STRIKES IN THE UNITED STATES, 1881-1972: A CRITICAL EXAMINATION OF THE THEORY OF THE INSTITUTIONALISATION OF INDUSTRIAL CONFLICT.

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ABSTRACT

This thesis examines strike activity in the United States from 1881 to 1972. Although part of its aim is simply to describe and analyse trends of activity, its main concern is sociological: the explication and testing of the theory of the institutionalisation of industrial conflict.

Since official statistics on strikes are the basic data employed, chapter one considers the problems with the use of such statistics. Phenomenologists criticise the use of all official data, on the grounds that there is no 'true' distribution of social phenomena independent from the reality of everyday life, and that official figures are merely records of bureaucratic procedures. But, unlike crime statistics, strike figures measure a true distribution of activity. They simply record how often labour-management disputes develop into collective and complete stoppages of work; the strike is a category used in everyday life and its meaning as a tactical weapon in disputes is clear. Although the strike, as a 'stoppage of work to express a grievance or enforce a demand', cannot be defined independently from actors' meanings and intentions, this intentionality aspect is not a crucial problem; given the strike's role in the employment relationship, the inferring of intentions is not difficult.

The main problems are practical; for example, it is hard to know where one strike ends and another begins. Such problems can be by-passed, however, if we concentrate on trends in activity. Since the different American recording agencies have used very similar definitions and procedures, their data are statistically reliable, especially for workers involved and 'days lost' in

strikes. Their validity is more questionable, but, since we are concerned with trends and not with strike statistics as indices of the absolute amount of conflict at one time, we may proceed to use the official data, although considerable caution will be required regarding information on such things as the 'causes' of strikes.

Chapter two examines the theory of the institutionalisation of industrial conflict. Its 'conventional' version, developed to its fullest extent by industrial relations writers of the 1950's, argues that institutions will grow up to channel and thus to control conflict; of these institutions, collective bargaining is the most important. As unions and management learn to co-operate, strikes become tactical weapons in the bargaining process and lose any wider political significance; not only are they institutionally controlled, but their frequency and intensity fall as institutional means are found for the resolution of conflict. One strand of the conventional view stresses the importance of industrialisation for the amount of conflict; in the 'early' period activity will be high because of the disruption caused by rapid industrial change, but subsequently workers will become accustomed to industry, and conflict will become less intense. This view is taken up by Shorter and Tilly in their book Strikes in France 1830-1968. They set out to chart the course of strikes from 'early' to 'modern' forms of protest and, although they criticise previous writings on the effect of industrialisation, can be taken as giving a distinct variant of the institutionalisation theory. They stress the political role of the strike and thus widen the scope of the theory; and, in arguing for a transformation of the strike into a political demonstration instead of an economic battle, they follow the

broad lines of the theory. Finally, a 'radical' version of the theory is identified. This grew up in response to the conventional line and argues that institutionalisation has not taken place on equal terms; there is a fundamental inequality of power in capitalist societies which has meant that the trade unions have been incorporated into the system on terms set by employers and the government. Workers have become enmeshed in a system over which they have little real control.

This set of theories, being concerned with long-term trends in labour relations, is clearly suitable for testing against strike data. The central prediction is that the frequency and duration of activity will decline as instituionalisation progresses, and strikes will also become more 'predictable' and 'orderly'. A weaker argument is that the effect of institutionalisation on industrial conflict will be contingent on economic circumstances; we must therefore examine economic influences on strikes and whether any change in their impact can be attributed to instituional developments. It is also necessary to examine trends within industries and regions, to see if trends at a more detailed level than that revealed by the aggregate statistics support the instituionalisation theory.

Chapter three tests the theory against the data on strike trends for 1881-1972. The notable feature of American strikes has been their failure to change 'shape': their frequency, size and duration have remained remarkably constant. This basic finding sets the framework within which all other results must be examined. Thus the observed rise in union involvement in strikes fits the theory's predictions, but does not counteract the fundamental weakness of the view that the amount of conflict will decline. Trends in the issues in strikes show the expected

increase in strikes for union recognition during the 1930's, when collective bargaining was being established nationally, but these recognition strikes have not disappeared subsequently. Within industries, one would expect activity to peak when bargaining was being established, but to decline thereafter; but an examination of long-term trends in several sectors showed that such a pattern was umusual. Similarly, regional trends in activity do not fit the institutionalisation model. Thus, changes in activity cannot be explained by either of the processes identified by the 'conventional' theory, namely collective bargaining and industrialisation. Neither is it possible to suggest that trends towards institutionalisation will be limited to particular industries or regions.

Chapter four investigates the more subtle argument that the nature of economic and other influences on strike activity will be affected by the degree of institutionalisation. Thus the period 1946-72, during which institutionalised relations have been established, is compared with two earlier periods, representing the years of rapid industrialisation (1881-1910) and the period when bargaining was not institutionalised (1900-39). Using a multiple regression framework, the overall explanatory power of the economic determinants of strike activity does not vary markedly between these periods; but there is some evidence to suggest that the direction of the influence of particular variables has changed. The fact that a change occurred fits the institutionalisation model, but the precise direction of the change cannot be explained by it. Strike activity has been broadly influenced by economic conditions, but this link has not been direct; strikes are associated not with the current unemployment rate but with measures of the height and depth of

previous business cycles. A general, and not an immediate, influence is at work. Shorter and Tilly expect that the degree of working class organisation will be the crucial variable intervening between economic conditions and strikes, and that strikes up to the New Deal should reflect political and not economic influences. Detailed examination of several models of strike activity suggests that these expectations are unfounded; the influence of union density on strikes has been relatively weak, and political and economic variables have not operated in the predicted directions. Thus any shift in the 'institutional parameters' of conflict has not altered the importance of political and economic influences on strikes; rather, activity has continuously reflected economic conditions, although the precise direction of the effect of these conditions has changed.

Chapters five to seven consider three key periods for industrial conflict. The first, relating to the period 1881-1905, concentrates on the effects of industrialisation on strike activity. Trends over time in the amount of activity are not explained by industrialisation, and nor can the detailed characteristics of this activity be explained by the impact of industry. In broad terms, this can be explained as the result of the simultaneous operation of two factors. On the one hand, strikes were becoming increasingly 'sophisticated' as workers learnt to use them as instruments in planned campaigns: for example, stoppages tended to grow larger and more successful. On the other, strikes were used to resist attempts by employers to destroy the day-to-day control of operations enjoyed by craftsmen; this meant that strikes tended to be small, since they were limited to specific plants and groups of workers, and unsuccessful. Hence,

no overall trends on the dimensions of 'sophistication' can be seen.

As one would expect from the argument about job control, strikes increasingly came to reflect the struggles of skilled men. Craft workers had the most to lose from the introduction of mass production methods, and were in the strongest position to put up resistance. Hence, strikes were concentrated in the least technically advanced industries. But, again, no simple pattern emerged; for example, within industries there was no systematic tendency for increasing mechanisation to be associated with distinctive patterns of strike activity. The struggle for job control was often a lengthy one which bore no relation to immediate conditions. Similarly, a comparison of skilled and unskilled occupations reveals that no simple pattern of response (such as the 'successful' and 'unsuccessful' craft responses suggested by Shorter and Tilly) existed. Thus, although industrialisation had broad effects on strike patterns, there was considerable diversity of experience. It is suggested that this diversity may have been associated with the great heterogeneity of the United States. Employers, and other groups, often followed very different policies towards workers. Together with regional differences in the rate of industrialisation and differences in the positions of particular groups of workers, this meant that no national pattern of response existed.

Chapter six turns to the establishment of the institutionalised system under the New Deal. It shows that rank and file protests lay at the root of the strikes of the period; in particular, they marked the 'breakthrough' of activity in the mass production industries, after the very low levels of activity in the 1920's. In very general terms, we may say that the end of the nineteenth century

saw the destruction of craftsmen's protests and that the 1930's saw the emergence of strikes in a 'modern' form. But these strikes were taken over by national unions and directed towards the aim of formal union recognition; although rank and file protests remained important, and were particularly significant during the Second World War, they could not break out of the institutionalised relations which were becoming established.

Over time, strike activity strongly reflected economic conditions, with rising wages tending to encourage activity. But strikes were concentrated in the most 'disadvantaged' industries, characterised by low wages, high unemployment and small plants. The finding that, as in 1881-1905, plant size was inversely related to strike activity contradicts the expectation of Shorter and Tilly that workers will be most strike-prone when they are brought together in large masses. Similarly, a comparison of the strike-proneness of cities shows that neither the size nor the rate of growth of cities explains their strike record.

Chapter seven examines the workings of the institutionalised system since 1950. Although collective bargaining has been established, expectations for declining, or at least stable, levels of conflict have not been met. In particular, strike activity rose sharply during the 1960's. Several influences on this are considered, of which price inflation seems to have been the most important. Although the rise in activity covered large as well as small stoppages, the period was marked by an increase in the number of 'unofficial' rank and file actions. The presence of these strikes suggests that the institutionalised system was unable to cope with conflict based on shopfloor grievances. However, 'radicals' have exaggerated the significance of rank and file protests, which have had limited only aims; and

the concentration on wage demands due to inflation has led workers into a renewed reliance on their union leaders.

The institutionalisation theory expects that inter-industry differences in activity will be explained by the extent and nature of collective bargaining coverage; but this is not the case. Differences are more closely associated with an industry's technology and the economic position of its workers. The direction of the influence of these factors suggests that concentration of strikes in the 'disadvantaged' sectors, observed for earlier periods, has remained true in the most recent past. It might also be suggested that trends within individual industries will reflect the extent to which bargaining is institutionalised. This does not appear to be the case, however; the lack of association between strikes and economic conditions, in contrast to the relatively strong link observed for aggregate data, suggests that, within industries, other factors may mediate economic influences, but that in the aggregate these factors cancel each other out so that strike activity as a whole is related to economic conditions.

Chapter eight summarises the findings of previous chapters. A wide range of tests has shown that strike activity has not declined and that shifts in the parameters of conflict, examined through time-series and cross-sectional analyses, give little support to the institutionalisation theory. However, we may treat institutionalisation as a model of labour-management relations; trends are apparent towards institutional accommodation, but varying degrees of institutional control are possible and forces of de-institutionalisation may be at work. For example, rank and file struggles for job control cannot be dealt with through formal institutions but can be resolved only at the 'point of production'.

Such challenges as this mean that, although an institutionalised system has been established, it has not been able to prevent conflict from becoming overt.

The chapter then reconsiders American strike activity and, in particular, seeks to explain why American strikes have been very large and long. As the discussion of job control struggles in previous chapters suggests, the conflict between workers and employers for control of day-to-day [illegible] of operations has been particularly intense. This is related to the advanced nature of American capitalism and the constant challenge of technical change. But the values of the wider society have also been important; employers and workers alike have stressed individual achievement and have thus refused to moderate their demands. Linked with this general value has been the belief of employers in their 'right' to run their plants as they see fit; there has thus been a constant hostility to trade unions. On the workers' side, there has been the fear that employers, if they gained the upper hand, would seek to destroy unionism. Thus every strike has tended to be seen as a crucial conflict, in which neither side can afford to give way.

Since so much attention has had to be given to control of the plant, it is not surprising that American strikes have not developed a political orientation; this initial tendency has been strengthened by developments within the trade unions and the polity. The system of collective bargaining has institutionalised the long-term hostilities between workers and unions; the wide scope of bargaining means that there is a great deal to strike about. To some extent, current strike patterns can be explained by the bargaining system, but they also reflect more fundamental and long-term conflicts between workers and employers.

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Abbreviations

All abbreviations are explained when they are first introduced; the present list provides a convenient reference to those most frequently employed.

1. Strike indices

N Number of strikes

W Number of workers involved in strikes

D Number of days lost in strikes

St Number of strikers

2. Independent variables

A Average annual earnings

B Number of employees in a plant before a strike

C Total Civilian employment

E Total non-agricultural employment

H Average hourly earnings

P Price level

P.P. Party of the President

% Dem. Percent. of Congress accounted for by Democrats

Q Quarterly dummies

T Number of trade union members

U Number unemployed

(Hence U/E is the unemployment rate, H/P is the level of real hourly wages, and so on).

3. Reports of results of regression equations

Ch. Proportionate change in a variable (i.e. Ch.H/P is the rate of change of real hourly wages).

D-W Durbin-Watson statistic

R^2 Coefficient of determination, corrected for degrees of freedom.

4. Other abbreviations

A.F.L. American Federation of Labor

B.L.S. Bureau of Labor Statistics

C.I.O. Congress of Industrial Organizations.

PREFACE

This thesis examines strike activity in the United States from 1881, when adequate statistics began to be collected, until 1972. Chapter one examines the problem of the use of strike statistics and considers the nature of the American data; but before moving on to these matters I shall outline the reasons for the choice of the United States and the approach I have adopted.

The first reason for considering the U.S. is simply quantitative: the country has accounted for an important part of the strike phenomenon. For example, in the period 1949-53 it accounted for over half the total number of days lost in strikes in the world, and for nearly a quarter of the workers involved.[1] Since Griffin's work was published in 1939, there has been no adequate study of strike patterns;[2] the first aim, therefore, is simply to describe and analyse strike activity in one important country. But the United States is important for other, more sociologically interesting, reasons. As we shall see, its strike-proneness has been very high compared with other countries; in particular its strikes have been very large and long. But its labour movement is among the least radical in political terms and the absence of a permanent Socialist movement has long puzzled scholars. The examination of strike trends may enable us to explain this apparent paradox of militancy combined with conservatism.[3]

Although the documentation of strike trends is an important part of this thesis, the main concern is sociological rather than historical. The sociological focus is the theory of the institutionalisation of industrial conflict, which is examined in detail in chapter two. The theory is particularly relevant

for the United States since American writers have provided many of its best-known formulations and have often based their arguments on American experience. The particular view to be investigated is that institutions have grown up to channel and thus to control disputes between workers and employers; such institutions prevent disputes from becoming overt conflicts and also contribute to changing the atmosphere of labour relations in the direction of mutual acceptance by the parties involved. As we shall see, the theory is a very ancient as well as popular one, but this age and popularity mean that it has several variants which need to be distinguished. At present, I do not need to go into the details of the versions which I distinguish in chapter two, but must mention the view that the institutionalisation of conflict comes about as a result of the changes in labour relations induced by industrialisation; for example, the coming of mass production methods is said to destroy craftsmen's traditional control over their own work. The effect of industrialisation on patterns of protest is clearly of considerable sociological interest, and I shall give it a good deal of attention in later chapters. Thus my concern is two-fold: to test the theory of institutionalisation in general, and to analyse, within the broad framework of this theory, the effect on industrial conflict of the changes brought about by industrialisation.

One objection to my approach which may occur to the reader at various points, and particularly in chapter eight, is that I do not discuss in detail the 'fundamental' causes of strikes; for example, I do not attempt to relate the occurrence of strikes to the nature of work under capitalism. An explanation of this will be in order here. Firstly, studies already exist which deal at a

general level with the way in which strikes reflect the conflicts inherent in the capitalist system[4]; there would be little point in repeating these discussions here. Secondly, regardless of the 'nature' of strikes, large questions remain about their patterns; hence, I shall concentrate on trends of activity and inter-industry differences. I shall not attempt to answer the question of what causes strikes, but will focus instead on patterns of activity and how these have changed. Any contribution which this may make to the discussion of 'fundamental' matters is secondary to the discovery of the proximate influences on strike activity over time and between industries.

There is a second criticism which must be mentioned in these preliminary comments. It is often argued that the strike is a product of labour-management relations and cannot be separated from the context of a specific set of relationships; the implication of this is that it is not possible to treat the strike as a phenomenon in its own right. In chapter one, I suggest that strikes are separable from other forms of protest and that they form a reasonably homogeneous category. But here I must deal with the point that, even if this is so, no type of conflict may be treated in isolation from the context in which it develops. Although it is important to study strikes as the results of particular labour-management disputes, it is equally important to examine whether some sectors are more strike-prone than others and to seek the causes of this. The advantage of a statistical approach, such as that used here, is that the relative importance of various independent factors can be assessed and the strength of their impact on strike activity discovered; case studies may point to the coming of a trade union, for example, as a key element in the occurrence of a

strike, but a statistical approach can show the strength of the influence of unionisation on variations in strike activity over time and between industries.

My approach is thus complementary to more detailed investigations; it approaches the question of industrial conflict from a different direction. The aim is not to relate strikes in a given industry to various structural features of that industry but to indicate the factors which make one industry have a higher strike rate than another. An example will show the difference of approach. In their study of the motor industry, Turner et.al. argue that strike activity cannot be explained by technological factors; the insecurity due to fluctuating wages and employment is more important.[5] In the following chapters, I shall be concerned with the differences between industries; it would be quite consistent with Turner's findings to discover that technology differentiates between industries even though it is unimportant within them.

In dealing with data on strike activity I am dealing with the outcome of a large number of complex processes; the aim is to reveal and account for the pattern of these outcomes. This is as valid an approach as examining the processes themselves. Notwithstanding such general comments, the value of my approach will emerge in the following chapters. I am concerned with the long-term patterns of strike activity in one country in order to test one popular theory (or, rather, set of theories) about industrial conflict. At the end of their book on strikes in France, Shorter and Tilly comment that finding out if their view of strikes holds true for other countries 'will surely represent the coming agenda for the political sociology of industrial conflict.'[6] The study of America, with its many and obvious

differences from France, could be seen as an initial attempt to deal with the first item on such an agenda.

NOTES:

1. 'Industrial disputes, 1937-54' Internat. Lab. Rev., 72, pp. 78-91 (1955) at pp. 88-89.
2. J.I. Griffin Strikes: a study in quantitative economics (Columbia Univ. Press, N.Y., 1939).
3. On this paradox see, for example, S. Aronowitz False promises: the shaping of American working class consciousness (McGraw-Hill, N.Y., 1973) p. 259; S. Lens The crisis of American labor (Sagamore Press, N.Y., 1959) p. 19.
4. See R. Hyman Strikes (Fontana-Collins, London, 1972). For papers on a wide range of 'fundamental' matters see A. Kornhauser, R. Dubin & A.M. Ross (eds) Industrial conflict (McGraw-Hill, N.Y., 1954).
5. H.A. Turner, G. Clack & G. Roberts Labour relations in the motor industry (George Allen & Unwin, London, 1967) esp. pp. 329-33.
6. E. Shorter & C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974) p. 350.

CHAPTER ONE

THE USE OF OFFICIAL STATISTICS

Since this study uses official statistics as its major source of data, consideration must first be given to the adequacy of these statistics. While strike statistics have often been a matter of controversy,[1] there has been a tendency among analysts to state the difficulties that exist and then to move on to the substantive discussion without considering how the problems raised affect the conclusions reached. Throughout this study I shall attempt to keep in mind the limitations on the data which the discussion of this chapter will bring out.

In the following section I set out very briefly the arguments of writers who suggest that the use of any official statistics is invalid. Since these arguments have become familiar to sociologists in recent years, I do not need to spend long in expounding them. Moreover, since the dispute over the use of official data ultimately rests on epistemological arguments which are unlikely to find a clear resolution, I shall simply indicate the main reasons for my view that strike atatistics are usable; I do not attempt a refutationsof the critics' argument as a whole. In section two, I consider whether there is anything about strike statistics in particular which, <u>in principle</u>, prevents us from using them. I turn then to the <u>practical</u> problems with the data, while section four examines the American evidence in the light of the earlier discussion and attempts to show that the figures are sufficiently consistent for the study of trends in activity over a period as long as 1881-1972.

1. <u>The phenomenological critique</u>

I shall concentrate solely on the specific negative

criticisms made of the use of official data, and shall not attempt to assess the wider question of whether, on the basis of these and other arguments, the various writers of a phenomenological or ethnomethodological stance have made good their claim that 'traditional sociology' must be abandoned.[2] The core of the argument is that, in relying on official sources, one is merely following the record of a set of bureaucratic procedures and that the 'data' which emerge at the end can be understood only as the products of a complex of 'taken for granted' practices. Hospital medical records, for example, are produced by various members of staff on the basis of their taken-for-granted views.[3] It should be emphasised that, according to this approach, there is no way in which records can be produced which are not context-dependent. It may seem to be obvious that statistics are the result of bureaucratic processes, but it is the implications that are drawn from this that are important: we cannot use official data because they represent a confounding of the official agencies' procedures with the 'reality' that is being measured.

A second strand of the critique points out that the nature of the 'reality' is itself problematic. Thus Douglas, in discussing Durkheim's use of statistics on suicide,[4] argues that it is the social meanings of suicide which must be given precedence and that the statistics are biased in various ways. But he does not want to argue simply that there are problems of comparability of definitions, reporting techniques and the like, for he states that a central error in the use of statistics is that it is being assumed that actions which are fitted into the category of 'suicide' have essentially similar meanings. In other words, he is suggesting that it is in principle impossible to develop

statistics on suicide that will bear any relationship to the meanings of the acts for the participants themselves.

The logic of the argument is not, of course, limited to suicide. Douglas himself extends it to all forms of moral statistics[5] and Walsh,[6] for example, takes it to cover all types of official data. These criticisms are, of course, part of a much wider attack on the methods of traditional sociology; the phenomenologist would not be satisfied with the use of data constructed by the sociologist himself, for such data would still abstract from the performances of people acting on the basis of their 'background expectancies'. For example, Churchill criticises the use of such things as path models because they do not help in understanding how social rules are <u>used</u> by people, and because there is an imposition of 'variable thinking' on the process of social interaction.[7] It is not simply that such 'positivistic' methods are incomplete; they fail to give any understanding of how people actually manage their lives.

Thus it is being argued that, since 'social facts' are the product of interaction and cannot be divorced from their contexts,[8] there is no 'true' distribution of phenomena to be observed.[9] The reliance on official categories is merely an extreme form of the positivism inherent in all attempts to construct sociological explanations that are not rooted in the affairs of 'everyday life'. Any official (or other) statistics, records, files and other documents cannot be treated as a 'resource' for sociological inquiry; rather, how they come to be created is a valid 'topic' for investigation.

In many ways, it is hard to respond to this argument, for the phenomenologist has sought to create a case that is immune to

criticism; any attempts to remedy orthodox approaches will be dismissed for failing to respect the integrity of everyday life.[10] Instead of entering an arid dispute about positivism, I shall deal with certain specific criticisms advanced by the writers in question in relation to strike data.

2. Strike statistics

The fundamental point is that statistics on strikes do not suffer from the same weaknesses as those on suicide or crime. To be sure, there are practical difficulties to be overcome; but it is in principle possible to conceive of adequate data on strikes. For example, a frequent criticism of crime statistics is that they reflect how much effort the police make in seeking out crime; an increase in the 'rate' of juvenile crime may reflect the fact that the police have stepped up their detective operations. Similarly, the keenness with which officials search for information on strikes will affect the number recorded. But there is a crucial difference. Writers on crime and deviance have argued convincingly that there can be no 'true' rate of crime since what is defined as criminal depends on the context in which certain acts take place; what in one context is 'hooliganism' may in another be the 'innocent letting off of steam'. In contrast, I would suggest, the categorisation of an event as a strike is not context-dependent to anything like the same extent.

Most definitions of the strike take it to be a stoppage of work by a group of employees in order to express a grievance or enforce a demand; the stoppage must also be temporary in that the men intend to return to work when the dispute has been settled.[11] While there are difficulties with establishing whether there was

sufficient collective action in a given case for the event to be called a strike, our central problems relate to the intentionality aspect. Events are not counted as strikes unless there is the intent to 'express a grievance or enforce a demand'; and the criterion that the stoppage be temporary involves the intent to return to work. Thus, unlike Durkheim in his definition of suicide,[12] we cannot even try to avoid the aspect of the actors' intentions. Since intentions are context-bound, it might be argued, strike statistics, like those on suicide, are necessarily useless. However, 'expressing a grievance' is a very broad category and many events are counted as strikes even when it is not clear what particular grievance is being voiced. In other words, 'for all practical purposes' an event may be counted as a strike without strong evidence on the actors' intentions.

It may appear that, in saying this, one is granting the case of the phenomenologists, for it seems that in practice the formal definition of the strike is altered in all sorts of taken-for-granted ways. But if we approach the question from a different angle, we can see that this is not really a problem. The strike is part of the employment relationship and only stoppages of work by employees are to be included; 'strikes' by master craftsmen for increases in the prices of their products have been excluded from the category because they did not involve a dispute between an employer and his employees.[13] All sorts of problems exist about what is defined as criminal, whether or not the person who commits 'criminal' acts sees these in the same terms as the agencies of law enforcement, and about the effect of <u>ad hoc</u> bureaucratic procedures on the statistics. The meaning of a stike in capitalist society is much less problematic. It is understood by

employers and workers alike to be part of the relationship between them.[14] Although there are many types of strike and stoppages can be granted very different degrees of legitimacy, the category of a 'stoppage of work to express a grievance or enforce a demand' is broad enough to cover any dispute which one might want to count as a'strike' and clear enought to be used without risk of ambiguity.

As we shall see below, several agencies have attempted to distinguish between a strike and a lock-out. The difference has been held to rest on whether the workers or the employers were to blame for the stoppage. But this distinction has been abandoned because the side which was first to take belligerent action was not necessarily 'to blame'; and the concept of blame is naturally hard to use in such situations. It is useful to the parties to attach blame to their opponents, but the distinction between strikes and lockouts is of little analytical significance. What is important is that both involve an attempt to enforce a demand or express a grievance and that they grow out of the employment relationship. In a particular case, it may be relevant to know whether a stoppage was seen as a strike or lock-out; but the similarity of form and purpose between them means that for statistical analysis they can be treated together as 'stoppages of work'.

It is true that individual strikers and employers will attach different meanings to strike action, and even that one person may change his views during the strike. But this does not affect the possibility of using strike statistics. In employing these data one is not trying to aggregate meanings, which would be invalid, but assessing the frequency with which labour-management

disputes develop into stoppages of work. The meanings of the participants are not crucial to this. Or, to be more precise, the only meaning with which we are concerned is that a stoppage of work to enforce a demand or express a grievance is occurring. Here, it is reasonable to argue that there is a considerable overlap of meanings between workers and employers. There is little dispute as to whether a strike is, or is not, going on. With the enforcement of a demand, the employer will be aware of the demand and know that refusal to grant it will lead to the stoppage of work. Things are somewhat more complex with the expression of a grievance since the employer need not be aware of the grievance, which may not even be directly related to the conditions of employment; this is the case with 'political' strikes. But after the strike has begun, the grievance can be discovered. Even if there is no clear grievance, as may be the case with 'spontaneous' walk-outs, the collective and complete cessation of work will distinguish the strike from other forms of action.[14a] In other words, the presence of a strike will be recognised even when the precise grievance involved is unclear; and the application of meanings is not crucial.

This is because the strike is part of the employment relationship. The employer buys his employees' labour power; the collective and complete withdrawal of this power is known as a strike. Although the intentionality aspect of strikes cannot be removed from the definition, in practice it is not a problem because of the shared meanings of the participants. They may disagree over the causes of a strike, may seek to call it by another name or may even attempt to ignore its presence. But these are practical problems. What a strike is, and what it

represents, is clear: it is a collective refusal to work under the existing conditions of employment, and represents a state of overt conflict between workers and their employer.

The category of the 'strike' is not one imposed by the outside observer. An important part of the phenomenologists' case is that 'members' and observers have different means of dealing with and de-coding the information with which they are presented; theoretical categories used by observers have no necessary relationship to what is going on. They are imposed on the affairs of everyday life in an ad hoc manner.[15] Thus, it is said, the category 'social class' should not be imposed on the world, but people's perceptions, and the use of the term in everyday life, should be the focus.[16] But the strike is a category which is common in everyday life; the outside observer does not impose it on the situation in the way that concepts such as 'class' and 'crime' are imposed.

I have already said that the position of the strike in the employment relationship contributes to the creation of shared meanings among participants. It is now clear that the observer does not arbitrarily impose his own meanings on this situation. To be more precise, the fact of compiling strike statistics does not imply that meanings are being imposed. Observers (and, for that matter, 'members') may operate with different views of strikes. Some may hold that there is inherent unrest among the working class and that every strike represents an expression of class consciousness, while others may prefer to think in terms of economic gains and losses.[17] But these and other meanings are concerned with the interpretation of strike activity. The category of the strike itself is not in dispute. Disputes over

the interpretation of strike action are as likely to occur in relation to a particular stoppage as to the aggregate level of activity. There is nothing in the existence of different interpretations to prevent the use of aggregate data.

It is obvious that observers and members give meaning to particular actions. There is nothing mysterious in this, although in certain cases it may lead to difficulties when statistical analysis is attempted; counting the number of 'crimes' is a case in point. But, I have argued, the meaning of what a strike is, as distinct from what it signifies, is shared by participants and observers to a very large extent. In counting the number of strikes, we are not making the implicit assertion that the meaning of all strikes is identical. We are merely examining how often labour-management disputes develop into overt conflicts which take the particular form of the strike. In relating this to various independent factors, we are not violating a set of context-bound meanings. One meaning of the strike is that it is a clearly identifiable stoppage of work, brought about by the collective action of a number of workers. There is no reason why this aspect of the strike cannot be considered in the aggregate.

Having argued that it is, in principle, possible to use statistics on strikes, I turn to the problems of principle encountered with the major measures of strike activity; in other words, the discussion will proceed on the lines of traditional measurement theory and its concepts of reliability and validity. In the United States and most other countries, three measures of strike activity are commonly employed: the number of strikes and the numbers of workers involved and 'days lost' in stoppages.[18]

I shall deal with these in turn.

It may seem that counting the number of strikes which occur is a relatively simple exercise, but the central problem is whether a stoppage that affects several factories should be counted as one strike or as several; as we shall see below, the U.S. officials have disagreed on this point. The approach usually adopted is to group together all the stoppages which seem to involve the same grievance or demand as one strike; but, to take one obvious case, it may not be clear whether a series of stoppages in which similar or identical demands are made are indeed part of a common movement or are merely simultaneous expressions of separate grievances. It might be possible to discover how far such a series of strikes was centrally co-ordinated, but this would be difficult and often inconclusive. In that the official agencies have to follow 'ad hoc' rules in deciding whether they are dealing with one strike or many, the points raised by the phenomenologists are clearly very relevant, but there is something to be said for the continued use of data on the number of strikes.

To the extent that strikes grow out of collective bargaining between employers and workers, especially where trade union involvement is important, it is usually possible to differentiate between one strike and another. Each strike will be in pursuit of a particular demand and will be called formally by the union officials, so that the various stoppages that occur can clearly be seen as part of the same dispute. This is, of course, far from the whole story and where, for instance, unofficial strikes take place it may not be possible to locate them in a formal procedure. But the fact that some strikes can

be so located suggests that the problems are reduced in some cases. It also suggests that there may be international differences in the extent to which figures on the number of strikes are usable; to anticipate the argument of chapter 3, in the U.S. strikes which grow out of collective bargaining disputes are a significant part of the total and therefore data on strike frequency may be more valid that they are in other countries.[19]

Further, to point out that informal and 'ad hoc' bureaucratic rules must be used is not to say that the data which emerge are necessarily unusable. If a reasonably clear set of rules can be devised, the data should be tolerably reliable. For example, it would be possible to operate with the general rule that stoppages in one plant or department should be deemed one strike unless there was evidence to suggest that separate disputes were involved; and many other rules could be devised. This will mean, of course, that the number of strikes that is recorded will reflect bureaucratic procedures but, and this is a fundamental point, if these procedures remain fairly constant any change in the number of strikes will be a 'real' one rather than one due to the rules themselves. The data are not being used to estimate the amount of conflict present but to indicate whether there is more at one time than at another. Indeed, it is a rather meaningless question to ask how much conflict is present, since the meaning of the amount can be assessed only by comparison with other periods and places. I shall argue in the section on the American figures that recording procedures have been such that trends of activity can, in general, be compared; but we may note that comparisons of strike frequency between countries are likely to be vitiated by the fact that many different classificatory rules are employed.[20]

The problems with the other two dimensions of activity, worker involvement and days lost, are much less serious. For the former, one is simply taking a count of the number of men who strike and, once a definition of what sort of activity is to be called a strike has been arrived at, there are no great problems of principle involved. The difficulty comes with reconciling different estimates of how many men are on strike; in a situation of conflict it is likely that the two sides will make contrasting claims as to the effectiveness of the stoppage.[21] But there clearly is a true number of strikers which could in principle be established accurately. A greater difficulty relates to the fact that not all those counted as on strike may be active supporters of the stoppage. One should certainly not infer from the fact that a strike is apparently solid, that all the strikers are behind their leaders either in the demands made or on the question of whether the strike is the appropriate means to pursue the demands. But, to re-iterate what was said above, in using strike statistics one is not trying to deal with every meaning that could be applied to particular disputes; the aggregate data record how many men strike, and the interpretation of this is a different question.

Walsh has argued that even statistics on demographic matters are not sociologically useful, asserting, for example, that measures of the birth-rate do not tell us anything about the meanings which people attach to how many children to have.[22] But he cannot show that it is impossible to obtain valid counts of the number of births in a given period. He is merely saying that it is difficult to use such data for certain purposes. Similarly, we can separate the collection of figures on worker involvement in strikes from problems of their interpretation.

The number of days lost in a given strike is given by the product of the number of workers involved and the number of days for which a strike lasts. Thus any problem of principle, in addition to those connected with worker involvement, will relate to measuring the duration of the stoppage. The main difficulty that is likely to arise concerns strikes which are not ended by a formal settlement but in which there is a prolonged period in which the men return to work until operations are nearly normal; in some cases the final decision to call off the strike has been made years after all effective action had ceased. But even in these cases it is usually possible to make a reasonable estimate of when a strike has ceased. The criterion will not be the resumption of production, since the curtailment of normal operations is not the measure that a strike is taking place; if it were, only effective strikes would be included in the figures. In America, a strike is considered ended when the majority of the vacancies caused by it are filled by returning strikers or new workers, or when the plant closes for good.[23] Here, as elsewhere, bureaucratic rules have to be applied, but the problems are not too serious; in many cases, formal strike settlements are reached, and, in others, the filling of vacancies gives a reasonable measure of the ending of a strike. Thus, estimates of strike duration are usable.

We can agree that it is impossible to obtain completely accurate statistics on any of the three dimensions of strike activity, but it does not follow that the data which exist are inherently unusable. In the next section, I deal with some of the practical difficulties that occur, and will begin by considering again each of the dimensions in turn.

3. The usability of strike statistics

Several influences are likely to affect the data on strike frequency. Suppose that the official agency operates with the rule that stoppages in one establishment are generally to be seen as one strike, Then, if the average size of plants increases, there will be, ceteris paribus, a downward influence on the number of strikes recorded. Similarly, the centralisation of collective bargaining and the amalgamation of trade unions are likely to reduce the number of separate bargains that are made, which in turn will tend to reduce the number of stoppages.[24] Such factors as these need to be borne in mind when long-term trends are being compared.

Other general problems relate to the completeness of the counting of strikes, in view of the possible manipulation and suppression of information, and to the fact that differing amounts of effort put into data-collection will affect the number of strikes recorded.[25] I have not included the discussion of these points in the above because they are better seen as problems of practice than of principle. It would be possible to exercise a strict control over the methods used in the collection of data to minimise the bias introduced by changing amounts of effort. As we shall see in the following section, the U.S. officials, like most others, have tended to alter the methods used, and this has had quite a large influence on the counting of strike frequency.

Here we come to the main reason why, in addition to the difficulties of principle associated with deciding what is to count as one strike, the data on the number of strikes are less useful than those on worker involvement or striker-days. The practical problems are connected largely with small stoppages

and it is likely that very many of these escape inclusion in the statistics, but such strikes do not account for a high proportion of worker involvement or days lost.[26] For example, the suppression of information by managements interested in a reputation for industrial peace is quite possible in relation to small disputes, which may be defined as 'pauses for consultation' rather than as strikes; but it is the large and long stoppages which account for the great majority of worker involvement and it is very unlikely that such strikes can be kept hidden.

Thus, of the three dimensions of activity, strike frequency is the least statistically valid and reliable. However, if the recording practices of the official agencies have been reasonably consistent, it may be possible to examine trends in the number of strikes. But the fact that the reliability of the data varies suggests that less weight can be placed on trends here than on trends in the other dimensions. The problems of reliability also mean that breaking down the aggregate data into various series for industries or regions is likely to lead to difficulties. For example, if it is known that one industry is particularly prone to short disputes[27] or that in another management is able to suppress information, comparisons between industries will be invalid. However, it may still be possible to compare <u>trends</u>; thus we may be able to say that, in a given period, activity has increased <u>more</u> in one industry than it has in another; and, of course, comparisons of rates at one point in time may still be possible when the number of workers involved or days lost is the index.

The main practical problem relating to worker involvement is deciding where to draw the line between those directly affected by the dispute and those without direct involvement.[28]

Some agencies (including the American one in 1881-1905) attempt to differentiate between strikers and those who are thrown out of work by a strike, although they are not themselves actively supporting the strike. It is clearly very hard to do this and a common solution to the problem (which has been adopted by U.S. officials since 1914) is to restrict one's concern to establishments on strike. Thus all men in a struck plant who are thrown out of work are counted as 'involved' whether or not they are actively supporting the strike; and all secondary idleness in other plants is ignored. This is clearly only one possible convention, but if it is consistently adhered to it makes possible the examination of trends in worker involvement: any recorded change can be attributed to 'real' forces rather than to a statistical artefact. Again, though, there may be difficulties with inter-industry comparisons. An industry which has plants in which the operations are highly inter-dependent will tend to record a higher rate of worker involvement than will one where strikes in one department do not affect work in another; and where whole plants are dependent on each other recorded involvement will not reflect the number of men in the non-striking plants affected by the dispute. Thus comparisons of trends rather than of rates may have to be used.

This convention of concentrating on struck plants alone has the advantage that the recorded number of workers involved is kept reasonably close to the number of strikers. After all, the aim is to measure how many men go on strike and extending the coverage to non-struck plants is likely to reduce the validity of the series. But one result of this is that the figures on days lost will not reflect the true economic impact of the strike, since they will relate only to the loss in struck plants.[29]

This, together with the fact that the striker-day index is the product of two separate measures of activity, each of which has its own problems of reliability, may suggest that this index will be the least useful of all. However, it has been suggested that the index is the most useful for international comparisons because differences of definition are less significant than they are for the other dimensions of activity.[30] And for present purposes the point to emphasise is that the great majority of striker-days occur in the large and long strikes; to an extent even greater than that for worker involvement, the missing of small strikes has little effect on the figures.

Having argued that the data are sufficient for the analysis of trends of activity, I now turn to some of the wider questions of the usability of strike statistics. A central difficulty concerns the separation of the strike from other forms of 'unrest'. As Kerr[31] and many other writers have argued, employee discontent can takethe form of absenteeism, go-slows, high quit rates or a variety of other things; and it may be suggested that a focus on strikes is inadequate. Similarly, it might be said that the strike is inseparable from an on-going set of relationships, and cannot be treated in isolation; the only way to assess some change in strike activity would be to place it in the context of the bargaining relationship. Since in the following chapters the strike is taken as the focus, this argument must be given careful attention.

I have argued above that it is possible to arrive at and use a reasonable definition of the strike; by implication, strikes are also logically separable from other forms of activity. The fact that they are <u>collective</u> serves to differentiate them from individual actions such as quitting. To be sure, there may be

cases of mass resignations where a strike is illegal or illegitimate,[32] but it is usually clear that these are collective acts; to be effective they have to be organised and the presence of organising activity will indicate that they are different from the more usual forms of quitting. Secondly, strikes involve the complete cessation of work, in contrast to go-slows which are collective but not complete. Again, there are some boundary problems, particularly when actions which do not involve a complete stoppage are called 'strikes in detail' or 'strikes on the job'.[33] Particular problems relate to cases where total stoppages occur but where the men do not leave the plant; when such sit-downs are large and long it is possible to say that a strike is going on, but when they are short it is hard to know if they should be called strikes or go-slows. However, it seems reasonable to call any collective and complete stoppage a strike.

I have argued that the strike is a fairly distinct type of event and that it can be studied separately from other forms of job action. The question then arises as to why strike patterns are of interest in their own right. One preliminary, but weak, argument is that various theories relating directly to strikes have been propounded and that it is a useful activity to test them. Similarly, strike data have been used to test more general theories, such as the hypothesis that workers who form an 'isolated mass' will be more conflict-prone than other groups.[34] More importantly, strikes are of interest because they are a-typical and breach the usual pattern of 'order' in industry.[35] If conflict is central to processes of social change,[36] the strike, as an extreme form of industrial conflict, is an important subject for study.

But this does not prove that a statistical analysis is

possible. Thus it has been argued that the strike is an integral part of a set of relationships and that its causes cannot be established by examining aggregate data.[37] In other words, each strike is a unique event. But there is a danger in this approach. Having dealt with the background features of a situation, the growth of discontent and the steps in the process of negotiation,[38] it is easy to imply that the strike was more or less inevitable. Each event in the chain leading up to the strike is examined, but the strike is seen solely as the product of these events and not as a phenomenon with important similarities with other stoppages. In the following chapters I shall approach strikes from the other direction, concentrating on trends and patterns of activity and attempting to bring out the causes of strikes at this, aggregate, level. This approach cannot stand independently of more detailed investigations, but it can contribute to an understanding of strikes by dealing with the factors which affect the distribution of stoppages over time and space.

I must stress that I do not want to use the strike as an 'index of unrest'. Much effort has been spent in discussing whether strike trends measure the course of the amount of conflict in industry; in other words, the question is whether strikes are a valid and reliable index of 'general unrest'. But, I would suggest, it is not helpful to look at strikes in this way. Activity is influenced by basic and deep-seated discontents, but is also affected by the workers' perceptions of their chances of success, the attitude of the employer and many other things. Many people, especially sociologists,[39] suggest that relating strike statistics to economic variables is unsatisfactory because it does not deal with 'fundamental' discontents. But this is misguided.

There are many links in the chain from 'unrest' to strike activity, and many other chains which may be equally important. When we study strike activity in the aggregate we are concerned with the patterns within a complex protest movement and with the causes of variations in the patterns. Of course, this does not enable us to establish the meaning of individual strikes, but it permits an analysis of the framework within which strikes take place; that is, the factors which effect the distribution of strike activity can be identified and the relative strength of different factors assessed.

Thus, I would suggest, strikes are separable from other forms of activity and are analysable in their own right. They may be studied in the aggregate not because this can give us an idea about the total amount of conflict which is present, but because it leads to an understanding of the trends of activity. The view that there is a total amount of conflict which is measured by strike activity is unsound because conflict takes many forms and the notion of an 'amount' of conflict is very unclear. What is important is the trend of activity and its distribution between industries at various times. Since the strike is the most obvious and extreme form of labour-management conflict, a focus on it will reveal patterns which are of more general significance even though the view of strikes as indices of unrest is unsatisfactory. The very fact that the strike is separable from other features of industrial relations means that it cannot be expected to be an index of the character of relations in general. What an examination of its trends can show is the way in which protest activities have altered and how the 'parameters of conflict' (to use a phrase introduced in chapter four) have changed.

I now turn to a brief consideration of some of the statistical descriptions of strikes that are commonly used in addition to the three main dimensions. There are, firstly, the various breakdowns of the data by the duration and size of stoppages and by the industries and regions in which they occur. Information on size and duration is clearly as usable as that on the main dimensions, for it involves merely classifying the statistics in the relevant ways. Some of the problems with industrial comparisons have been mentioned and, to the extent that regions do not have industrial structures identical to that of the country as a whole, these will also affect the regional break down. But other difficulties also exist. For one thing, it is hard to find a means of defining industries that is relevant to the task at hand; the usual definition by the type of product may not usefully distinguish between industries in terms of the production process employed or by meaningful bargaining units. Since the industrial breakdown given in the statistics is that by product, there is little that can be done about this, other than to try to re-classify industries where possible. However, the trends within industry groups can be used to assess whether trends at the national level are repeated in all sectors, whether activity is becoming more or less dispersed, and so on. Further discussion of the details of this will be reserved until the presentation of evidence on the industrial distribution of activity; more general problems with industrial classification are considered in Appendix One.

The data on the 'causes' and results of strikes are open to numerous and serious criticisms.[40] Attempting to classify the declared aims of strikes according to certain official categories raises all the problems of divorcing actions from their context emphasised by

the phenomenologists. But most official agencies continue to provide classifications of strikes by cause, probably because it is felt that the 'issues' or the 'reasons given for striking' can be stated with a fair degree of accuracy.[41] It is clear that the expressed reasons cannot be equated with the causes of strikes, partly because the strikers themselves may restrict what they say they are striking about[42] and partly because causes at a different level of analysis can be identified. For example, a demand for increased wages may reflect dissatisfaction with many things but may be made because it is more likely to be met than less conventional demands; and a desire for improved wages is clearly neither necessary nor sufficient for a strike to occur. There are further difficulties associated with the fitting of demands which may be complex and diffuse into official categories, and it is probably impossible to develop a fully adequate set of categories. But, if we take only the broadest groupings of 'wages and hours', 'union organisation' and so on, we can probably say something about the trends of activity. It is generally possible to determine into which of these broad categories a given strike issue falls; and, although we may learn little about the causes of strikes, an analysis of changes in the stated reasons for striking can show us something about the changing character of strike activity.

Information on strike results suffers from as many weaknesses as that on causes; indeed, several agencies, including the American, have ceased to publish data on results. This is largely because it is felt that it is hard to determine whether a strike has been won or lost. The exact terms of a return to work are often unclear and it may not be until long after the strike that some assessment can be made of 'who won'. And if the

strike demands change during the stoppage it will be unclear how to categorise the result. In any case, the language of victory and defeat may not be appropriate to a wide range of strikes.[43] Such data as are available will, therefore, have to be used with great caution, but again we can apply the argument that trends may be illuminating even if it does not mean much to say that a certain proportion of strikes was won or lost.

4. The American data

Some of the standard problems with strike statistics have now been mentioned, and we must turn to a more detailed consideration of the data available for the United States. Details of sources are given in Appendix I, but some discussion is called for here. In 1880, as part of the national census of that year, an attempt was made to record information on strikes[44] but since this was a limited exercise of doubtful reliability no use will be made of its data. Between 1888 and 1907, the Commissioner of Labor produced four reports, covering the years 1881-1905 and containing a great deal of useful information. From 1906 to 1913 no national records were kept, while from 1914 to 1926 the Bureau of Labor Statistics began to collect data on strikes, workers involved and other series. In 1927, the work was re-organised and series on striker-days and various cross-classifications of the data introduced. J.I. Griffin[45] attempted to fill the gap from 1906 to 1913 and, since the B.L.S. data for 1914 and 1915 are clearly very incomplete, his figures will be used for these two years.

The four reports of the Commissioner were published in 1888, 1896, 1901 and 1907 covering respectively the periods 1881-86, 1887-1894 (June), July 1894-1900 and 1901-05. Towards the end of each period, investigators examined newspapers and

trade and union journals for information on strikes. Armed with this preliminary knowledge, field investigators went out to seek further details from the parties involved; they were also instructed to include information on any strike which had not been included in the initial survey. Since events were being studied that, in some cases, had occurred five years or more earlier, it is likely that the Commissioner's evidence is far from completely reliable; but this is counteracted to some extent by the fact that work was done in the field, in contrast to later techniques which have relied on press reports and the like and on answers to questionnaires. It is hard to know how comparable this early information is with that collected by the B.L.S. The Commissioner claimed that his method 'secured information relating to nearly every strike, if not every strike, which occurred in the United States during the period covered' and similar claims have been made for the B.L.S. methods.[46]

In 1914 a survey of printed information on strikes was made and in 1915 the method which has been followed to date was begun. From 'leads' in papers and trade journals questionnaires were sent to the interested parties requesting further information.[47] Over the years the number of 'leads' has been increased and this has had the effect of increasing the number of strikes recorded although, because the new strikes tend to be small, the number of workers involved and of days lost has been little affected. Thus, while the various claims to have covered nearly all strikes cannot be accepted fully, it seems that worker involvement and striker-days have been fairly well recorded.[48]

Griffin has provided estimates of the number of strikes and workers involved and of the causes and results of disputes for the years in which the official figures either do not exist or are

seriously incomplete.[49] Since seven State bureaus published data for the years in question, he took the sum of the figures they provided and estimated the total for the U.S. by increasing this amount according to the proportion which these States' strikes held to the total in 1904-05. All the States, except Kansas, are concentrated on the Eastern seaboard so that any change in the regional distribution of acitivity would bias Griffin's figures; similarly, these States do not have an industrial structure identical to that of the country as a whole and, therefore, shifts of strike activity between industries would not be fully recorded. In 1904-05, Griffin's States accounted for 89% of the workers involved in the U.S. as a whole, but for only 45% of the strikes, so that one can expect that his figures for worker involvement are the more reliable. The only other attempt to 'fill the statistical gap' was made by Hansen,[50] who based his estimates on Canadian data, but this is much less satisfactory than Griffin's approach.

Table I-I[51] compares Griffin's and official estimates:

(See Table I-I, over page).

As the Table shows, the B.L.S. estimates for 1914-15 are very incomplete, but the figures from 1916 to 1918 seem to be

Table 1-1: Estimates of strike activity, 1901-18 (annual averages).

	Number of strikes		Number of workers involved ('000's)	
	Griffin	Official	Griffin	Official
1901-05		2901		583.9
1906-09	2940	n.a.	386.5	n.a.
1910-13	3132	n.a.	791.5	n.a.
1914-15	3177	1399	767.0	n.a.
1916-18		3864		1355.7

consistent with earlier and later data. Griffin's estimates show a notable increase in strike activity, at least as far as worker involvement is concerned, in 1906-15 and this fits with the qualitative evidence for these years,[52] suggesting that his figures indicate the trend in activity, even if they are not wholly accurate.

The incompleteness of the early B.L.S. reports suggests that there may be a similar problem with the Commissioner of Labor's early data. It is certainly the case that the figures for 1881-84 are lower than those for later years, but there is no way of knowing how far this is a 'real' effect and how far it is due to changing reporting reliability. But is seems likely that for the first few years of work the Commissioner's staff were less skilled than they were later and that, as time went on, unions and employers came to keep better records of strikes. Similarly, the arousal of public interest in industrial conflict under the upsurge of strike activity in 1886[53] may have meant that newspaper reporting of strikes became more thorough.

One possible source of bias which can be tested is the effect of the fonnding of State bureaus of labour statistics; it might be argued that more strikes were recorded where there was a bureau than where there was not. Table I-2 gives the strike figures for seven States, by the date of founding of their bureaus, and compares these with those for the U.S. as a whole.

(See Table 1-2, over page).

Thus in the two years before the New York bureau was established (1881 and 1882) 2184 establishments were recorded as being involved in strikes, whereas in the two years after (1884 and 1885) 1578 establishments were affected, a decline of 27.7%, compared with a decline in the country as a whole of 7.6%.

If the foundation of the bureaus did affect recording, one would expect strike activity in the States concerned to increase more than, or decline less than, activity in the U.S. as a whole. It is clear from the Table that this is not the case. While enormous increases in activity were recorded in California, this was from a very small base and for the four States with bureaus set up in 1883 the number of establishments involved fell faster than it did in the whole country, while the number of strikers rose more slowly. There is thus no reason to suppose that there is any significant bias in the figures from this source.

We must now turn to some of the more important details of

Table 1-2: Effects of foundation of State Bureaus of Labor Statistics on strike recording

	Number of establishments			Number of strikers ('000's)		
	2 years before	2 years after	Percent. change	2 years before	2 years after	Percent. change
Founded 1883						
Calif.	3	49	1530	0.04	1.86	4800
Mich.	104	132	26.9	7.99	6.94	-13.1
N.Y.	2184	1578	-27.7	49.6	61.9	24.9
Wisc.	41	23	-43.9	4.07	2.07	-49.0
Total above	2332	1782	-23.6	61.7	72.8	18.1
Total U.S.	5033	4651	-7.6	221.9	275.9	24.3
Founded 1884						
Iowa	111	93	-16.2	6.33	3.53	-44.2
Maryland	75	284	279	4.21	11.4	171
Total U.S.	4864	12145	150	243.1	558.7	130
Founded 1885						
Kansas	14	38	171	1.29	1.06	-18.2
Total U.S.	5126	16450	221	239.5	672.9	181

the official agencies' recording practices. As I have mentioned, there are difficulties with establishing the boundary between strikes and non-strikes and with recording all the small disputes that fall into the former category. In order to achieve reliable series of strikes, most agencies place limits on the size of disputes they record. Since 1927, only those strikes involving at least six workers and lasting at least one full day or shift have been included; it is the latter condition which is the more important since it excludes short stoppages regardless of their size[54] and thus ignores any brief demonstration strikes that may take place. From 1914 to 1926 an attempt was made to count every stoppage. We do not know how successful this attempt was, but from the published statistics can see that about 3% of recorded strikes lasted less than one day, suggesting that the total number of strikes recorded for this period needs to be reduced by about this amount to make the figures comparable with those after 1927. Unfortunately, no breakdown of duration by workers involved exists for 1914-26, but it is likely, in view of the fact that in later years the great majority of strikers were involved in long strikes, that the bias is much less than 3%.

From 1881 to 1905, only strikes lasting less than one day were excluded, with no minimum on the number of workers involved. However, for the years 1901-05 some information on stoppages of less than one day was collected and reported separately from the main tables on strikes.[55] These stoppages accounted for about 4% of the total number of strikes, which accords well with the above figure of 3% for 1914-26, and only 1% of workers involved were in these short stoppages. However, we must note the fact that the Commissioner felt that the data were incomplete because of the insignificance of such strikes and because of the danger

that people might not remember them. In an earlier report it had been argued that disturbances of less than one day

> 'consist mainly of cases of misunderstanding, in which there was but a few hours' cessation of work and no financial loss or assistance involved .... they have not been considered sufficiently important to be classed as strikes'.[56]

This differs from the usual view that it is in practice hard to measure short stoppages and suggests, instead, that short disputes are not serious enought to be called strikes. This view has some plausibility since a short walk-out after work has begun is likely to differ from a refusal to work one or more whole days; and the conscious act of staying away from work may require a different type of decision from that involved in the stopping of work in the heat of the moment. But the important thing at present is that, except for 1914-26, only strikes of at least one day have been recorded and that the exclusion of shorter strikes has not biased the figures very much.

Some indication of the effect of including strikes by fewer than six men is given in Table I-3, but, before turning to this, the nature of its construction must be considered. In the first two of the Commissioner's reports, covering 1881 to June 1894, detailed information on every strike recorded was included, in addition to various summary tables. Each strike was entered by State, year and industry and other information recorded included its duration, 'cause' and result, whether or not it was called by a trade union, the number of employees before the strike, the number of strikers and the number of workers involved.[57] It is thus possible to build up summary tables which the Commissioner did not see fit to include. Table I-3 was constructed by taking

the number of workers involved (i.e. those striking plus those thrown out of work by the strike in the struck establishment) in each strike and classifying it into one of the categories shown in the table.

One other important point must be dealt with before we can examine the table. This is that in his first report the Commissioner did not make the strike the unit of analysis, but asked only how many establishments were affected. It was stated that

> 'the exact number of strikes represented in the tables cannot be stated, nor can the exact number that may occur in any year ever be stated, though a perfect record be had of every such disturbance.'[58]

This is a fundamental point, for it is being said that it is in principle impossible to determine where one strike ends and another begins; one must estimate the frequency of industrial disputes by recording the number of establishments affected. It is remarkable that in his next report devoted to strikes[59] the Commissioner dismissed this argument:

> 'In the present report experience and a great amount of care have made it possible to make the strike or lockout the unit in all cases'.

The earlier report had said that, even with perfect information, there would be no clear way to separate one strike from another. In reporting the results of strikes, the establishment was retained as the unit of analysis (despite the claim that the strike was the unit in all cases); thus for the whole period 1881-1905 we are not told how many strikes succeeded in their aims but in how many establishments the strikers' demands were met.

It is unfortunate that the early argument of the Commissioner was ignored for, as I have mentioned in earlier sections of this chapter, the problems of principle with counting the number of strikes are much greater than those relating to worker involvement. Particularly suspect must be the attempt in the last three reports to re-analyse the data of the first one in order to estimate the number of strikes in 1881-86. While the post-1914 reports state the number of establishments affected, they do not break this down by industry or result.

Even in the first strike report, there is some ambiguity since not every establishment is included in the detailed tables; in a number of cases a line of a table refers to two or more establishments. It appears, then, that some implicit means was being used to group establishments together and that the investigators did have some idea that stoppages for the same end should be seen as one strike, even if they did affect more than one plant. Thus the results reported in Table I-3 relate neither to strikes nor to establishments; in view of this, I have called the events from which the data are derived 'cessations'. For some years, the number of these is very similar to the number of strikes reported but in others there is a marked divergence.[60]

(See Table 1-3 over page)

The table indicates that, in the two periods combined, 6.8% of all 'cessations' involved less than six workers so that this figure is an approximation to the extent to which the data for 1881-1905 overstate the number of strikes, compared to the post-1927 figures. This is not to say that, even if the size distribution of strikes has remained unchanged, one could estimate the 'true' number of strikes in recent years by increasing the stated number by about 7%(to allow for the non-coverage of short stoppages) and a further 3% (for the strikes of less than one day). We do not know how complete the Commissioner's recording of small strikes was so we cannot take the numbers in the table as an estimate of the true number of such stoppages. The figures indicate only the extent to which the Commissioner's data are not comparable with those for later years: and since they relate to 'cessation' and not to strikes they give only an approximate indication. On the proportion of all workers involved who were in the small stoppages, we can calculate from Table I-3 that only about 0.1% of the total were in strikes in which fewer than six men were involved, suggesting that the Commissioner's estimate for worker

Table 1-3: 'Cessations' by size, 1881-94.

	1881-86		1887-94	
	Number	%	Number	%
Number of workers involved				
Less than 6	259	4.5	854	8.1
6-19	854	14.8	2669	25.4
20-49	1195	20.8	2381	22.7
50-99	1083	18.8	1414	13.5
100-249	1179	20.5	1530	14.6
250-499	581	10.1	831	7.9
500-999	347	6.0	419	4.0
1000-2499	169	2.9	244	2.3
2500-4999	53	0.9	73	0.7
5000 and over	36	0.6	75	0.7
Total	5756	99.9	10496	99.9

involvement is consistent with data from the B.L.S. It is not surprising that such a small proportion was involved in the very small strikes since the figures used were, of course, those for the total number of men 'thrown out of work' as a result of the strike and not those for 'strikers'. Even though less than six men may have struck, it is likely that more than this number will be affected by the dispute. A corollary of this is that the B.L.S. figures on worker involvement where six or more workers were affected are likely to be a highly reliable index to total worker involvement.

We have seen, then, that the changes in recording practice that have occurred over the years have not had a very large effect on the counting of strike activity. Further, the definitions of strikes have remained remarkably constant. For the Commissioner,

> 'A strike is a concerted withdrawal by a part or all of the employees of an establishment, or several establishments, to enforce a demand on the part of the employees'.

For the Bureau of Labor Statistics,[61]

> 'A strike is a temporary stoppage of work by a group of employees in order to express a grievance or to enforce a demand.'

There may be some concern that the Commissioner did not include the expression of a grievance in his formal definition of the strike, but it is clear that in practice he did not restrict himself to cases where there was an obvious demand by the employees; an examination of his four reports, and particularly of the information on individual strikes in the first two, indicates that he included such things as sympathy strikes and other stoppages lacking a clear demand by the strikers.

The Bureau has also included sympathy strikes, presumably because they can be seen as expressing a grievance and because they have some link with the strikers' own conditions of employment. We must also consider the approach to two other difficult categories, the jurisdictional strike and the political strike. It might be argued that the former is not a true strike because it is not a dispute between employees and their employer, but the Bureau argues that the employer is integral to the situation in that two groups of workers are demanding the assignment of a particular task; similarly, when the dispute is between two rival unions the Bureau argues that there must be discontent among one union's members over the conditions negotiated by the other, so that again the employer is necessarily involved.[62] It is doubtful whether this is true in all cases, but the difficulty of deciding whether the employer is sufficiently involved to call a stoppage caused by rival unionism a strike probably justifies the Bureau in including all such stoppages in its statistics. It is clear from the inclusion of strikes 'against the dismissal of a unionist' and 'against employment of members of other union' that the Commissioner, too, counted as strikes stoppages resulting from disputes between unions or over the allocation of work.

The Bureau's approach to the political strike is to include it if the workers' terms and conditions of employment seem to be involved, but otherwise to exclude it. The decision is taken on a case-by-case basis so that a stoppage by public employees against some legislative action affecting their salaries would be included, whereas a refusal of longshoremen to load cargo destined for particular countries would not.[63] In other words, the attempt is made to restrict the strike statistics to <u>work</u>

stoppages in the sense that they are directly related to conditions of work. Political strikes as they are known in some European countries are virtually unknown in the U.S. so that the problems facing the Bureau are not very great. Strikes during the Second World War and the so-called 'emergency disputes' since then have certainly involved direct and powerful government intervention, but the stoppages themselves have always been concerned with the terms and conditions of employment. To be sure, the decision to strike may be taken in the light of probable government action and in practice the strike may be aimed as much against the government as against the employer,[64] but it is the terms of employment which have remained the focus and the Bureau has not been faced with any important problems of classification.

I shall deal with the details of the cross-classifications of strikes at the relevant points in later chapters, but some mention must be made here of the data on the causes and results of stoppages. There has been a continuous attempt since 1881 to record the issues in dispute in strikes but a number of changes have been made in the way these were classified. The Commissioner began by giving extensive listings of the issues involved; since up to 65 groups of cause were distinguished this hid more than it revealed and made the analysis of broad trends of activity virtually impossible.[65] In later reports the data were presented in a more systematic but still far from satisfactory way. Since the B.L.S. adopted its own approach to classifying strike issues in 1914, there have been three important attempts at re-definition (in 1927, 1942 and 1950) and some minor alterations, suggesting that there is no simple answer to the problem. Thus, in analysing the long-term trends, only the

broadest categories of issue can be used, although within each period of definitional consistency some further breakdowns are possible.

An examination of these attempts to classify strikes by cause reveals one point of general importance. This is that broadly similar types of dispute have been the object of attention. The official re-appraisals of the procedures have not led to any radically new classifications; for instance, that of 1960 re-ordered the data in terms of the contractual status of the strike,[66] to achieve what was felt to be a more meaningful presentation, but there is a broad similarity with the earlier methods. This supports the view that what has been defined as a strike has remained constant over the years, and also suggests that the broad categories of 'wages and hours', 'union organisation' and 'working conditions' can be used for comparative purposes.

As I have mentioned, the presentation of information on the results of strikes has been discontinued, which suggests that the figures that are available have to be used with particular caution. We are told whether the results were generally favourable to the workers or to the employer or whether a compromise was achieved. While these categories do not say much about the broad question of how far strikes have improved the conditions of the workers, they can be of some use; for instance, we can examine the effect of economic conditions on the rate of success and differences in the success rate of strikes in which various issues were involved.

We have seen, then, that what the official agencies count as a strike and how they go about recording stoppages have had a considerable degree of consistency. Critics of the American

statistics have pointed out that short strikes are ignored and that the information is incomplete and cannot be reduced to statistical form.[67] The first criticism seems to imply that the amount of conflict is underestimated in the official data and that a more complete recording would show a more 'correct' figure. This argument is valid in attacking those who argue that there are really very few strikes and that collective bargaining is 90-95% effective (since only 5-10% of negotiations lead to strikes).[68] There is an unknown number of small strikes, so that these sanguine estimates must be rejected. But for the analysis of <u>trends</u> of industrial conflict the argument is not pertinent. We are not concerned with the <u>amount</u> of conflict but with seeing if there is <u>more</u> at one time than another; it is meaningless to ask how much conflict there is without reference to some standard of comparison.

5. <u>Conclusion</u>

I have argued in the previous sections that it is possible to consider strike statistics in terms of standard measurement theory, and that the American data have sufficient reliability to be used in the analysis of trends of activity. On the first point, I suggested that the difficulties which exist with all official statistics are much less severe for strikes than for some other forms of activity. The concept of the strike is part of everyday life and is not imposed by outside observers. To a very large extent, 'members' have a set of shared meanings relating to what a strike is, although, as I have stressed, this does not preclude disagreement over what a given action signifies. Strikes are a recognised part of the employment relationship and their meaning at one level is not mysterious: they involve the collective refusal to work on the existing terms. An even stronger

case for the unimportance of individual meanings could be made if we could suggest that strikes can be defined without any element of intentionality. But, firstly, official agencies operate with the view that strikes intend to enforce a demand or express a grievance, so that nothing would be gained from establishing a different definition. Secondly, the intentionality aspect is necessary because it stresses that strikes are conscious collective actions. But, 'for all practical purposes' this aspect of the definition raises few problems because the 'expression of a grievance' is a very broad category; it is very unlikely that many collective work stoppages are excluded from the strike category solely because no clear grievance seems to be involved.

Turning to traditional measurement theory, we can see that several levels of validity can be distinguished. Firstly, there is the question whether the official agencies measure what they set out to measure; in the American case, this refers to the number of strikes involving at least six workers and lasting at least one day. Since small and short strikes are excluded, recording problems are kept within bounds, but it is clear from the rise in the number of strikes counted when the 'leads' on strike activity are improved that a complete census of all stoppages is not obtained. However, counts of workers involved and days lost are more accurate. A second level of validity concerns the extent to which the strike figures cover stoppages which are excluded from official definition. I have given estimates of the effect of excluding small and short disputes, but these relate only to differences between the practices of different recording agencies and not to the true extent of such disputes. Several writers have studied the number of strikes in

particular firms or industries and noted that this is often much greater than the number officially recorded.[69] If this is repeated throughout the economy, it is clear that strike frequency is not a very close estimate of the total number of strikes; again, however, workers involved and days lost are much more fully recorded because they are concentrated in the large disputes.

The third level of validity involves the question of whether strikes can serve as an index of 'general unrest'. I have argued that it is not useful to look at strikes in this way. Firstly, 'unrest', assuming that the term can be given an unambiguous meaning, is likely to find its expression in many forms, some overt and others hidden from all but the most detailed enquiries. Secondly, strike activity reflects many things other than 'fundamental' discontent. It is preferable, therefore, to see the strike as an important form of conflict in its own right; trends of activity may reveal certain features of labour-management relations, but the focus on fundametal discontents is not helpful in doing this.

Although the validity of strike measures is open to question, their reliability can be established more firmly. In the United States, at least, recording practices have remained remarkably stable and the differences in strike definitions do not seem to have had a very great effect on the number of stoppages counted. I have suggested that it is not meaningful to ask how much conflict there is; rather, trends and inter-industry patterns should be the focus. Thus the reliability of the indices is more important than their validity, given that some minimum level of validity is attained. As I have said, the reliability of the worker involvement and days lost measures is greater than that of strike frequency, because changes in recording practices have

had a less marked effect. But trends in the number of strikes can be used since year-to-year fluctuations are unlikely to be heavily affected by the unreliability of the figures.

In the light of these conclusions, I shall concentrate in the following chapters on trends in strike activity over time and cross-sectional patterns at one time. Strikes are separable from other forms of protest activity and are worthy of study in their own right. But an analysis of them may also point to conclusions of a more general nature, which are taken up in the final chapter. Since it is not possible to approach the great mass of data on strikes without a theoretical focus, chapter two outlines the theory which I shall be concerned with and chapters three to seven set out to test it.

NOTES:

1. For example, H.A. Turner Is Britain really strike-prone? (Cambridge Univ. Press, Cambridge, 1969); W.E.J. McCarthy 'The nature of Britain's strike problem', Brit. J. of Ind. Rels., 8, pp. 224-36 (1970).

2. For general criticisms see J.H. Goldthorpe 'A revolution in sociology?' Sociology, 7, pp. 449-62 (1973); R. Gidlow 'Ethnomethodology - a new name for old practices' Brit. J. Sociol., 23, pp. 395-405 (1972); W. McSweeney 'Meaning, context and situation' European J. Sociol., 14, pp. 137-53 (1973).

3. H. Garfinkel Studies in ethnomethodology (Prentice-Hall, Englewood Cliffs, N.J., 1967) pp. 11-18, 186-207. See also A.V. Cicourel Method and measurement in sociology (Free Press, N.Y., 1964) and A.V. Cicourel and J.I. Kitsuse 'A note on the use of official statistics' Social Problems, 11, pp. 131-39 (1963).

4. J.D. Douglas The social meanings of suicide (Princeton Univ. Press, Princeton, N.J., 1967) esp. p. 229.

5. J.D. Douglas 'Understanding everyday life' pp. 3-44 in Douglas (ed.) Understanding everyday life (Routledge & Kegan Paul, London, 1971) at pp. 6-7.

6. D. Walsh 'Varieties of positivism' pp. 37-55 in P. Filmer, M. Phillipson, D. Silverman & D. Walsh New directions in sociological theory (Collier-Macmillan, London, 1972) at pp. 43-53.

7. L. Churchill 'Ethnomethodology and measurement' Social Forces, 50, pp. 182-91 (1971) esp. pp. 186-88. See also H. Blumer Symbolic interactionism (Prentice-Hall, Englewood Cliffs, N.J., 1969).

8. B. Hindess The use of official statistics in sociology (Macmillan, London, 1973) pp. 28-29.

9. This seems to be the meaning of Garfinkel's term 'indexicaltty'.

10. D. Benson 'A revolution in sociology' Sociology, 8, pp. 125-29 (1974).

11. See R. Hyman Strikes (Fontana-Collins, London, 1972) p. 17; A. Flanders Management and unions (Faber & Faber, London, 1970) p. 239; F. Peterson Strikes in the United States, 1880-1936 (U.S. Dept. of Labor, Bulletin No. 651, Washington, D.C., 1938) p. 3; K.G.J.C. Knowles Strikes - a study in industrial conflict (Blackwell, Oxford, 1952) p. 1; O. Kahn-Freund & R. Hepple Laws against strikes (Fabian Society, Research Series pamphlet no. 305, 1972) p. 4; International Labour Office Methods of compiling statistics of industrial disputes (Studies and reports Series N (Statistics) No. 10, Geneva, 1926) p. 14. It is Peterson's definition which Hyman quotes, without acknowledgement.

12. E. Durkheim Suicide (trans. J.A. Spaulding and G. Simpson; Routledge & Kegan Paul, London, 1952) p. 44; S. Lukes Emile Durkheim (Penguin, Harmondsworth, 1975; orig. publ. 1973) p. 200.

13. J.R. Commons et.al. History of labour in the United States (Macmillan, N.Y., 1918) Vol. 1 p. 26.

14. It is notable that the most ambitious cross-national study of strike statistics restricts itself to countries with a free labour market; that is, the strike is seen as an aspect of capitalist employment relations and outwardly similar events elsewhere are not truly comparable. A.M. Ross and P.T. Hartman Changing patterns of industrial conflict (Wiley, N.Y., 1960).

14a. The 'collective and complete' nature of strikes is taken up further below.

15. A.V. Cicourel The social organisation of juvenile justice (Wiley, N.Y., 1968) p. 3; See also Hindess op.cit. and Benson op. cit.

16. See P. Hiller 'Continuities and variations in everyday conceptual components of class' Sociology, 9, pp. 255-87 (1975); E. Bott Family and social network (Tavistock, London, 2nd edn., 1971) p. 163.

17. J.R. Hicks The Theory of wages (Macmillan, London, 1932). See also O. Ashenfelter & G.E. Johnson 'Bargaining theory, trade unions and industrial strike activity' Amer. Econ. Rev., 59, pp. 35-49 (1969) esp. p. 39; L.G. Reynolds Labor economics and labor relations (Prentice-Hall, Englewood Cliffs, N.J., 6th edn., 1974) pp. 470-85.

18. For a very useful summary of the reporting procedures and statistics used of 18 countries see M.R. Fisher Measurement of labour disputes and their economic effects (Organisation for Economic Co-operation and Development, Paris, 1973) pp. 101-32, 231-34.

19. Cf. the case of France, where the rules on counting a 'conflit du travail' as one strike or as several seem to have changed, possibly because it is harder to place strikes within the framework of collective bargaining. See M. Silver 'Lies, damned lies and strike statistics: the measurement of trends in industrial conflict' (unpublished paper, 1975) pp. 9-10.

20. This is the conclusion of Silver: ibid. and see M. Silver 'Recent British strike trends: a factual analysis' Brit. J. Ind. Rels., 11, pp. 66-104 (1973) at pp. 69-70; Turner op.cit. (note 1) pp. 9-15 agrees.

21. For an example of this see International Labour Office op.cit., p. 15: in Norway in 1919-21 the workers' information suggested that 99,000 workers were involved in strikes, while the employers' estimates put the figure at 35,000.

22. Walsh loc.cit. (see note 6); cf. C.G.A. Bryant 'In defence of sociology' Brit. J. Sociol., 21, pp. 95-107 (1970).

23. Fisher, op.cit., p. 56; Peterson op.cit., p. 164.

24. There is some dispute over the effect in practice of centralising bargaining on strike activity. All that is being said here is that the factors mentioned will exert a downward influence on strike frequency, which may be counteracted by other forces.

25. Silver 'Lies, damned lies and strike statistics' op.cit., pp. 4-6; Hyman op.cit., p. 26.

26. Detailed figures for the U.S. will be given in later chapters. See also Silver 'Recent British strike trends' op.cit., pp. 83-85 and my B.Phil. thesis 'Strikes: theories of their trends and causes; and the application of some statistical evidence' (Oxford, 1975) tables A2 and A4.

27. The automobile industry is often cited as an example. See H.A. Turner, G. Clack and G. Roberts Labour relations in the motor industry (George Allen and Unwin, London, 1967) esp. pp. 52-53. On the American case see R. Herding Job control and union structure (Rotterdam Univ. Press, Rotterdam, 1972) p. 210.

28. Knowles op.cit., pp. 302-03; on pp. 299-306 Knowles provides an excellent summary of the main problems with strike statistics.

29. How far days lost measure economic losses is a complex question which I cannot go into here. See Fisher op.cit., pp. 179-97, Turner op.cit. (note 1). On why the term 'striker-days' might be preferable to 'days lost' see Turner, Clack and Roberts op.cit., p. 54; the two terms will be used interchangeably here.

30. See references in note 20, plus T.G. Whittingham and B. Towers 'The strike record of the United Kingdom: an analysis' Ind. Rels. J., 2, No. 3, pp. 2-8 (1971).

31. C. Kerr 'Industrial conflict and its mediation' Amer. J. Sociol., 60, pp. 230-45 (1954) at p. 232. See also H.A. Clegg The system of industrial relations in Great Britain (Blackwell, Oxford, 1972) pp. 313-14 for the growth of forms of pressure other than the strike in Britain.

32. For example, among American school teachers. See M.H. Moskow Teachers and unions (Univ. of Pennsylvania Wharton School of Finance and Commerce, Philadelphia, 1966) p. 97. What was reported to be the first strike by nurses in the U.S. took the form of mass 'sick leave'; see 'Developments in industrial relations' Monthly Lab. Rev., 89, p. 1131 (Oct. 1966). The B.L.S. attempts to record all strikes, regardless of their legal status; this is particularly important in relation to stoppages by public employees, which are often illegal. See, e.g., Analysis of work stoppages in 1972 (U.S. Dept. of Lab. Bulletin 1813, 1974). See also J. Stieber Public employee unionism: structure, growth, policy (Brookings Instit., Washington, D.C., 1973).

33. For the use of such tactics by the Industrial Workers of the World see J.S. Gambs The decline of the I.W.W. (Russell & Russell, N.Y., 1966; orig. publ. 1932) pp. 127-28.

34. C. Kerr and A.J. Siegel 'The inter-industry propensity to strike' pp. 189-212 in A. Kornhauser, R. Dubin and A.M. Ross (eds) Industrial conflict (McGraw-Hill, N.Y., 1954). We may also want to see if theories derived in relation to one country apply to another. See P.N. Stearns Lives of Labour (Croom Helm, London, 1975) pp. 300-327 for an examination of strikes in four European countries in 1890-1914; E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974).

35. Cf. J.S. Auerbach 'Introduction' to Auerbach (ed.) American labor: the twentieth century (Bobbs-Merrill, Indianapolis, 1969) p. xxi.

36. See L.A. Coser 'Structure and conflict' pp. 210-19 in P.M. Blau (ed) Approaches to the study at social structure (Open Books, London, 1976).

37. See, for example, the view of Karsh: strike causes are not to be 'found alone in depersonalized charts, graphs, and tables....Since a strike is first and foremost a form of human behavior acted by individuals who are the immediate participants in groups, their causes are social as much as, if not more than, economic or historical'. And 'Workers in the same objective situation will respond differently to the appeals of union organization and strike action'. B. Karsh Diary of a strike (Univ. of Illinois Press, Urbana, Ill., 1958) pp. 2, 5.

38. Good detailed studies include D. Brody Labor in crisis: the steel strike of 1919 (J.B. Lippincott Co., Philadelphia and N.Y., 1965) and S. Fine Sit-down: the General Motors strike of 1936-37 (Univ. of Michigan Press, Ann Arbor, Mich., 1969).

39. See H.L. Sheppard & N.Q. Herrick Where have all the robots gone? Worker dissatisfaction in the '70's (Free Press, N.Y., 1972) p. 3; R. Dubin 'Attachment to work and union militancy' Ind. Rels., 12, No. 1, pp. 51-64 (1973). Cf D. Bell Work and its discontents (Beacon Press, Boston, 1956) pp. 28-29.

40. See W.E.J. McCarthy 'The reasons given for striking' Bull. of the Oxford Univ. Instit. of Stats. 21, pp. 17-29 (1959); Knowles op.cit. (note II) pp. 209-12, 228-37; 240-45; Peterson op.cit. (note II) pp. 166-69.

41. The term 'issues' in dispute is used by the American agency, the Bureau of Labor Statistics; the 'reasons given for striking' is McCarthy's.

42. Hyman op.cit. (note 11) p. 123; D. Lockwood 'Arbitration and industrial conflict' Brit. J. Sociol., 6, pp. 335-47 (1955) at p. 338.

43. Thus Karsh op.cit., p. 4 argues that the strike is a means of resolution of conflict as well as an expression of it. Many unionists claim that strikes are never really lost. Thus P.J. McGuire, the leader of the Carpenters' union in America, said in 1883: 'No strike is a loss or a failure to the workers even if the point sought is not gained for the time being. If naught else, they teach the capitalists that they are expensive luxuries to be indulged in'. Quoted in P. Taft Organized labor in American history (Harper and Row, N.Y., 1964) p. 110.

44. Peterson op.cit. (note 11) p. 2.

45. J.I. Griffin Strikes: a study in quantitative economics (Columbia Univ. Press, N.Y., 1939) pp. 118-29.

46. Third Annual Report of the Commissioner of Labor, 1887 (Government Printing Office, Washington, D.C., 1888) p. 10; Peterson op.cit., p. 170; annual article on strikes and lockouts Monthly Lab. Rev., 10, p. 1505 (1920).

47. Peterson op.cit., p. 170. The response to questionnaires has not always been good; in 1919 the B.L.S. reported that of 3997 sent out only 1392 were returned completed in whole or part: Monthly Lab. Rev., 8, No. 6, p. 307 (1919). This is unlikely to affect the number of strikes recorded, since replies to questionnaires would not turn up any new disputes, but may have led to biases in the reporting of such things as the issues in dispute and the extent of union involvement.

48. Fisher op.cit. (note 18) pp. 129-30. The addition of a new source of leads in 1950 is estimated to have increased the number of strikes reported, above what it would otherwise have been, by about 5% in 1950 and 10% in 1951; since most of these stoppages were small, the effect on the numbers of workers involved and striker-days was about 2% in 1950 and 3% in 1951. See annual article on work stoppages Monthly Lab. Rev., 74, p. 512 (1952). The size of the impact on the number of strikes recorded is somewhat disconcerting and is a further reason to treat the figures with caution. Cf. E. Clague The Bureau of Labor Statistics (Praeger, N.Y., 1968) p. 142: 'most strikes, no matter how small, do get into the local papers, so the Bureau has found that the major source of information on strikes can be obtained from newspaper clippings'.

49. See Griffin op.cit., pp. 118-29.

50. A.H. Hansen 'Cycles of strikes' Amer. Econ. Rev., 11, pp. 616-21 (1921).

51. Details of the sources of all tables where a source is not specifically acknowledged will be found in Appendix I.

52. See D. Montgomery 'The "New Unionism" and the transformation of workers' consciousness in America, 1909-22' J. Social Hist. 7, pp. 509-29 (1974); G. Adams Age of industrial violence, 1910-15 (Columbia Univ. Press, N.Y., 1966); M. Dubofsky We shall be all: a history of the Industrial Workers of the World (Quadrangle Books, Chicago, 1969); and any standard work on labour history e.g. Taft op.cit. (note 43).

53. The year was marked by a number of strikes for the eight-hour day, considerable activity by the Knights of Labor, then at its peak, and the Haymarket bombing in Chicago, which aroused considerable interest in labour questions.

54. Cf. the practice in the U.K., where strikes lasting less than a day and involving less than ten workers are excluded, unless more than 100 striker-days were involved.

55. Twenty-first annual report of the Commissioner of Labor, 1906 (G.P.O., Washington, D.C., 1907) pp. 101-02.

56. Tenth annual report of the Commissioner of Labor, 1894 (G.P.O. Washington, D.C., 1896) p. 10.

57. The attempt to distinguish between strikers and 'workers thrown out of work as a result of the strike' was not continued by the B.L.S. Strikers were 'those who actually joined in the demand and followed their demand by a cessation of work' (Twenty-first report...1906, op.cit., p. 110) while those involved were the strikers plus other employees of the struck plant thrown out of work. The limitation of worker involvement to struck establishments has thus been a constant feature of all the official data.

58. Third report...1887, op.cit., p. 11.

59. Tenth report...1894, op.cit., p. 13.

60. Table A-25, in Appendix 2, compares the numbers of strikes and cessations for 1881-93. Up to 1886, there were more cessations than strikes, indicating that some means of combining separate cessations into one strike was employed when the data were re-examined in an attempt to estimate the number of strikes. After 1886, the numbers were more or less equal; the slight differences can be explained by errors in my recording of cessations. (The larger discrepancy for 1889 is due to a gap of several pages in the copy of the Commissioner's Tenth Report available to me.)

61. Twenty-first report...1906, op.cit., p. 11; Peterson op.cit., p. 3.

62. Peterson op.cit., pp. 5-6.

63. Fisher op.cit., pp. 128-29.

64. This has been particularly true of railway disputes, in which the government soon came to play a significant role. See G.G. Eggert Railroad labor disputes: the beginnings of Federal strike policy (Univ. of Michigan Press, Ann Arbor, Mich., 1967); J.J. Kaufman Collective bargaining in the railroad industry (King's Crown Press, Columbia Univ., N.Y., 1954).

65. Griffin op.cit., p. 73. For a description of the details of the B.L.S. procedures for all the main strike indices see Peterson op.cit., pp. 163-69.

66. That is, one broad division was made of all strikes which involved demands for changes in the terms of contract between union and employer.

67. S. Lens Left, Right and Center (Henry Regnery Co., Hinsdale, Ill., 1949) p. 355; A.M. Bing War-time strikes and their adjustment (E.P. Dutton and Co., N.Y., 1921) p. 291. See also H.G. Gutman 'The worker's search for power: labor in the Gilded Age' pp. 38-68 in H.W. Morgan (ed.) The Gilded Age: a reappraisal (Syracuse Univ. Press, N.Y., 1963) at p. 46.

68. The 90% figure is from International Labour Office The trade union situation in the United States (I.L.O., Geneva, 1960) p.32. A figure of 'more than 95%' is given by the editors 'Problems and viewpoints' pp. 3-23 in Kornhauser et.al. (eds) op.cit. (note 34) at p. 11.

69. See refs in note 27 and, for example, J.W. Kuhn Bargaining in grievance settlement (Columbia Univ. Press, N.Y., 1961) p. 158.

CHAPTER TWO

THE THEORY OF THE INSTITUTIONALISATION OF INDUSTRIAL CONFLICT

1. Introduction

The theoretical focus for this study is provided by the set of ideas centred upon the concept of the institutionalisation of industrial conflict. In its broadest sense, the concept of institutionalisation has been widely used in the study of society[1] and social movements. As Turner and Killian put it[2]:

> 'a movement is institutionalized when it has reached a high degree of stability internally and been accorded a recognized position within the larger society. Institutionalization occurs when the movement is viewed as having some continuing function to perform in the larger society, as it is accepted as a desirable or unavoidable adjunct to existing institutional arrangements'.

In the present context, the argument is that there is a long-term process of accommodation between workers and employers and a recognition of the rights of the other side. The concern is with the institutionalisation of conflict rather than with that of the labour movement, and thus we are dealing with two separate but linked processes: the institutional control of conflict, which reflects the acceptance of trade unionism in society, and the development of strikes as institutions in their own right. The link is provided by collective bargaining which, as we shall see below, is seen as the key process in the control of conflict.

Although the theorists to be considered differ in a number of respects, it is possible to see them as forming two groups. The 'conventional' approach received its best-known statements

in the 1950's and forms part of the current 'pluralist' orthodoxy of industrial relations.[3] Although the more extreme of the statements of the Fifties would now be qualified, the core of the analysis remains. This is that industrial conflict is no longer an uncontrolled and often violent affair but has been stabilised and made subject to institutional control. The approach which I have called 'radical' would agree that conflict is regularised but emphasises the 'incorporation' of the unions into the system and see society not as a collection of equal interest groups but as a class system in which the interests of the workers are subordinated to those of the rulers.

The essential similarity of the two approaches lies in their concern with the process whereby conflict is controlled and limited.[4]

> 'Industry and industrial conflict are, in post-capitalist society, institutionally isolated, i.e. confined within the borders of their proper realm and robbed of their influence on other spheres of society....they have settled down in society, have found a stable and definite place within it.'

Neither approach can argue that employers and unions create a means of living together unless it is also argued that their conflict does not spill over into the rest of society; otherwise, institutional control would be lost. This does not deny that the government can come to play a role in industrial relations. Indeed, some writers would stress this aspect of institutionalisation, but the above quotation argues merely that conflict has been robbed of its influence elsewhere and not that the impact of 'society' on industry has been eroded.

The division into two approaches is to some extent a political

one. In broad terms, the conventional writers accept the existing system and see collective bargaining as an institution which has successfully solved certain problems. The radicals, on the other hand, may agree that institutional control has been achieved but are not happy with this state of affairs. Writers of both approaches attempt to make their theories work by, on the one hand, stressing the values of 'reason' and the disadvantages of a 'resort to force' and, on the other, advocating mass action by the workers. These political divisions help in the differentiation between the approaches, but the concern here is with their theoretical arguments, to which I now turn. The following section deals with the conventional approach, while section 3 deals with the important recent development of it in the work of Shorter and Tilly. Section 4 examines the radical view, while in section 5 I attempt to draw out the empirical implications of the institutionalisation theory.

2. The 'conventional' approach

While statements that reflect various parts of the theory can be found scattered through the literature on industrial relations,[5] my concern here is with the more careful and systematic statements of it. The conventional approach grows from the tradition of pluralism whose tenets have been given a classic expression by Kerr.[6] Society is made up of competing groups, but rules develop to control their relationship. For a pluralist system to operate, the sides must accept the validity of each other's position, a situation which is said to exist in the United States; but mutual accommodation must not shift to mutual advantage at the expense of other groups in society. In other words, the system must provide checks on the free use of a group's power and, while 'responsible' behaviour by unions and

employers is essential, overall power must be held by the State. Pluralism has worked because accommodation between the parties has been achieved and progress continued.

A slightly different emphasis, which plays down the need for a final authority and concentrates on the process of concession and compromise has recently been given by Clegg[7] in a pluralist system,

> 'the group gains a stake in society, not only in the benefits derived from the concessions themselves, but also in the commitment to the process by which they were secured....In this way every powerful group is enmeshed in the plural society, and, as new groups successfully demand attention, they too are <u>enmeshed by concessions</u>'.

The assumption that the system itself adopts a neutral attitude to the new challengers is very clear.

The most general attempt at the explanation of the trends which are seen as leading to the creation of the plural society comes from writers who focus on the process of industrialisation. The general argument is that the coming of industry disrupts existing social structures and that conflict will arise, but that, when the workers become used to industrial life, a new pattern of accommodation will emerge. For Kerr and his associates,[8]

> 'worker protest in the course of industrialization tends to peak relatively early and to decline in intensity thereafter....At the early stages the break with the traditional society is sharpest; the labour force is making the more basic and difficult adjustments to the discipline and pace of industry....The amount of latent protest at the early stages is related directly to the

> pace of industrial growth....(and) to the extent to which the new industrial order adapts or destroys the institutions of the traditional society....Protest as a significant response has declined....primarily on account of the greater positive attractions of industrialization'.

According to Siegel[9], the character of conflict will change. In early industrialisation it will be amorphous and volatile, with large demonstrations that will flare up and rapidly subside. As time goes on, expressions of protest become 'rational, predictable, and stylized' and their magnitude and revolutionary potential decline. For Dunlop[10], the 'rule-making process....becomes more explicit and formally constituted in the course of industrialization'.

Thus the view is very clearly expressed that industrial conflict will decline in intensity and will be subject to institutional stablilisation. Further, this trend will be irreversible for, once the initial challenge of the development of industry has been overcome, no serious problems will emerge. Since this argument is general in its application, an examination of the American case will provide some test of it. It may be argued that the period since 1881 does not provide a fair test because modernisation was already well advanced by 1880. But arguments exist that America was in the relatively early and rapid stages of industrialisation in the 1880's.[11] Further, some traces of 'early' patterns of protest should be evident, particularly in those industries which had not yet experienced the shift to modernity.[11a]

Within the pattern set by industrialisation, collective bargaining is seen as the institution which controls conflict.[12]

> 'Collective bargaining institutionalizes conflict by gradually building up orderly processes, joint machinery, and other administrative restraints against unruly or precipitate action'.
>
> 'With maturity of collective bargaining, continued improvement in grievance work, and general acceptance of arbitration, there seems little excuse for the non-peaceful settlement of grievances'.
>
> 'Collective bargaining is the great social invention that has institutionalized industrial conflict'. It has 'created a stable means for resolving industrial conflict'.

The general process by which accommodation is said to occur is clear enough. After a period of hostility and conflict, the parties begin to realise that they stand to gain by working together; their tentative first steps soon lead to a more permanent agreement.[13]

Although the conventional theory reached its most elaborate form in the 1950's, it has had a long history; a discussion of some of its earlier expressions will bring out some of its central features. As early as 1901, Commons was arguing:[14]

> 'This highest form of industrial peace, negotiation, has now reached a formal stage in half a dozen large industries in the United States'. The most 'comforting feature' of the recent negotiations in the coal industry had been 'the matter-of-fact way in which each side takes the other. There is none of that old-time hypocrisy on the part of the employers.... and there is none of that ranting demagogy on the part of the workmen'.

Thus reason and mutual understanding are seen as having replaced distrust and suspicion. In their work on labour history, Commons and his associates similarly argue that the establishment of trade agreements was the logical thing to do; there is the implication that reason will spread.[15] Employer hostility to the unions was recognised and the possibility that collective bargaining could be destroyed not rules out, but the implication is that 'unreasonable' employers can be brought round to accept bargaining. The emphasis on negotiation as the highest form of industrial peace and on mutual acceptance by the parties is central to the conventional approach.

Similarly, for Mitchell:[16]

> 'A strike is simply a method of bargaining' (it) 'does not necessarily involve animosity....or any form of bitterness; it merely represents a difference between what the buyer of labor is willing to offer, and what the seller is willing to accept....The hope of future peace in the industrial world lies in the trade agreement' (but it cannot) 'prevent all strikes. It will undoubtedly minimize these industrial conflicts, by obviating misunderstandings, by showing each side the position of the other, by creating a more friendly feeling between employers and employees, and finally by making strikes and lockouts, when they do occur, so wide-spread, general, and expensive, that their recurrence will be avoided'.

Thus the strike has lost any political overtones it may have had, and even within the confines of the employment relationship it is merely a bargaining weapon in disputes over the price of labour.[17] And, through mutual understanding, the frequency of

strikes is reduced; but Mitchell makes the point, which is voiced by several more recent theorists, that bargaining may not be able to prevent large stoppages from occurring. Small strikes that are due to misunderstandings can be avoided, but if there is a fundamental dispute there is nothing that bargaining can do. Since strikes become weapons whose use is carefully planned, the average strike becomes a costly battle between two determined and well-matched adversaries; the size and length of strikes may thus even increase.[18]

Hiller provides an early example of an argument which is at the heart of the institutionalisation theory:[19]

> 'The form taken by collective unrest is at first the product of random efforts to gain satisfactions. If these results follow from any trial-and-error behavior the lucky form is repeated. It is adopted as a traditional model and subjected to experimental improvements. From these attempts to direct unrest, union structure and techniques for maintaining institutionalized practices have developed.'

He also argues that the strike itself has become an institution, with a set of customary rules, again anticipating some more recent discussions, but elsewhere[20] suggests that there is a cycle of accommodation and conflict. While the lessons of conflict lead to modific ations of policy, there is no one-directional tendency since the status gained by the workers' collective power is often lost. Such a cyclical view, which was also stated by Hoagland,[21] is clearly more theoretically advanced than the suggestion that institutionalisation is a one-way process. But Hiller shares the difficulty of later writers in failing to specify the causes of movements of the cycle; it is easier to

produce a general interpretation in terms of a cycle or trend than to provide an adequate account of the link between the factors identified as causes and the phenomenon to be explained.

Hiller gives three reasons why disputes between workers and employers will become less likely.[22] The details of these do not concern us here, but we must note Hiller's reservations about the changes he identifies:[23]

> 'In so far as these changes cumulate, they have, in restrospect, a discernible trend. For this reason they appear to have had a predetermined aim, whereas at each step they were compelled, or were selected as the course of least resistance'.

Hiller's caution in extrapolating trends is not shared by later writers, although, as we shall see below, Dahrendorf's approach is in many ways similar. We have seen, then, that the institutionalisation theory has a long history; the work of Commons and Mitchell contains some crucial statements of the theory which have been re-discovered by the writers of the 1950's. But the discussion of Hiller has shown that these later writers have tended to ignore the possibility of a cyclical pattern of institutionalisation and de-institutionalisation. They have taken certain trends, which may, indeed, involve a reduction in the amount of conflict, and assumed that they are inevitable and irreversible. With this in mind, we may return to some of the more recent expressions of the institutionalisation theory.

For Lester,[24] accommodation comes about through changes within the union, such as the centralisation of control and the growth of more reasonable attitudes among the leaders, but largely through developments elsewhere: a greater employer acceptance of labour organisations, a rise in the workers' living

standards and a general societal change towards the moderation of attitudes. Writing thirty years after Hiller, Lester identifies a similar set of forces leading to institutionalisation, but he cannot explain why these forces have operated in a certain way. He cannot show why employers came to accept unions at one time rather than another or why an increase in the workers' standard of living necessarily reduces conflict.[25]

After identifying certain general trends, Lester, like many other writers,[26] then modifies what he has said, so that it is unclear what his final position is. However, it is possible to distinguish between a 'strong' version of the institutionalisation theory and a weaker form. The former sees accommodation as a general process which is irreversible; in particular, collective bargaining should be able to withstand the pressures put on it by economic forces. It need not be argued that institutionalisation is inevitable, but once a pattern of accommodation is established it is seen as permanent. The 'weak' version would hold that the maintenance of the pattern is much more dependent on other things; an economic collapse, for example, could overturn the system. However, any theory of institutionalisation must, to be worth the name, argue that institutions can exert some influence on the amount and character of conflict. The very weak view, that 'maturity' depends on economic prosperity,[27] is saying, in effect, that economic conditions reduce the amount of conflict present and that the institutions of control can then appear to exert an influence; a true institutionalisation theory must give them an independent role.

A different emphasis occurs in the work of Dubin.[28] Dubin argues that institutionalisation does not end the importance of power in industrial relations; collective relations are

<u>necessarily</u> grounded in the use of power. Strikes and their managerial equivalents are weapons which exacerbate industrial 'disorder'; the strike is a form of 'behavior that interrupts the normal business of the society'.[29] But collective bargaining allows the limits of disorder to be institutionally determined. Mitchell's view of collective bargaining is that it can create means to solve disputes but that, once conflict breaks out, nothing more can be done. Dubin goes further and suggests that bargaining can determine what forms of the creation of 'disorder' will be allowed. Thus he lists six features of institutionalised relations and relates their establishment to the nature of bargaining.[30] For example, the ends sought through bargaining become standardised and disputes over ends evolve into disputes over means. But of greatest interest here is Dubin's view that a characteristic of 'institutionalized power relations is the standardization of the forms of conflict'.[31] Strikes follow an established pattern, the cessation of work takes on a 'ceremonial aspect' and violence has virtually disappeared; even the wild-cat strike 'has become a union instrument for forcing management attention to local-plant problems'.[32]

Thus, for Dubin, the strike has become an institution in its own right. Hence we have the distinction between the institutional control of conflict and the creation of the strike as a rule-governed activity. Although the processes leading to these two conditions are not separate, since both are linked to the growth of collective bargaining, the analytical distinction will have to be borne in mind when we come to the empirical content of the institutionalisation theory.

Dubin's stress on power is an important corrective to the view that the growth of accommodation is a 'natural' development.

In his approach, it is not necessary to assume that employers choose to accept unions as an act of good will. Recognition can be seen as coming about when the power of the unions forces it on the employer; unions become an unavoidable adjunct to existing institutional arrangements. But Dubin does not indicate the reasons for changes in the relative power of unions and management. This is most apparent in his theoretical consideration of power in labour relations.[33] He introduces the concept of 'power disparity' and relates it to the amounts of 'fundamental' and 'conventional' conflict to be expected; but he gives no satisfactory means of measuring power disparity. Thus this approach, like that of Lester and earlier writers, does not provide any causal links between the 'independent variables' and the pattern of accommodation which is to be explained.

Dubin is, perhaps, the most sophisticated American institutionalisation writer of the 1950's, but the most well-known approach is that of Ross and Hartman.[34] Their central thesis is that the strike has been 'withering away' in most Western countries and that those strikes which still occur are becoming short demonstrations rather than trials of economic strength. Five 'leading influences on relative strike activity' between countries are identified.[35] Firstly, there is the organisational stability of the labour movement, comprising its age and the stability of membership. The second factor is the presence of leadership conflicts, examplified by rival unionism and a strong Communist influence. Thirdly, there is the degree to which employers accept unions and the degree of consolidation of bargaining, with centralised bargaining tending to reduce strike activity. Fourthly, political activity by labour is said

to reduce industrial conflict, as is the presence of labour government. Finally, government involvement in defining the terms of employment and providing means for the settlement of disputes will make strikes less likely.

Ross and Hartman argue that these factors have failed to operate in the United States. The failure of the strike to wither away is due to: the relative youth of unionism on a mass scale, the presence of organisational rivalries, the lack of centralised bargaining, the absence of a labour party and the fact that settling disputes by trials of economic strength is still accepted by the public.[36] If this argument is correct, the United States may not be a very useful place to test the institutionalisation theory. We do not need to go into the criticisms that have been directed at the approach of Ross and Hartman as a whole but it is worth noting the argument that they fail to produce direct evidence that, for example, State involvement tends to reduce strike activity;[37] in other words, they make plausible assertions that cannot be proven. Similarly, on the role of a labour party, it has been shown that this, and a number of other measures of 'socialism', has no influence on the relative strike-proneness of fifteen countries.[38]

Thus their explanation of the American case may be mis-specified. To the extent that the 'five leading influences' do not work in other countries, an explanation of America in terms of them will be unsatisfactory. On America itself, they do not take account of the possibility that there may be 'functional alternatives' to the existence of a political party which is formally identified with 'labour'.[39] Nor do they show the signfficance of organisational rivalries for industrial conflict.[40] The argument from the youth of the union movement seems to be

that it takes time for unions to learn to use their strength 'reasonably' and for stable relations with employers to be achieved,[41] but the further question is why this development was so late in starting in the U.S. To be sure, explanations may be implicit in the Ross and Hartman account, but in failing to go into more detail they have left it, at best, very incomplete.

Further, all the factors they identify, except for the lack of a labour party, have, since the Second World War, operated in such a way that strike activity would be expected to fall. In particular, after the rapid growth of unions in the Thirties and Forties and the breach between the A.F.L. and C.I.O., the union movement has ceased to grow, has healed its internal divisions and has settled into a pattern of bargaining with employers. But strike activity has failed to move in the predicted direction. Particular reasons for this might be adduced;[42] but they will be additions to, and adaptations of, the basic institutionalisation thesis. Ross and Hartman have not shown why the general forces they identify have not operated in America, and further consideration of the case is thus warranted. Moreover, their concern was with differences between countries and there is nothing in their account to suggest that a process of institutionalisation was wholly absent in America. Also, they dealt only with the amount of conflict, as measured by strike statistics, and did not systematically consider the questions of its changing character or the development of the strike as an institution in its own right.

Although my main concern is with American writers, some attention must be given to Dahrendorf, since he has produced one of the most sophisticated institutionalisation theories. Like Dubin, he argues that conflict is inherent in industry: the

'authority structure of the industrial enterprise generates .... latent interests and quasi-groups'.[43] Their conflict is at the basis of class antagonisms, but it does not necessarily become overt. For Dahrendorf, the manifestations of this central conflict have changed. Industrial and political battles no longer overlap; industry and its conflicts have been institutionally isolated from the rest of society and have achieved an established place within it. Because they are important only within the industry where they occur, strikes do not affect the public directly. And the split between industrial and political matters has been crucial in reducing the 'intensity of conflict'. Dahrendorf stresses, however, that we cannot infer that conflict will continue to decline.[44]

For Dahrendorf, the main source of the institutionalisation of conflict is not the growth of collective bargaining but a change in the character of the wider society. In the nineteenth century the lines of cleavage in what Dahrendorf calls 'imperatively co-ordinated associations' ran together; in all aspects of their lives, workers were separated from their employers and thus found a community of interest. But this polarisation of interests has broken down into a series of separate authority structures. Although conflict necessarily exists between those with and those without access to authority, this is limited to the particular association in which it develops.

In seeking the sources of change outside the industrial relations system, Dahrendorf goes further than the writers considered earlier. He also gives an account of the mechanisms whereby social change affects industrial conflict, instead of relying on general and unspecified tendencies within collective bargaining. But he shares the view that the amount of conflict

has declined. What he means by the 'intensity' of conflict is not wholly clear, but the implication from his analysis is that strike frequency need not decline, because discontents will continue within each imperatively co-ordinated association. But disputes will not spread into other associations and they will be limited to matters which can be dealt with easily; in other words, the size and duration of strikes can be expected to decline. These predictions are consistent with those of other 'conventional' writers. Thus, for the period to the end of the 1950's, Dahrendorf's argument is that strike activity will show a decline, but, as I have mentioned, this is not made into a prediction about subsequent trends.

The above formulations of the institutionalisation theory were developed in the 1950's and it might be suggested that they have now been forgotten or superseded. But, I would argue, they still form the core of the standard approach to industrial conflict. In 1965, when Chamberlain and Kuhn came to re-write their textbook on collective bargaining they included <u>verbatim</u> a statement from the 1951 edition:[45]

> 'If it is possible systematically to reduce the costs of agreement by improved methods of collective bargaining, it may follow that such methods of making disagreement costly as the strike and lockout will simply find less frequent use....Occasional resort to them would be acceptable as that measure of tolerance for private group disagreements and breakdown which seems unavoidable in a democratic society'.

Although they accepted that the high hopes of the Wagner Act for the reduction of strikes by the recognition of unions had not been realised, they argued that bargaining could take credit for

reducing the violence of strikes and that there were two other 'hopeful signs': the peak of strike activity seemed to have been reached and strikes were limited to certain sectors of the economy.[46]

In 1969 Barbash, writing in a volume explicitly concerned with advancing the theory of industrial relations, produced an account very similar to those of earlier writers.[47] Differences between unions and management have been narrowed; and regularised bargaining 'has not ruled out strikes, but undoubtedly has moderated their virulence'. The cessation of work has become a ritual during which the two sides reach an understanding on meeting the union's interest in no work being done and management's desire for the protection of the plant. Barbash also makes the important point that, for unions seeking recognition, the strike can still help to cement the solidarity of the workers and express their independence from the employer; in other words, institutionalisation may advance at different rates in different sectors, a point to which I return in section five. As late as 1973, Dunlop argued that[48]

> 'the severity of interruptions (of production-P.K.E.) and the attention to strikes and lockouts is (sic) likely to continue to decline over the intermediate future'.

For Dunlop, the intermediate future in about fifteen years.

Despite the continued expression of such sanguine views,[49] the collective bargaining system has been subjected to a considerable amount of criticism. One line of attack suggests that private bargaining threatens the interests of society as a whole and that limits must be introduced on the extent to which, in Kerr's terms, mutual accommodation changes to mutual advantage

at the expense of others.[50] Another line deals with the challenge of automation and a slow rate of economic growth and suggests that these may make disputes harder to settle.[51] A third considers whether strikes can be permitted in the public sector and whether alternatives to them can be developed.[52]

The second of these is the most relevant to the institutionalisation theory, for it might seem that the pattern of accommodation of the 1950's is breaking down. However, it was the particular pattern of that decade which was under challenge, and not union-management accommodation in general. By 1960, management had begun to take a 'hard line' with the unions,[53] but the aim was to tilt the balance of advantage in its favour and not to threaten the unions' right to exist. The growth of conflict in the Sixties is still considered in terms of the earlier model. Private bargaining may at times appear to threaten the economy as a whole, but the response is to suggest that the pluralist system can be improved to meet these difficulties.[54] The more fundamental question, of whether the system of accommodation is susceptible to reform, is not considered. In other words, the strong version of the theory, that collective bargaining could virtually guarantee harmony, has been challenged but its underlying assumptions have not. The institutional control of conflict and the standardised nature of strike activity are still emphasised. Only the view that the state reached in the 1950's represented an end-point of an evolutionary path would be rejected.

I do not wish to concentrate on the logical and theoretical problems faced by the conventional approach, but two particular difficulties must be mentioned. Firstly, as I have mentioned, the links between the independent and dependent variables are not clearly

specified. The theory has a spurious air of precision, but few attempts have been made to state why, how and when a factor such as the increase in the workers' living standards moderates strike activity. Secondly, there is a lack of clarity about the explanandum. Even when a clear dependent variable such as strike activity is employed, reference is made to many other areas. It is really the general pattern of labour relations which is the concern, and, when a factor such as rising living standards is introduced, it appears plausible that it will contribute to industrial peace. A story to the effect that the old antagonisms have died is easily constructed. But when we return to the explanation of a particular phenomenon we find that the plausible general account is applied without adequate consideration of whether it fits the case.

The institutionalisation theory has had wide, though far from universal,[55] acceptance. Although some of its statements have great weaknesses we have seen, for example in relation to Dahrendorf, that some of the difficulties can be overcome. The important thing is to test the most plausible version of the theory instead of making logical criticisms of particular formulations: in section five, I draw out the implications of the theory for strike activity. But before doing so, I turn to a distinctive variant of the conventional theory, the work of Shorter and Tilly.

3. The work of Shorter and Tilly

In their book on strikes in France in the period 1830-1968, Shorter and Tilly provide the most detailed recent examination of the strike trends in one country over a long time span.[56] I consider it here because of its relationship to the institutionalisation theory and because it gives an important

re-statement of the argument from industrialisation which I mentioned at the start of the last section.

I begin with their approach to industrialisation:[57]

> 'By industrialization we mean simply the processes by which occurs a shift of production (a) away from agriculture toward manufactured goods and services, (b) away from households, kin groups, communities or individual entrepreneurs, toward specialized formal organizations. Any net movement of production in either of these directions counts as industrialization.'

An initial theoretical problem with this definition is that if the changes under headings (a) and (b) are not perfectly correlated, it is hard to find an unambiguous measure of the overall extent to which the society has become more industrial. In principle, it would be possible to treat the two dimensions independently, but in practice Shorter and Tilly follow the general tendency to treat industrialisation as a relatively homogeneous phenomenon.

Three types of argument linking industrialisation with collective action are identified. These are labelled the 'deprivation', 'breakdown' and 'interest' theories and it is suggested that they relate, respectively, to the short, medium and long term. The first is identified with the work of Kerr and has been mentioned above; it relates to the material deprivations that accompany industrialisation. The second is typified by the writings of Smelser and refers to the breakdown of older forms of social arrangement in the face of rapid change.[58] The interest theory is harder to summarise. For Shorter and Tilly it is found in the writings of E.P. Thompson[59] and locates a group's collective action in the relationships the

group has with other groups and with larger structures. This approach is much less deterministic than those of Kerr and Smelser and, as Shorter and Tilly recognise, Thompson's view is only one of the many possible. The approach in itself does not lead to any particular predictions about collective action since it does not specify how groups will react to changes in structural conditions.

Thus we need to know how Shorter and Tilly develop their own version of the interest theory.[60] They rely in part on the standard costs-and-benefits approach of economics; it is said, for instance, that cultural breakdown will reduce strike activity (in contrast to the predictions of the standard 'breakdown' theory) because of the increased cost of collective action to the workers. More fundamentally, the strike becomes 'the principal means by which those organized groups (of workers-P.K.E.) display their strength and exert pressure on the other chief participants in the power structure - both employers and the government'. It is not clear whether this statement summarises findings reported later or is intended as a theoretical proposition to be tested. But by the time they return to the theme of industrialisation Shorter and Tilly state that 'struggles for power set the rhythms and themes of French strike activity' although this took place 'within forms established by industrialization'.[61] Thus it would seem that an empirical point is being made in the earlier statement and that, therefore, there is no clear derivation of the theory from the 'interest' approach. This suggests that the theoretical status of the arguments about the effects of industrialisation is uncertain.

In summarising their empirical work, Shorter and Tilly state:[62]

> 'industrialization transforms the nature of strike activity by creating a new organizational base, and by fixing the eyes of the strikers upon new, explicitly political, objectives....It thus appears that industrial growth increases strike activity through two complementary mechanisms: (1) by concentrating masses of workers within the same municipality, indeed within the same enterprise.... (2) by changing the very nature of organization itself, making of worker associations politicized, bureaucratized giants whose legs span the nation-state and whose actions are tied closely to the central political arena'.

We can see from this quotation that Shorter and Tilly represent a variant of the institutionalisation theory. Their focus is the 'transformation of the strike' from a 'pre-modern' to a 'modern' state, from which it is clear that, like the 'conventional' theorists, they are dealing with a long-term process of change. Seeing industrialisation as the major cause of the change is not new, although Shorter and Tilly analyse its effects in a novel way. They also argue for an alteration of the character of the strike. The modern strike is a brief demonstration which is planned by the 'politicized, bureaucratized giants' in a rational way and is very different from the scattered and spontaneous protests of earlier periods: it has, therefore, become an institution with clear rules of conduct.

The major difference from the conventional writers lies in the emphasis on the political nature of the strike. Instead of arguing that industrial conflict has become institutionally isolated, Shorter and Tilly see it as a phenomenon which has

become less isolated and more centred on the 'political arena.'[63] They do not limit this analysis to France but seek to apply it to other countries.[64] In broad outline, the argument is that until the 1930's most countries had similar rates of activity, reflecting the organisational mobilisation of the rank and file up to the First World War and the common post-war economic problems. After 1945 there was a separation into a number of patterns indicating a 'new international differential in the politics of labor'. Since I suggested in the Introduction that a 'true' instituionalisation theory must argue for the isolation of industrial conflict, Shorter and Tilly cannot be seen as part of the conventional school. However, their arguments on the politicisation of the strike are not wholly opposed to the views of conventional writers. The strike has only a limited and defined political role and is a bargaining weapon of the unions. The only crucial difference from the conventional view is that it is seen as operating directly in politics. The strike may not be fully isolated, but it is institutionally contained and the areas in which it may be used restricted.

Even the United States is brought within the political interpretation of strikes. It is argued that, before the Second World War, collective action was political as much as economic and that only since the war has the protection of the workers' non-economic interests been given over to the political parties. Since the Thirties, French and American strikes have differed:[65]

> 'The difference is in politics and plant unionism. Extensive union implantation in North America after the Depression has reduced strike activity because the unions acquired substantial job control for the workers,

> and because the unions ceded to the political parties the task of safeguarding the working-class political interests. North American unions therefore set themselves the assignment of bread-and-butter material gains'.

There is little in this that conflicts with the standard emphasis on 'business unionism' in America; only the timing of the retreat from direct political involvement is in question. Despite their attempts to create a new approach, Shorter and Tilly have not, at least as regards the U.S., broken away from the view that conflict is institutionally isolated.

I do not want to go into a detailed discussion of the evidence Shorter and Tilly adduce to support their contentions, but an indication of some of the difficulties they have will put their work in perspective and also be valuable in showing some pitfalls to be avoided. The most fundamental point is that it is impossible to argue that industrialisation affected strike activity in France only if it first altered the 'pattern of organization and the nature of the struggle for political power'.[66] In one case study it is clearly impossible to establish the necessary conditions for certain changes in activity. This weakness lies at the heart of the other problems of analysis. It is argued that the data will be set out and then examined in relation to the hypothesis to be tested but the manner of testing depends on the theory. In the time-series analysis, for example, a set of path models is presented in which union membership is an important intervening variable between the independent variables and strike activity,[67] but it is not demonstrated that it need be there. It is a well-known feature of path analysis that one first decides on theoretical grounds which paths will be

important and then tests the model. It is quite possible that another model would work as well as that used by Shorter and Tilly. I am not arguing that they have failed to provide an adequate test of the model, but it is odd to argue that certain things had to happen on the basis of a model that assumes they would happen.

On the political aspect of strikes, much of what Shorter and Tilly say seems to be conjecture. Thus they say of the union members who struck in 1880-1910 that 'Not all these unionists were "revolutionary", but the bulk of their strikes were nonetheless fundamentally political'. There is no strong evidence for this assertion; no data on stated strike issues support it, and in any event they have already said that 'the poorest way of knowing what workers want in strikes is to go by what they say they want'.[68] They admit that they are on weaker ground here than elsewhere, but suggest that the evidence on the association between political conflicts and strikes, the political timing of strike waves and the nature of governmental involvement supports their assertions.[69] But their measures of political conflicts are inadequate and are not consistently related to strike activity. It is not demonstrated that the 'political timing' of strike waves is not due to the effects of some factor such as economic crisis operating independently on strikes and political matters. And the attitude of the government reflects the view of the political order towards strikers rather than the reverse.

Thus, Shorter and Tilly have not demonstrated their contentions about the necessary role of unionism in transforming the strike and the political nature of strikes. Similarly, in considering international differences, their evidence is too flimsy to justify their sweeping away the Ross-Hartman

interpretation in terms of industrial relations system in favour of a political explanation. More importantly, their acceptance of the thesis that, in some countries at least, the strike is withering away, and their explanation of this in terms of the relationship between unions and other power structures, are subject to the criticisms of the institutionalisation writers made earlier. Shorter and Tilly have moved the discussion from the narrow confines of union-management relations and broadened the scope of the concept of institutionalisation. But theoretical and methodological flaws in their argument suggest the need for great caution when we come to test the institutionalisation theory.

4. The 'radical' approach

Just as the conventional approach grows out of a wider concern with institutional accommodation in society in general, so the radical one is part of a broader critique of the 'liberal' position. The essence of this critique is that society is not a complex of ralatively equal groups but that the power of its rulers enables them to impose their will on others; the power is of a traditional capitalist kind. The working class is 'incorporated' and robbed of its militancy; there is no mutual accommodation between employer and union but the subordination of the latter to the interests of the former.

Radical writers differ in the emphasis they give to the various agents of incorporation. One line, which I shall label the 'class hegemony' argument, suggests that the nature of the system itself is the most important factor. In its most general form, it suggests that the system has a wide range of weapons to ensure that protest is contained. As well as such obvious things as physical repression, there are more subtle means of disarming

protest and persuading the workers of the benefits provided by the system. Marcuse, for example, examines the methods of operating on the workers' unconscious feelings.[70] In the case of America, however, particular weight has been placed on the high and increasing standard of living provided for the workers as the main deterrent to the formation of class consciousness.[71] In its simplest form, this view suggests that the workers were 'bought off' by a successful capitalist system; since economic failure would prevent this from being continued, the possibilities of a revolutionary upheaval are not closed off to the same extent as they are in Marcuse's argument.

There is the obvious danger of assuming that the system can automatically disarm challenges to it. In an attempt to avoid this danger, Weinstein has studied the actions of employers in the early twentieth century.[72] He suggests that the more sophisticated employers, notably members of the National Civic Federation,[73] were aware of the threat to their position from the unions and other groups. Unlike the National Association of Manufacturers,[74] which adopted a militant line and refused to grant any concessions to the unions, the N.C.F. leaders realised the advantage of separating the conservative and radical groups among the union leaders. They had a considerable degree of success in persuading conservative unionists of the benefits of co-operating with employers and were thus able to prevent a radical challenge to their own position. But they remained committed to the capitalist system. They did not grant concessions because they were convinced of the benefits of unionism but to defend the essentials of the system. One of the crucial features of the system, it is argued, is its ability to adapt to, and disarm, potentially threatening developments.

In contrast to the 'hegemony' argument, the 'class collaboration' line stresses the role of the unions in the process of incorporation. Radosh, for example, suggests that American union leaders have, since the late nineteenth century, followed a policy of co-operating with employers, seeing themselves as 'junior partners' in the capitalist system.[75] They have failed to press working class interests and have been most interested in establishing their own position. Similarly, Preis argues that since the 1930's leaders of C.I.O. unions have been of key importance in suppressing rank and file protests; although the C.I.O. was seen as a challenge to the existing system, its main achievement was the channelling of protest into harmless areas.[76]

Other writers argue that the unions represent a partial challenge to capitalism. Although they control unrest, they cannot be written off as mere agents of the system; they grew up to press workers' demands and now act as a focus of discontent.[77] This view is more sophisticated than the simple collaboration argument, for it recognises the problems the unions face. They may genuinely want to press their members' demands, but have to operate within the system. They may attempt to keep their 'purity' at the cost of achieving no concrete gains or may compromise themselves by seeking some form of day-to-day co-operation with employers. This dilemma faces all union movements and the solution adopted in America cannot be explained solely by the attitudes of certain leaders, But, radicals argue, the narrowing of union interests to 'aggressive economism and defensive control' has gone further here than elsewhere.[78] The leaders' policies may be one cause of this, but structural factors are also identified. I have already mentioned

the power of the capitalists and the role of high living standards. But the attitude of the workers must also be given attention. As Lens says, the rank and file were not 'innocent by-standers' in the process of institutionalisation; their apathy allowed the leaders to lose their vitality.[79]

Thus, according to the radicals, a dialectical process is occurring. The established position of the capitalist system overawes the union leaders and prevents them from adhering to a policy of challenge to the system as a whole. They limit themselves to 'economism' and this, in turn, buttresses the system. As they become incorporated, they become separated from their members and come less and less to represent rank and file interests; challenges from below are absorbed and translated into the language of economism.

However, genuine challenges can arise. It is particularly easy for writers who adopt a 'collaborationist' stance to suggest that rank and file rebellions will break out. Men who are normally quiescent and display no class consciousness can, when the normal state of affairs is upset, produce a surprising amount of solidarity and class awareness which shows the foundations of capitalism to be much less secure than they appear to be. Strikes are seen as among the most important means by which these 'explosions of consciousness' occur because it is in them that the existing pattern of order most clearly breaks down.[80] According to Brecher, there have been several waves of 'mass insurgency' in America, led by the rank and file and usually opposed by union leaders.[81] Herding has given a detailed analysis of labour relations at plant level in the auto and steel industries since the Second World War.[82] He suggests that control over the content of work has been a primary concern of

the workers and that there has been an increasing rejection of the procedures of bureaucratic unionism, with its stress on periodic negotiations over the renewal of contracts; there is a continuing struggle at shop-floor level as workers seek to achieve and maintain control over their jobs.

If the workers are able, from time to time, to throw off the domination of the system, an explanation must be given of how the system has been able to maintain itself. Thus Aronowitz notes the ambivalence of working class militancy, with long and violent strikes co-existing with a consciousness which is oriented to the industry or even the individual job.[83] He accounts for the workers' ideological ties to the system in terms of the ability of the capitalists to share the benefits of economic growth with a large part of the working class. However, he suggests elsewhere that this sort of explanation is incomplete because it ignores the structure of the working class itself as a factor limiting consciousness.[84] Attention must also be given to ethnic and skill differentials within the working class and the rural origins of a large number of unskilled and semi-skilled workers. Other writers argue that this uprooted agrarian work force will be particularly prone to protest against industrial conditions.[85] But this does not necessarily conflict with Aronowitz's case since these protests will be likely to be spontaneous and unorganised; they will not pose a threat to the system as a whole.

According to radicals, then, employers have been able to incorporate the challenge of the unions, a process which the unions themselves have assisted. But the possibility of fundamental protest, based on the rank and file, is not ruled out. The analysis of how collective bargaining has let to

institutionalisation follows the 'conventional' approach and need not be repeated. But radicals stress that employers accept bargaining because they feel that this will further their long-term interests; they are not concerned with union recognition in itself.[86] Conventional writers have also, of course, argued that the acceptance of unionism was not an act of good will by the employers but was forced on them.[87] But radicals give much more attention to the ability of the system to disarm challenges by adapting to them; the nature of labour relations was not fundamentally changed by the recognition of the unions. Associated with this is a stress on the kind of unionism which was acceptable. For radicals, it would not have been possible for any kind of unionism to have gained acceptance; only a bureaucratic and business-oriented form met the conditions required by the capitalists. This points to another similarity with the conventional approach; the standard view of American unionism, presented by Perlman, for example, is that business unions were appropriate for the American environment.[88] But radicals stress that this 'functional fit' depended on the attitudes of the employers; there was nothing natural about it. Once unions had accepted the need to work within the system, the process of their incorporation was under way.

There are other similarities with the conventional approach over particular questions. But more important is a fundamental parallel between the two approaches. Both are concerned with the long-term processes of change in industrial relations. As the word implies, institutionalisation is a process.[89] The approaches seek to explain this process in terms of changing structural conditions and alterations in the attitudes of the parties. Although they are concerned with the general nature

of labour relations, they have implications for the character and extent of conflict. As I have mentioned, some versions of the conventional approach imply that institutionalisation is a one-way process, but others allow for a cyclical pattern. Radicals are generally interested in the possibility of fundamental change in the pattern of institutionalisation and thus tend to the cyclical rather than the one-way view. But they do not deny the power of the forces of stability or the difficulty of overturning an established system. In other words, it is recognised that a cycle of conflict and accommodation takes place within the context of a set of institutionalised relations. Not surprisingly, radicals differ in the extent to which they feel that a re-structuring of these relations is possible.

It is frequently noted that radicals have given up the hope that the working class will develop a self-conscious movement.[90] But this highlights the importance they give to events in the past, when the possibility of radicalism had not been eliminated.[91] We need to know how and why the current institutionalised position came into being; as Barbash notes, there are difficulties with the radical explanation.[92] For example, it is not clear what the unions were incorporated by or what a non-incorporated union movement would look like. The approach thus shares the difficulty with the conventional line that the causal mechanisms linking general societal changes to trends in industrial conflict are not closely specified.

Like conventional writers, radicals are concerned with the role of the State in industrial relations, but they are more likely to stress the State's constant interest in defining the terms of industrial conflict, instead of concentrating on developments since the Second World War. The State is seen as

the constant support of the employers and, particularly in war-time, can lend direct assistance to their attempts to institutionalise the unions.[93] The government can appear to act as the impartial arbiter of disputes and seek 'reasonable' solutions that will protect the 'national interest', whereas in fact its intervention will be aimed at confining conflict within certain limits and preventing strikes from taking on a wider political significance.[94] Radicals might agree with Dahrendorf that industrial conflict has been institutionally isolated, but argue that this is part of the general effort of the State to ensure that political challenges to the system are contained. Government leaders are not seen as acting with impossible degrees of cunning or foresight, and the path of the system is not pre-determined. But the actions of genuinely 'liberal' statesmen are taken within the terms of the existing system and their pragmatic attempts to deal with a challenge are predicted on the need to protect that system.

As with the conventional approach, I do not wish to examine the general theoretical appects of the radical approach. I have sought to bring out its main features and to indicate two particular types of argument, the 'hegemony' and 'collaboration' views. These represent differences of emphasis and are not alternatives, but the distinction will be useful in the following section.

Conventional and radical approaches are both concerned with long-term processes of change; I thus turn to the specific predictions regarding industrial conflict which can be derived from them.

5. The empirical content of the theory

In the above sections I have outlined two broad approaches

to the institutionalisation of industrial conflict. It is clear that they are both concerned with a long-term process of change; to be testable, they must assert that an identifiable state now exists which did not exist in the past and which was caused by certain independent influences. Thus, it is to the evidence relating to the longest available period that we must turn. The theories are not concerned solely with the amount of conflict which will be present but also make predictions about its character. To some extent, strike character is reflected in the statistical data on such things as the issues involved, but is also concerned with more qualitative matters such as the degree of hostility felt between the parties to a dispute. In the following discussion, I shall begin with the predictions relating to the amount of conflict, then deal with the other aspects for which statistics are available, and finally with the less measurable features of strike activity. Since the theory has many versions, it will be necessary to note which version would make which prediction.

I must mention at the outset why the theory should be expected to apply to strikes. Firstly, and most obviously, a number of writers have themselves concentrated on the strike; Ross and Hartman are the clearest example, but many others refer to strike trends as part of their general argument. Secondly, as I argued in chapter one, strike trends provide a relatively consistent series of observations over a long time period; they should reveal, therefore, the patterns argued for by the institutionalisation theorists. And strikes are a product of labour-management relations. This may be a problem for writers using the statistics as indices of worker unrest,[95] but it is an advantage for studying the institutionalisation of conflict

which, of course, is concerned with the interaction between workers and employers. Strikes are the most overt manifestation of conflict and one can expect the theory to account for trends in their incidence.

For the long-term, the central prediction is that the frequency and intensity of conflict will tend to decline. This is made very explicit in some of the arguments from industrialisation and in the work of Ross and Hartman, but it is also present in the writings of the 'radicals'. It is not consistent with the view that the working class has become incorporated to argue that conflict will fail to decline. To be sure, some radicals (and also some 'conventional' writers) suggest that there may be a cycle of accommodation and conflict, but, as I suggested in the above section, such arguments do not specify the causes of the cycle. Moreover, even if a cycle exists, it should, according to the theory, operate only within the framework of a general tendency for conflict to decline. There may be outbreaks of strikes, but these will grow out of established bargaining relationships and will not represent as reversion to a less orderly situation. For the radicals, there may be outbursts of unrest, but these will be mediated by the unions and will be less of a challenge to the system than the strikes of the past. To be sure, the radicals would not suggest that the strike has withered away or that revolt is impossible, and the 'class collaboration' strand in particular would see rank and file militancy as a constant possibility; but it would not be argued that strikes in America are potentially revolutionary. Incorporation means that the workers have been robbed of their vigour and that the leaders are part of the system, and thus some long-term fall in strike activity would

be expected.

In the short-term, there is no need for the theory to argue for a decline in activity. Thus Dubin has argued that the achievement of an institutionalised system will lead to a stable amount of conflict, with some fluctuations about the trend.[96] But it has been pointed out that the two 'laws' adduced by Dubin could equally well predict a decline in strike activity.[97] And, as I have said above, the model of power and conflict used to explain the deviations from the trend is unsatisfactory because it gives no indication of how the categories of 'power disparity' and 'fundamental and conventional' forms of conflict can be related to a real situation except in an ex post facto manner. The importance of the recent upward trends is that some writers would see them as minor deviations from the institutionalised state, whereas others would see them as part of a more fundamental change. But the long-term expectation of the theory is clear enough.

The 'weak' version of the theory would suggest that bargaining provides the means to settle some disputes but that fundamental disagreements may still lead to a strike. Thus strike frequency might decline, but the number of workers involved or of days lost need not do so. Stronger versions of the theory would suggest that bargaining can mediate the effect of external forces; whereas in the past economic problems may have created conflict, bargaining enables the parties to achieve a more 'reasonable' and co-operative solution to their joint problems. As we have seen, most conventional writers would place some limits on the ability of the system to survive all challenges to it, but would see collective bargaining as more than a glorified grievance procedure; in other words, it is a

system with some ability to alter the nature and extent of conflict.

Thus, while the weakest versions of the theory would not make any predictions about the duration of those strikes that bargaining cannot prevent, stronger versions would suggest that stoppages should grow shorter. Instead of a battle until one side gives way through exhaustion, there will be means to reach a rapid settlement and negotiations will not be broken off completely; furthermore, the parties will accept the right of each other to exist and will not be engaged in an attempt at the complete destruction of their opponents. The strand of the theory concerned with the character of strikes also predicts a shortening of disputes; they are ritual parts of the bargaining process which have to be used; but the bitterness has gone and therefore there is nothing in the way of a rapid settlement.

As we have seen, a major question facing both approaches to institutionalisation concerns the extent to which environmental pressures can disrupt the pattern of accommodation achieved. We shall therefore need to test the theory in a more complex way than simply examining the trends of strike activity. We must analyse the strength of the association between strikes and environmental variables, particularly economic ones, and to do this a multiple regression framework will be employed. Discussion of the details of the tests will be left until chapter 4, but mention may be made here of some of their features. Following Shorter and Tilly, Snyder has argued that the 'institutional parameters' of conflict have changed: before the Second World War strikes were explained by political factors but after the war it is economic trends which have the greater explanatory power.[98] Thus, we shall have to assess whether the

parameters of conflict have shifted and whether this can be related to trends in collective bargaining.

Similarly, the union has been seen as a crucial influence on strikes and the strength of its effect, in combination with other variables, will be examined in a multiple regression model. Expectations about the direction of union influence differ. Shorter and Tilly and other writers[99] are clear that the union is a necessary mediating factor between economic conditions and strikes and that there should therefore be a direct association with strike activity. Similarly, radicals would mention the union as a means whereby rank and file discontent can be expressed. But conventional writers would be more ambivalent, seeing the union as necessary for organised stoppages to occur, but also arguing that established unions will learn to bargain peacefully with employers. It is hard to derive any clear predictions from this, but it seems plausible to suggest that conventional writers would see the union as encouraging strikes when it is struggling for recognition but as attempting to control them once it has become established. One consequence of this might be that activity would become closely related to the cycle of contract negotiations. The fixed-term contract is a very common feature of labour-management relations in America and the standard bargaining theory is that strikes will occur only when a contract comes up for renewal; as the union becomes more widely established, the link between strike frequency and the number of contract renewals should become closer.

The presence of a union should also mean that changes occur among the various components of strike activity. Strike frequency should decline as the union takes control of strikes and concentrates on what it sees as the most important disputes; as a

'manager of discontent' the union will discourage spontaneous stoppages over work-place grievances and will try to force disputes through the grievance procedure. But most versions of the theory would argue that the strikes the union is willing to sponsor will be large and that they may be lengthy battles. But, as we have seen, there is a general expectation in the theory that the duration of strikes will decline. This is reinforced by the argument that the institutionalisation of the union will mean that its disputes with management are no longer 'fundamental' ones and that working relationships are no longer totally disrupted by strikes. Thus the theory's assertions about the role of the union support its more general expectations about the components of strike activity: the number of stoppages should decline, but the trends of worker involvement and striker-days are less certain.

Union involvement in strikes will also affect trends in the issues in, and results of, strikes. As unions become accepted, matters of recognition and security will become less important as causes of strikes and issues relating to the terms of contracts proportionately more significant. And the union will strengthen the general trend away from those types of stoppage, particularly the sympathy and general strikes, which have been shown by experience to have a very low rate of success. This, plus the increase in the effectiveness of bargaining strikes due to union organisation and finances, will mean that the overall success rate of strikes will rise. As we have seen in chapter 1, measures of the results of strikes are not satisfactory indices of the power of the workers because, for example, the recorded result depends on how much was being demanded; but a rising success rate would indicate that the strike was being institutionalised

into those channels where it was most effective.

Radical and conventional writers would differ, of course, on the extent to which the union can be successful in chanelling protest into bargaining strikes; the former would expect more 'unofficial' actions based on control of the work-place than would the latter. Unfortunately, it is in this area that the statistical sources are least useful. There is no official recording of whether a strike was conducted with union approval and it is the small and short shopfloor actions which are most likely to escape inclusion in the overall count of strikes. However, for the years since 1960 an index can be constructed showing trends in unofficial disputes; this will be described in a later chapter. And by studying the category of strikes over 'other work conditions' we can obtain some indication of trends in shopfloor actions.

We have seen, then, that all the writers considered will expect there to be a 'transformation of the strike' in the long-term. For those who stress the role of industrialisation, the distinction will be between 'pre-modern' and 'modern' forms of activity; for Shorter and Tilly the former is characterised by frequent, small and short strikes and the latter by infrequent, large and long stoppages, as the spontaneous nature of strikes declines and as the organisational ability of the unions increases. The predictions of the Kerr school are less detailed, but the overall amount of activity is expected to fall, as is the spontaneity of stoppages. For those conventional writers who stress collective bargaining, the transformation should be associated more with the growth of bargaining on a national scale than with the shift to an industrial economy; by an examination of the timing of any 'transformation' we should be

able to test the relative strengths of the arguments from industrialisation and bargaining. For the radicals, the transformation will reflect the growth of corporate capitalism. In practice, it may be difficult to separate this from the trends in the growth of industry and collective bargaining, but, since radical and conventional writers differ on the form of institutionalisation that will occur and on its stability, it should be possible to differentiate between them.

I turn now to predictions about strike character. To some extent, character will be reflected in the measurable components of activity, but other aspects must also be considered. An important prediction is that there will be a decline in the violence of strikes, as this relates to the amount of emotion involved in the dispute and to the extent of physical violence that occurs on the picket line; the latter is clearly the more easily assessed. The institutionalisation theory would make use of arguments that conflicts will be the most violent when unions challenge what is seen as a fundamental management 'right'[100] to suggest that violence will decline as the unions become accepted in industry and society. The action of going out on strike will become a ritual which at the level of the individual plant does not engage the emotions of the participants,[101] with the real battle being fought out in the distant national negotiations.

The strike will become part of the tactics of the union to advance its more general strategy. For example, if it is decided to press for bargaining on supplementary benefits such as sickness and pension rights, the demand will be carefully planned and presented to management. If this is seen as an attempt to extend the scope of bargaining into new areas, it may be necessary to call a strike against one company, but once this

firm has given way a new pattern will rapidly be established in the rest of the industry and will then spread to other industries.

It is hard to produce many explicit predictions about the character of strikes, other than that they will be less violent and emotional and more integrated into a union's plans to extend its power. But one other aspect that must be mentioned is the political character of strikes. All versions of the theory suggest that the strike is no longer overtly political in America, but there is disagreement on how far it ever was directed at the political arena: Shorter and Tilly suggest that it was once a political action, whereas writers who stress the consistency with which the labour movement has shunned open political involvement would suggest that it has always been limited to material gains.

The obverse of this concerns the extent of government involvement in industrial relations. Conventional writers have stressed the influence of the government in encouraging union growth and recognition,[102] particularly of course through the Wagner Act, and the implication is that as an outside factor in labour-management relations it can ensure that the power of the two sides is equalised and that intransigent behaviour on either side prevented. As well as this indirect effect on strikes, there is the direct involvement of the government in settling particular disputes as rapidly and as amicably as possible. Radicals agree about the importance of the government, but concentrate on its role in containing the scope of the conflict and disarming any challenge to the capitalist order as a whole. Hence there is a double prediction about the government and strike character. Firstly, the nature of disputes will be altered by the knowledge that the government can intervene through National Labor

Relations Board elections or the emergency disputes procedure; the intervention will affect other aspects of a strike's character by making a settlement readily available. But, secondly, the very fact of the intervention will mean that a new feature is added to the character of strikes; the nature and extent of government involvement will become one variable in the determination of character.

The arguments considered above relate to strike activity in the aggregate, but we must also consider trends within individual industries. In connection with the work of Barbash, I pointed out that users of the institutionalisation theory can argue that the process is limited to sectors where the unions are recognised and that the non-institutionalised industries will be characterised by a high strike rate. However, there are limits to the extent to which a failure of strike activity in the aggregate to decline can be made to accord with the institutionalisation theory. The concern of the theory is with trends which operate at the national level; for conventional writers, a willingness to accept unions and the growth of 'mature' relations are universal tendencies and, for radicals, the incorporation of the unions is similarly a general process. As it has been argued for, the theory makes little attempt to differentiate between industries in the degree of institutionalisation to be expected, but it is not difficult to derive specific hypotheses from it. The level of strike activity would be expected to be related to the level of unionisation in an industry, the extent of collective bargaining, the nature of the economic environment and various technological features of the production process. But, it must be emphasised, inter-industry difference can be seen only as operating within

the wider process of instiutionalisation.

Thus we will need to examine the data across industries at one time to see what features of their structure and bargaining relationships are related to strike activity. But it will also be of interest to examine the time trends of activity within industries. As we have seen, the theory suggests that there will be a peak of activity when the union battles for recognition, followed by a decline as the pattern of accommodation develops. It will be of interest to see if such a pattern can be observed within industries and to compare it with any pattern that emerges nationally. Similarly, it may be argued that there are regional differences in the degree of institutionalisation. In a country as large as the United States, considerable differences in the character of union-management relations can be expected between, for example, New England, the South and the West Coast. Differences in strike activity may be related to differing degrees of institutionalisation and thus comparisons similar to those carried out on the industry data are required.

In this section, I have not attempted to list all the detailed predictions which the institutionalisation theory might make about strike activity or to consider the precise tests which might be undertaken; this will be done in later chapters. But I have dealt with the more important predictions and will now outline the strategy to test them. It would be possible to take each version of the theory in turn and test its predictions, but it is preferable to proceed with the study of particular themes. The findings relating to each version are thus scattered throughout the following chapters, but are brought together in the first section of chapter eight, so that a systematic

assessment may be undertaken.

In chapter three, I analyse the overall trend of strikes from 1881 to 1972. The focus is the argument that, as a matter of historical fact, institutionalisation has occurred; I therefore consider trends in the frequency and duration of strikes and in such things as the issues involved in the light of this argument. In chapter four, I turn to the more subtle view that the determinants of strike activity vary according to the extent of institutionalisation. Thus I consider the economic political and organisational influences on fluctuations in strike activity for various periods. The following three chapters extend this aggregate analysis by considering activity in each of three key sub-periods. Each chapter examines the details of year-to-year fluctuations in activity, considers some possible explanations of these fluctuations which are not dealt with in chapter four and analyses the distribution of activity between industries. In this way, a picture is built up of strike activity throughout the whole of the period since 1881. But chapters five, six and seven also deal with certain themes. Chapter five concentrates on the effect of industrialisation on strikes and examines the predictions of Shorter and Tilly and other writers about the nature of workers' response to rapid change. Chapter six deals with the growth of institutionalised relations during the New Deal period and examines the causes of this process. Chapter seven considers the working of the institutionalised system in the period since 1945 and assesses the force of challenges to the system.

In general, the inter-industry analysis of each chapter is designed to develop the theme of that chapter, but it also contributes to an understanding of how the parameters of conflict

have altered; it is important to bear this in mind, since a piece of analysis may relate more to the overall elucidation of these parameters than to the immediate concerns of the chapter of which it is part. Consideration is also given to certain key industries, but the aim is not to build up extensive case studies. Little would be gained by bringing together a series of secondary accounts of individual strikes or of labour relations in particular industries. Cases will be referred to only when they are relevant to the general argument. Similarly, I shall not be primarily concerned with the qualitative aspects of strikes; as I have mentioned, it is hard to derive any very clear hypotheses about these aspects from the institutionalisation theory.

. Conclusion

In the previous sections of this chapter, I have considered one broad theory, or set of theories, with which to approach strikes in America. Clearly, it is not the only possible theoretical basis, but it has several distinct advantages. It relates to long-term trends and is clear about the general process of change to be expected. It has a number of variants, so that one will not be testing only a narrow formulation of the case. And it has proved to be a popular and, as the discussion of Commons and Hiller has shown, long-lasting theory; it is not limited to the writers of the 1950's but is at the heart of much of the writing on labour relations. Finally, many of the statements of the theory apply specifically to the United States. But explanations of strike activity here tend to be made on the basis of a limited amount of data, often in the context of comparisons with other countries; trends within the United States have been given insufficient emphasis.

I shall adopt a critical approach in the following chapters. Instead of developing a line as an alternative to the institutionalisation theory, I shall concentrate on testing that theory's predictions. As I suggested in discussing Shorter and Tilly, there is a danger of approaching the strike data with a model such as their 'organisational-political' one and assuming that it is the only one which is worthy of consideration. Although it may fit the data, there are other models which may perform equally well; since we know little about the influences on strike activity, it is preferable to take a less dogmatic approach. I shall give an interpretation of American strike activity in chapter eight, but the bulk of the following chapters will focus on existing interpretations.

In examining the predictions of the institutionalisation theory, we must be clear about how institutionalisation is measured. As I have suggested, the theory is often stated in very general terms with no precise measures being provided. To some extent, this is unavoidable since the theory is concerned with the effects of broad changes in industrial relations which cannot be summarised in numerical indices. These broad changes are clear enough for us to assume, in chapters three and four, that institutionalisation has occurred. Thus the period since the Second World War is different from earlier periods in the general degree of union-management accommodation; in particular, collective bargaining has become firmly established. This well-known change in the character of industrial relations means that institutionalisation theorists must argue that the processes they identify have occurred; they cannot suggest that they are merely pointing to certain tendencies which would result if institutionalisation were to occur. That is, they

cannot suggest that a failure of strike trends to move in the predicted directions was due to a failure of institutionalisation to occur. I shall return to this at the end of chapter three, when the overall trends of strike activity have been examined.

It is difficult to develop precise measures of the extent of institutionalisation because the process depends on the attitudes of the parties involved as well as on more objective characteristics. For the analysis of trends over time, we have to be satisfied with comparing various periods in which the characteristics of industrial relations are known to be different. But for comparisons between industries, it is possible to be more precise. Since collective bargaining is identified as the key process of institutionalisation, it is reasonable to take the proportion of an industry's workers covered by bargaining agreements as an index of the extent of institutionalisation. Clearly, this does not cover every aspect of an industry's institutional arrangements, but it is not designed to do more than distinguish between industries. Useful figures on bargaining coverage exist only for the period since the Second World War, but for earlier periods broad comparisons are possible between industries where bargaining was established and those where it was not. However, the fact that widespread bargaining was not established until the New Deal means that inter-industry comparisons on this dimension are difficult for earlier periods; for example, many industries with bargaining were different on other dimensions and therefore few conclusions can be reached. Comparisons using bargaining coverage are thus largely confined to the period since the Second World War.

We have seen in this chapter that 'conventional' writers

have explored the characteristics of institutionalised relations. Little would be gained from elaborating on their accounts of what constitutes institutionalisation. Instead, I shall concentrate on patterns of strike activity and how they have changed, using these writers' expectations about the effects of institutionalised relations on conflict as the theoretical focus. Writers such as Shorter and Tilly and the 'radicals' have sought to amend the conventional approach in various ways. But the institutionalisation theory can still be treated as an entity because these writers retain the stress on the institutional isolation and control of conflict. Shorter and Tilly have widened the conventional approach by concentrating on labour's political position, but have retained the view that institutional acceptance for the unions will reduce the amount of industrial conflict. Radicals have questioned the pluralist assumptions of the conventional case but have still argued that the incorporation of the unions has robbed the working class of its militancy.

As I have said, I shall adopt a critical approach in the following chapters and attempt to assess the validity of the institutionalisation theory. In the course of this investigation, I shall offer explanations of particular findings but a more systematic statement of an alternative to the theory will be reserved for the final chapter. I must also remind the reader that chapters three to seven focus on certain themes and that I shall not test each version of the theory in turn. This approach has the advantage of presenting an account of strike activity in which we can progress from one theme to the next; otherwise a given theme would have to be brought up several times and the overall picture obscured. The disadvantage is that the findings

relating to each version of the theory are scattered throughout these chapters; thus I give a systematic summary of the results, as they affect each version, in the first section of the final chapter.

NOTES:

1. See T. Parsons The social system (Routledge & Kegan Paul, London, 1951) pp. 31-45; and P.M. Blau Exchange and power in social life (Wiley, N.Y., 1964) chap. 10.

2. R.H. Turner and L.M. Killian Collective behavior (Prentice-Hall, Englewood Cliffs, N.J., 1957) p. 481.

3. For a critique of pluralism and particularly the assumption that power is equally distributed between the groups see A. Fox Beyond contract: work, power and trust relations (Faber and Faber, London, 1974) pp. 262-70. See also Fox 'Industrial relations: a social critique of pluralist ideology' pp. 185-233 in J. Child (ed.) Man and organization (George Allen & Unwin, London, 1973).

4. R. Dahrendorf Class and class conflict in industrial society (Routledge & Kegan Paul, London, 1959) pp. 268-69. Similar views are expressed by A. Touraine The post-industrial society (Wildwood House, London, 1974) orig. publ. 1969) p. 17; and N. Poulantzas Political power and social classes (New Left Books and Sheed and Ward, London, 1973, orig. publ. 1971) p. 135. Cf. the argument which is the obverse of this: political life in general has settled down because the 'fundamental political problems of the industrial revolution have been solved: the workers have achieved industrial and political citizenship; the conservatives have accepted the welfare state...' S.M. Lipset Political Man (Heinemann, London, 1960) p. 406.

5. See, for example, L.R. Sayles and G. Strauss The local union (Harcourt, Brace and World, N.Y., 2nd edn, 1967) p. 7; R. Ozanne A century of labor-management relations (Univ. of Wisconsin Press, Madison, Wis., 1967) p. 194; V.H. Jensen Heritage of conflict (Cornell Univ. Press, Ithaca, N.Y., 1950) pp. 118, 353; J.T. Carpenter Competition and collective bargaining in the needle trades, 1910-1967 (Cornell Univ., Ithaca, N.Y., 1972) pp. 60-73.

6. C. Kerr 'Industrial relations and the liberal pluralist' Ind. Rels. Research Assoc. Proceedings of the 7th. annual meeting, 1954, pp. 2-16; see especially pp. 5-6, 11-12. See also E.W. Bakke 'Mutual survival after twelve years' Ind. Rels Research Assoc. Proceedings of the 11th annual meeting, 1958 pp. 2-18.

7. H.A. Clegg 'Pluralism in industrial relations' Brit. J. Ind. Rels., 13, pp. 309-16 (1975) at p. 309 (emphasis added).

8. C. Kerr, J.T. Dunlop, F. Harbison & C.A. Myers Industrialism and industrial man (Penguin, Harmondsworth, British 2nd edn 1973) pp. 218-19.

9. A.J. Siegel 'Method and substance in theorizing about worker protest' pp. 21-52 in National Bureau of Economic Research Aspects of labor economics (Princeton Univ. Press, Princeton, N.J., 1962); following quotation from p. 44. See also C. Kerr 'Changing industrial structures' pp. 348-59 in W.E. Moore and A.S. Feldman (eds) Labor commitment and social change in developing areas (Social Science Research Council, N.Y., 1960) esp. pp. 352-53; W.E. Moore Industrialization and labor (Cornell Univ. Press, Ithaca, N.Y., 1951) chap. 2; H.L. Wilensky and C.N. Lebeaux Industrial society and social welfare (Russell Sage Foundation, N.Y., 1958) pp. 86, 106-07.

10. J.T. Dunlop Industrial relations systems (Southern Illinois Univ. Press, Carbondale, Ill., 1970; orig. publ. 1958) p. 343.

11. Wilensky & Lebeaux op.cit., pp. 87-88; S.D. Hays The response to industrialism, 1885-1914 (Univ. of Chicago, Chicago, 1957) p. 1.

11a I return to the discussion of industrialisation in considering the work of Shorter and Tilly, in section three.

12. The quotations come from, respectively: R.A. Lester As unions mature (Princeton Univ. Press, Princeton, N.J., 1958) p. 32; J.W. Kuhn Bargaining in grievance settlement (Columbia Univ. Press, N.Y., 1961) p. 50; and R. Dubin 'Constructive aspects of industrial conflict' pp. 37-47 in A. Kornhauser et.al. (eds) Industrial conflict (McGraw-Hill, N.Y., 1954) at p. 44.

13. See Lester op.cit., pp. 21-31 for the argument that a period of intense hostility will be followed by one of peace. Note the similarity of the argument from industrialisation, although Lester concentrates on the sources of peace in the industrialised society rather than on the reasons for conflict in the newly-industrialising one.

14. J.R. Commons 'Trade agreements' pp. 1-12 in Commons (ed.) Trade unionism and labor problems (A.M. Kelley, N.Y., 1967; orig. publ. 1905) at pp. 1, 4.

15. J.R. Commons et.al. History of labour in the United States (MacMillan, N.Y., 1918) Vol. 2, p. 48.

16. J. Mitchell Organized labor (American Book and Bible House, Philadelphia, 1903) pp. 299, 347, 354.

17. Cf. J.R. Hicks The theory of wages (Macmillan, London, 1932) pp. 138-47.

18. See also S. and B. Webb Industrial democracy (Longmans, Green & Co., London, 2nd edn 1914) p. 221; A. Marshall Elements of the economics of industry (Macmillan, London, 4th edn 1907) p. 378.

19. E.T. Hiller The strike (Univ. of Chicago Press, Chicago, 1928) p. 65.

20. Ibid., pp. 193-94, 223-31. Cf. Dahrendorf op.cit. (note 4) pp. 278-79.

21. H.E. Hoagland Collective bargaining in the lithographic industry (Columbia Univ. Studies in Hist., Econs & Public Law No. 176, Columbia Univ., N.Y., 1917).

22. Hiller op.cit., pp. 269-75.

23. Ibid., pp. 274-75.

24. Lester op.cit., p. 30.

25. Lester's work is, of course, partly a reflection of its times; the unions appeared to have reached a stable position in industry and to have ceased their rapid growth. But, as I shall argue below, the central part of the institutionalisation theory is still widely accepted.

26. Lester op.cit., p. 22 where it is said that there is no one evolutionary route and that deviations from the trend can be expected. It is never explained what the causes of these deviations are. See also the studies carried out under the auspices of the National Planning Association; here certain conditions are identified as leading to industrial peace, with particular emphasis being placed on the willingness of the parties to co-operate and on the 'atmosphere' of relations; but it is then said that peace may not continue if the parties reduce their efforts to maintain harmony or if economic conditions deteriorate. See C.S. Golden & V.D. Parker (eds) The causes of industrial peace under collective bargaining (Harper & Bros., N.Y., 1955) especially C. Kerr 'The collective bargaining environment' (pp. 10-22) and C.A. Myers 'Conclusions and implications' (pp. 46-54). For criticisms see H.R. Northrup & H.A. Young 'The causes of industrial peace revisited' Ind. & Lab. Rels Rev., 22, pp. 31-47 (1968).

27. See M.J. Baum 'Maturity in industrial relations: a case study' Ind. & Lab. Rels Rev., 4, pp. 257-64 (1951) at p. 257; the characteristics of 'maturity' are described at pp. 260-62.

28. Dubin in Kornhauser op.cit.; Dubin 'Power and union-management relations' pp. 465-81 in W.A. Faunce (ed.) Readings in industrial sociology (Appleton-Century-Crofts, N.Y., 1967) orig. publ. in Admin. Sci. Quart. (1957).

29. Dubin in Kornhauser op.cit., p. 38.

30. Dubin in Faunce op.cit., pp. 468-78.

31. Ibid., p. 471.

32. Ibid., pp. 471-72. See also J. Seidman, J. London, B. Karsh & D.L. Tagliacozzo The worker views his union (Univ. of Chicago Press, Chicago, 1958) p. 84; J.T. Dunlop 'The function of the strike' pp. 103-21 in Dunlop & N.W. Chamberlain (eds) The frontiers of collective bargaining (Harper & Row, N.Y., 1967) at p. 105.

33. R. Dubin 'A theory of conflict and power in union-management relations' Ind. & Lab. Rels Rev., 13, pp. 501-18 (1960).

34. A.M. Ross & P.T. Hartman Changing patterns of industrial conflict (Wiley, N.Y., 1960).

35. Ibid., pp. 62-69. Cf. the somewhat different emphasis on pp. 47-64, where an analysis is given in terms very similar to those of Lester.

36. Ibid., p. 163. A virtually identical listing is given by H.A. Turner, G. Clack & G. Roberts Labour relations in the motor industry (George Allen & Unwin, London, 1967) pp. 297-98.

37. G.K. Ingham Strikes and industrial conflict (Macmillan, London, 1974) p. 16. See also J.E.T. Eldridge Industrial disputes (Routledge & Kegan Paul, London, 1968) pp. 23-35.

38. A. Gifford 'The impact of Socialism on work stoppages' Ind. Rels. 13, no. 2, pp. 208-12 (1974).

39. On union involvement in the Democratic Party see J.D. Greenstone Labor in American politics (Vintage Books edn., N.Y., 1970) esp. p. 361.

40. The meaning and importance of such rivalries are hardly considered by Ross and Hartman. If the argument is that they increase jurisdictional disputes, it is easy to show that, since they are a small proportion of the total, the contribution to total strike activity will be slight. If rivalries are taken as an index of disagreement in the labour movement, Ross and Hartman need to show that such things as the A.F.L. v. C.I.O. split were over fundamental matters; it is surely preferable to see this as very different from the divisions in the French or Italian movements. See V.R. Lorwin 'Reflections on the history of the French and American labor movements' J. Econ. Hist., 17, pp. 25-44 (1957).

41. For an analysis of the 'stages' through which labour-management relations are said to go see S.H. Slichter, J.J. Healy & E.R. Livernash The impact of collective bargaining on management (Brookings Instit., Washington, D.C., 1960) p. 665; B.D. Mabry Labor relations and collective bargaining (Ronald Press Co., N.Y., 1966) pp. 66-68.

42. See A.M. Ross 'The prospects for industrial conflict' Ind. Rels, 1, no. 1, pp. 57-74 (1961) for a further consideration of American strike proneness; here, Ross identifies a number of particular factors which may increase or reduce strike activity and which are quite separate from those stressed in Ross and Hartman. This suggests that Ross would use a different approach to explain trends in one country from that used in international comparison.

43. Dahrendorf op.cit. (note 4) pp. 256-57.

44. Ibid., pp. 268-69, 274, 278-79.

45. N.W. Chamberlain & J.W. Kuhn Collective bargaining (McGraw-Hill, N.Y., 2nd edn 1965) p. 189; cf. first edition by Chamberlain (1951) p. 238.

46. Chamberlain & Kuhn op.cit., pp. 395-401. The view of the Wagner Act was that 'The denial by employers of the right of employees to organize and the refusal by employers to accept the procedure of collective bargaining lead to strikes and other forms of industrial strife or unrest': preamble to the National Labor Relations Act, 1935, quoted in J.S. Auerbach (ed.) American labor: the twentieth century (Bobbs-Merrill, Indianapolis, 1969) pp. 365-66.

47. J. Barbash 'Rationalization in the American union' pp. 147-62 in G.G. Somers (ed.) Essays in industrial relations theory (Iowa State Univ. Press, Ames, Iowa, 1969) esp. pp. 147-49, following quote from p. 148. See also F.H. Harbison 'Collective bargaining in perspective' pp. 60-72 in J.H.G. Crisop (ed.) Industrial relations: challenges and responses (Univ. of Toronto Press, Toronto, 1966) esp. p. 67.

48. J.T. Dunlop 'Future trends in industrial relations in the United States' p. 9; paper given to the Third World Congress of the International Industrial Relations Association, 1973.

49. Other recent statements that derive from the institutionalisation theory and argue for the decline of union militancy include: J.K. Galbraith The new industrial state (Penguin, Harmondsworth, 2nd edn 1974; orig. publ. 1972) pp. 263-71; and D. Bell The coming of post-industrial society (Heinemann, London, 1974) pp. 163-64: the labour problem has been 'encapsulated'.

50. E.g. R.L. Raimon 'Affluence, collective bargaining and steel' N.Y. State School of Ind. & Lab. Rels at Cornell Univ. Reprint No. 102 (from Lab. Law J. 1960); N.W. Chamberlain 'Strikes in contemporary context' Ind. & Lab. Rels Rev., 20, pp. 602-16 (1967): D. Bell 'The subversion of collective bargaining' pp. 120-36 in G. Hunnius, G.D. Carson & J. Case (eds) Workers' control (Vintage Books, N.Y., 1973), essay orig. publ. 1960.

51. A.R. Weber 'Collective bargaining and the challenge of technological change' pp. 73-90 in Crispo (ed.) op.cit.; W.W. Wirtz excerpt from address to John A. Ryan Forum in Monthly Lab. Rev., 87, p. 755 (1964); N. Goldfinger 'Labor-management relations in an increasingly difficult economic environment' Ind. Rels Research Assoc. Proceedings of 27th annual winter meeting (1974) pp. 1-8.

52. B. Aaron 'Collective bargaining where strikes are not tolerated' pp. 129-53 in R.L. Rowan (ed.) Collective bargaining: survival for the '70's? (Univ. of Pennsylvania Press, Philadelphia, 1972); J. Stieber 'Collective bargaining in the public sector' pp. 65-88 in L. Ulman (ed.) Challenges to collective bargaining (Prentice-Hall, Englewood Cliffs, N.J., 1967).

53. See the symposium in Ind. Rels, 1, no. 1, pp. 9-55 (1961); and G. Strauss 'The shifting power balance in the plant' Ind. Rels. 1, no. 3, pp. 65-96 (1962).

54. See Chamberlain 'Strikes in contemporary context' op.cit., esp. p. 616; S.H. Sosnick 'Non-stoppage strikes: a new approach' pp. 73-80 and O.W. Phelps 'Compulsory arbitration: some perspectives' pp. 81-91 in Ind. & Lab. Rels Rev., 18 (1964); G.W. Taylor 'The recognition of national economic interests in bargaining' Monthly Lab. Rev., 83, pp. 18-21 (1960). For similar arguments relating to Britain see W.E.J. McCarthy & N.D. Ellis Management by agreement (Hutchinson, London, 1975).

55. For the view that union power and collective bargaining would destroy capitalism see C.E. Lindblom Unions and capitalism (Yale Univ. Press, New Haven, Conn., 1949). The 'conventional' response to this was made by F.H. Harbison & J.R. Coleman Goals and strategy in collective bargaining (Harper & Bros., N.Y., 1950); see esp. pp. 3-6, 156. See also B.M. Selekman 'Varieties of labor relations' pp. 386-408 in J. Shister (ed.) Readings in labor economics and industrial relations (J.B. Lippincott Co., Philadelphia, 2nd edn. 1956).

56. E. Shorter & C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974).

57. Ibid., pp. 4-5.

58. N.J. Smelser Social change in the industrial revolution (Univ. of Chicago Press, Chicago, 1959).

59. E.P. Thompson The making of the English working class (Penguin, Harmondsworth, revised edn 1968; orig. publ. 1963).

60. Shorter & Tilly op.cit., pp. 8-11; following quote from p.8.

61. Ibid., p. 194.

62. Ibid., pp. 234-35.

63. The contrast with Dahrendorf, in particular, is very marked. See also A. Giddens The class structure of the advanced societies (Hutchinson, London, 1973) pp. 201-02 where it is said that industrial and political conflict are separated and that this represents part of the normal functioning of advanced capitalism.

64. Shorter and Tilly chap. 12; following quote from p. 317. See also Shorter and Tilly 'The shape of strikes in France, 1830-1960' Compar. Studs in Soc. & Hist., 13, pp. 60-86 (1971). Cf. E.M. Kassalow Trade unions and industrial relations: an international comparison (Random House, N.Y., 1969); A. Sturmthal Comparative labor movements (Wadsworth Publishing Co., Belmont, Calif., 1972).

65. Shorter and Tilly Strikes in France p. 193; see also p. 329.

66. Ibid., p. 350.

67. Ibid., pp. 93-103.

68. Ibid., pp. 75, 66.

69. Ibid., p. 285; for the other measures of political conflict see pp. 80-84.

70. H. Marcuse One dimensional man (Abacus paperback edn, London, 1972; orig. publ. 1964).

71. This view is criticised by S. Aronowitz False promises: the shaping of American working class consciousness (McGraw-Hill, N.Y., 1973) p. 139. See P.M. Sweezy & H. Magdoff The dynamics of U.S. capitalism (Monthly Review Press, N.Y., 1972); B. Wycko 'The work shortage: class struggle and capital reproduction' Rev. of Radical Pol. Econs. 7, no. 2, pp. 11-30 (1975).

72. J. Weinstein The corporate ideal in the liberal State: 1900-1918 (Beacon Press, Boston, 1968).

73. Cf. M. Green The National Civic Federation and the American labor movement, 1900-1925 (Catholic Univ. of America Press, Washington, D.C., 1956).

74. See A.K. Steigerwalt The National Association of Manufacturers, 1895-1914 (Bureau of Business Research, Univ. of Michigan, Ann Arbor, Mich. 1964).

75. R. Radosh, 'The corporate ideaology of American labor leaders from Gompers to Hillman' Studies on the Left, 6, pp. 66-88 (1966). On union leaders' attitude to foreign policy and their acceptance of governmental policy see Radosh American labor and United States foreign policy (Vintage Books edn, N.Y., 1969).

76. A. Preis Labor's giant step: twenty years of the C.I.O. (Pathfinder Press, N.Y., 1972; orig. publ. 1964) e.g. pp. 46, 64, 85, 278.

77. C.W. Mills The new men of power (Harcourt, Brace & Co., N.Y., 1948) e.g. p. 9; L. de Caux Labor radical: from the Wobblies to the C.I.O., a personal history (Beacon Press, Boston, 1970) p. 547; S. Lens The crisis of American labor (Sagamore Press, N.Y., 1959) pp. 16-17; M. Glaberman 'The American working class in historical perspective' Radical America, 7, no. 6, pp. 81-90 (1973) at pp. 82-83.

78. M. Mann Consciousness and action among the Western working class (Macmillan, London, 1973) p. 21.

79. Lens op.cit., p. 226. I shall not go further into the reasons for this apathy, but merely wish to point out that factors internal to the working class are not ignored.

80. Mann op.cit., pp. 45-54; Preis op.cit., p. xi.

81. J. Brecher Strike: the true history of mass insurgence in America from 1877 to the present (Straight Arrow Books, San Francisco, 1972).

82. R. Herding Job control and union structure (Rotterdam Univ. Press, Rotterdam, 1972). Other recent radical accounts include S. Weir 'Class forces in the 1970's' Radical America, 6, no. 3, pp. 31-77 (1972); E. Mandel 'Where is America going' New Left Rev., 54, pp. 3-15 (1969).

83. Aronowitz op.cit., pp. 259-60.

84. Ibid., pp. 136-208 esp. pp. 139, 183.

85. This argument is most clearly expounded for America by J.C. Leggett Class, race and labor (Oxford Univ. Press, N.Y., 1968).

86. That is, concessions are granted as a way of incorporating the unions more fully. See B.J. Bernstein 'The New Deal: the conservative achievements of liberal reform' pp. 263-88 in Bernstein (ed.) Towards a new past: dissenting essays in American history (Pantheon Books, N.Y., 1968) esp. p. 280.

87. E.g. P. Taft 'The philosophy of the American labor movement' pp. 133-42 in W. Haber (ed.) Labor in a changing America (Basic Books, N.Y., 1966) at p. 136.

88. S. Perlman A theory of the labor movement (A.M. Kelley, N.Y., 1949) orig. publ. 1928) esp. p. 201.

89. For similar points regarding differentiation and alienation see A.D. Smith The concept of social change (Routledge & Kegan Paul, London, 1973); R. Schacht Alienation (George Allen & Unwin, London, 1971).

90. E.g. I. Unger 'The "New Left" and American history: some recent trends in United States historigraphy', Amer. Hist. Rev., 72, pp. 1237-63 (1967) at p. 1257. See also I. Howe 'New styles in "Leftism"' pp. 19-32 in Howe (ed.) Beyond the New Left (Horizon Press, N.Y., 1970).

91. See, for example, S. Lynd 'The possibility of radicalism in the 1930's: the case of steel' Radical America, 6, no. 6, pp. 37-64 (1972).

92. J. Barbash 'Labor and the corporate State in America' J. Econ. Issues, 6, no. 1, pp. 43-57 (1972) at pp. 52-53.

93. Weir op.cit., pp. 42-44; P.A.C. Koistinen 'Mobilizing the World War 2 economy; labor and the industrial-military alliance' Pacific Hist. Rev., 42, pp. 443-78 (1973) e.g. pp. 444, 471.

94. R. Miliband The State in capitalist society (Quartet Books edn, London, 1973; orig. publ. 1969) esp. pp. 74, 142-43. See also D.R. Fusfield 'The rise of the corporate State in America' J. Econ. Issues, 6, no. 1, pp. 1-22 (1972) esp. p. 12.

95. P.N. Stearns 'Measuring the evolution of strike movements' Internat. Rev. of Soc. Hist., 19, pp. 1-27 (1974) at pp. 15-17.

96. R. Dubin 'Prospects of industrial conflict; a prediction' pp. 527-30 in Kornhauser et.al. (eds) op.cit. (note 12); Dubin 'Industrial conflict: the power of prediction' Ind. & Lab. Rels Rev., 18, pp. 352-63 (1965).

97. O. Ashenfelter & W.S. Peirce 'Comment on "Industrial conflict: the power of prediction"' Ind. & Lab. Rels Rev., 20, pp. 92-95 (1966).

98. D. Snyder 'Institutional setting and industrial conflict: Comparative analyses of France, Italy and the United States' Amer. Sociol. Rev., 40, pp. 259-78 (1975).

99. D. Britt & O.R. Galle 'Industrial conflict and unionization' Amer. Sociol. Rev., 37, pp. 46-57 (1972); P.H. Douglas 'An analysis of strike statistics' J. Amer. Statistical Assoc., 18, pp. 866-77 (1923); H.A. Millis & R.E. Montgomery Organized labor (McGraw-Hill, N.Y., 1945) pp. 698.

100. P. Taft 'Violence in American labor disputes' Annals of the Amer. Acad. of Pol. & Soc. Sci., 364, pp. 127-40 (1966); P. Taft & P. Ross 'American labor violence: its causes, character and outcome' pp. 221-301 in H.D Graham & T.R. Gurr (eds) Violence in America (U.S.G.P.O., Washington, D.C., 1969).

101. See C.R. Walker Steeltown (Harper and Bros., N.Y., 1950) p. 124.

102. P. Ross The government as a source of union power (Brown Univ. Press, Providence, R.I., 1965). On union growth in general cf. A.A. Blum 'Why unions grow' Labor Hist., 9, pp. 39-72 (1968); I. Bernstein 'The growth of American unions' Amer. Econ. Rev., 44, pp. 301-18 (1954).

CHAPTER THREE

THE TREND OF STRIKES, 1881-1972

This chapter describes and analyses the broad trends of strike activity from 1881 to 1972. It contains the data which will be employed in subsequent chapters, but also begins the assessment of the theories outlined in chapter two. Thus, the most general predictions of those theories are examined through a systematic analysis of the main dimensions of strike activity. Section one gives a very brief introduction to the use of indices of strike activity; further discussion will be found in Appendix One, where sources of data are also given. Sections two and three consider the overall level of strike activity and the 'shape' of strikes. Trends of union involvement and the issues and results of strikes are examined in the following three sections. Sections seven and eight begin the analysis of industrial and regional trends in activity.

In dealing in turn with several dimensions of strike activity, we must not lose sight of the central implication of the institutionalisation theory, which is that conflict will become less intense and more 'orderly' as institutional control increases. However, as section one shows, overall activity can be divided into several dimensions. It is quite possible for an institutionalisation theorist to expect a fall on one dimension and not on another; for example, we saw in chapter two that some writers expect a fall in the duration of strikes but an increase in their size. Thus it is necessary to consider each dimension in turn in order to see which set of expectations, if any, is correct. The final section of the chapter will consider the wider implications of our findings.

1. Introduction: indices of strike activity

The problems of describing statistically patterns of strike activity has been approached in various ways. For Ross and Hartman[1],

> 'distinctive patterns of industrial conflict can be described most intelligently in terms of the membership involvement ratio (percentage of union members going on strike) and the duration of strikes (days lost per striker).'

Other writers concentrate on the number of days lost per worker[2] or attempt to construct more complex indices of strike activity.[3] The most logical starting point, however, is provided by Knowles. He gives the identity[4]

$$D \equiv N \times \frac{W}{N} \times \frac{D}{W}$$

where D is the number of days lost in strikes, N is the number of strikes and W the number of workers involved. In other words, the number of days lost can be broken down into three components, each of which is of interest: the number of strikes, the size of strikes (W/N) and the number of days lost per striker (D/W). It is not useful to follow Ross and Hartman in calling D/W the duration of strikes; although for one strike, the duration is given by D/W, it is obvious that this relationship does not hold in the aggregate.[5] The term 'loss per striker' or some equivalent will be used here and direct evidence relating to strike duration employed.

Knowles' identity-statement has been re-discovered by Britt and Galle, who claim it as their own.[6] Their method differs only in that they include a deflator term for the number of workers employed. In the terminology used here, where E is the measure of employment,

$$\frac{D}{E} = N \times \frac{W}{N \cdot E} \times \frac{D}{W}$$

Britt and Galle call D/E the volume of conflict and the three components the proneness to conflict and the extensity and intensity of conflict. This particular formulation is unsatisfactory because, although it deflates D and the size of strikes by employment, no such control is introduced in relation to the number of stoppages. And the meaning of the 'extensity' index is unclear since it measures neither the size of strikes (W/N) nor worker involvement per employee (W/E). The aim of the index seems to be to control the measure of size by deflating it by the number of workers available for striking, on the assumption that the uncorrected measure of size will be a function of the level of employment. But there is no particular reason to make this assumption; one would obviously expect the number of workers involved to increase with employment, but it is equally likely that the number of strikes will also increase.

In view of this, and of the fact that the size of strikes is of interest in its own right, in the following analysis I use the index W/N. Since the number of strikes means little in itself, the index of strike frequency used is N/E; I also include series for workers involved per employee (W/E) and striker-days per employee (D/E). And, following Ross and Hartman, indices using trade union membership, T, as the denominator are included.

2. Overall strike-proneness

Table 3-1 gives the series for the indices mentioned above, plus those for D/N and D/W, for ten-year periods. A more detailed breakdown into four-year periods is given in Table A-1 in Appendix 2, while Table A-2 puts the information into relative form, with the indices for 1927-29 set at 100.

Table 3-1: Strike indices, 1881-1972.

	W/N (no.)	D/N ('000's)	D/W (no.)	W/T (x 1000)	D/T (no.)	N/E (x 1m)	W/E (x 1000)	D/E (no.)
1881-90	282			737		99.1	28.0	
1891-1900	274			860		113	31.0	
1901-10	179			282		162	29.0	
1911-20	397			434		143	56.7	
1921-30	521			163		40.6	21.1	
1931-40	432	6.60	15.3	182	2.78	79.6	34.4	0.525
1941-50	604	8.76	14.5	186	2.69	98.9	59.8	0.866
1951-60	510	7.88	15.5	124	1.91	80.2	40.9	0.632
1961-72	468	7.42	15.9	116	1.84	69.7	32.6	0.517

Notes: For sources of data for all tables where a source is not specifically acknowledged, see Appendix 1.

The units in which the indices are expressed will be clear from the following examples:

no.: simple number; e.g. in 1961-72 the size of the average strike, given by W/N, was 468 workers.

'000's: index expressed in thousands; e.g. in 1961-72, as the D/N index shows, the average strike involved the loss of 7,420 days.

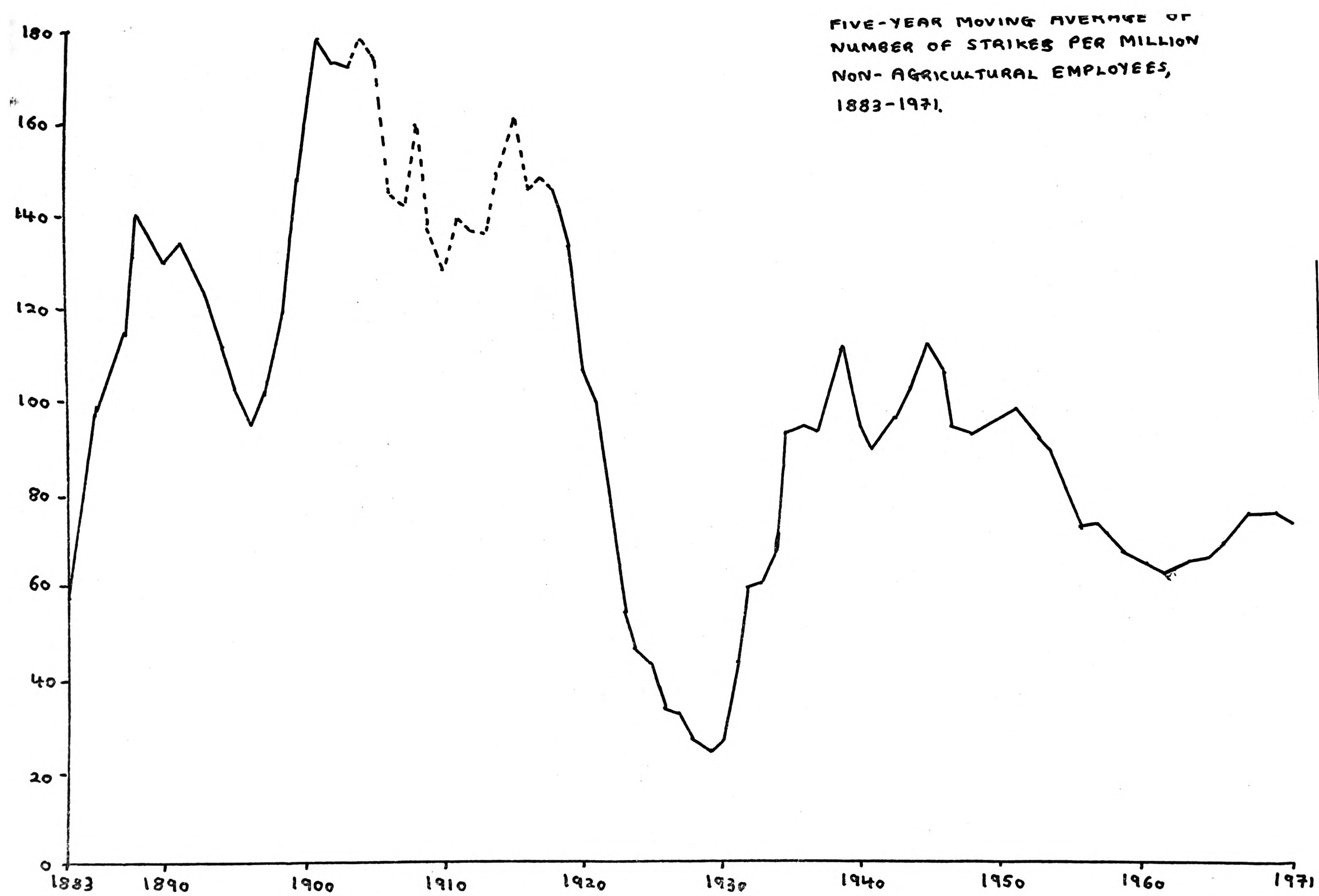
x 1m.: index multiplied by one million; e.g. in 1961-72 there were 69.7 strikes per million non-agricultural workers.

In estimating employment for the years up to 1920, I have had to use a number of separate series, so that the data are far from being totally reliable, but they are adequate for the broad trends; for details of the method of estimation, see Appendix 1. The measure of employment used is the number of non-agricultural workers, which is the index normally used in calculations of this kind.

As we have seen in chapter 2, the institutionalisation theory would expect a decline in the indices of strike frequency and worker involvement, the timing of the decline depending on whether industrialisation or collective bargaining is seen as the key influence. Although there is a decline in the N/E index, the evidence fits neither hypothesis closely since the watershed between periods of high and low strike frequency comes around 1920, after America had become heavily industrialised and before the advent of mass unionism and widespread collective bargaining. This is borne out further in Chart 3-1, which gives a five-year moving average of strike frequency; the

FIVE-YEAR MOVING AVERAGE OF NUMBER OF STRIKES PER MILLION NON-AGRICULTURAL EMPLOYEES, 1883-1971.

CHART 3-1



advantage of this method is that it reduces the impact of 'exceptional' years while showing the year-to-year trends of activity. Strike frequency increased in the 1880's, fell in the Nineties and then rose to peak levels in the early years of the present century. It remained high until the 1920's, when a dramatic decline occurred; and the militancy of the Thirties was not sufficient to raise the index to pre-1920 levels. Since 1940, there has been an historically low number of strikes per head, with a decline in the 1950's and some recovery in the Sixties.

It could be argued that this pattern does reflect the processes described by the institutionalisation theorists. Those stressing industrialisation might suggest that there is a time-lag between the shift to an industrial economy and the decline in strike activity, while a supporter of the role of bargaining might say that the system introduced in the Thirties has contained post-war conflict at low levels. The former argument is hard to assess since there is no prediction in the theory about the length of the time-lag, but on the whole it is not plausible. The first two decades of the present century cannot be equated with the period of 'early' protest identified in the theory and the rapid decline of activity in the 1920's cannot be seen as a case of the workers coming to terms with industry. The economy had been industrialised for far too long for this to be plausible, and particular reasons for the marked fall in strike frequency in the Twenties can be adduced.[7] Moreover, the arguments from industrialisation tend to see the strike as an <u>immediate</u> and spontaneous protest against new conditions so that there should be a very close link between industrial growth and strike activity; in other words, a

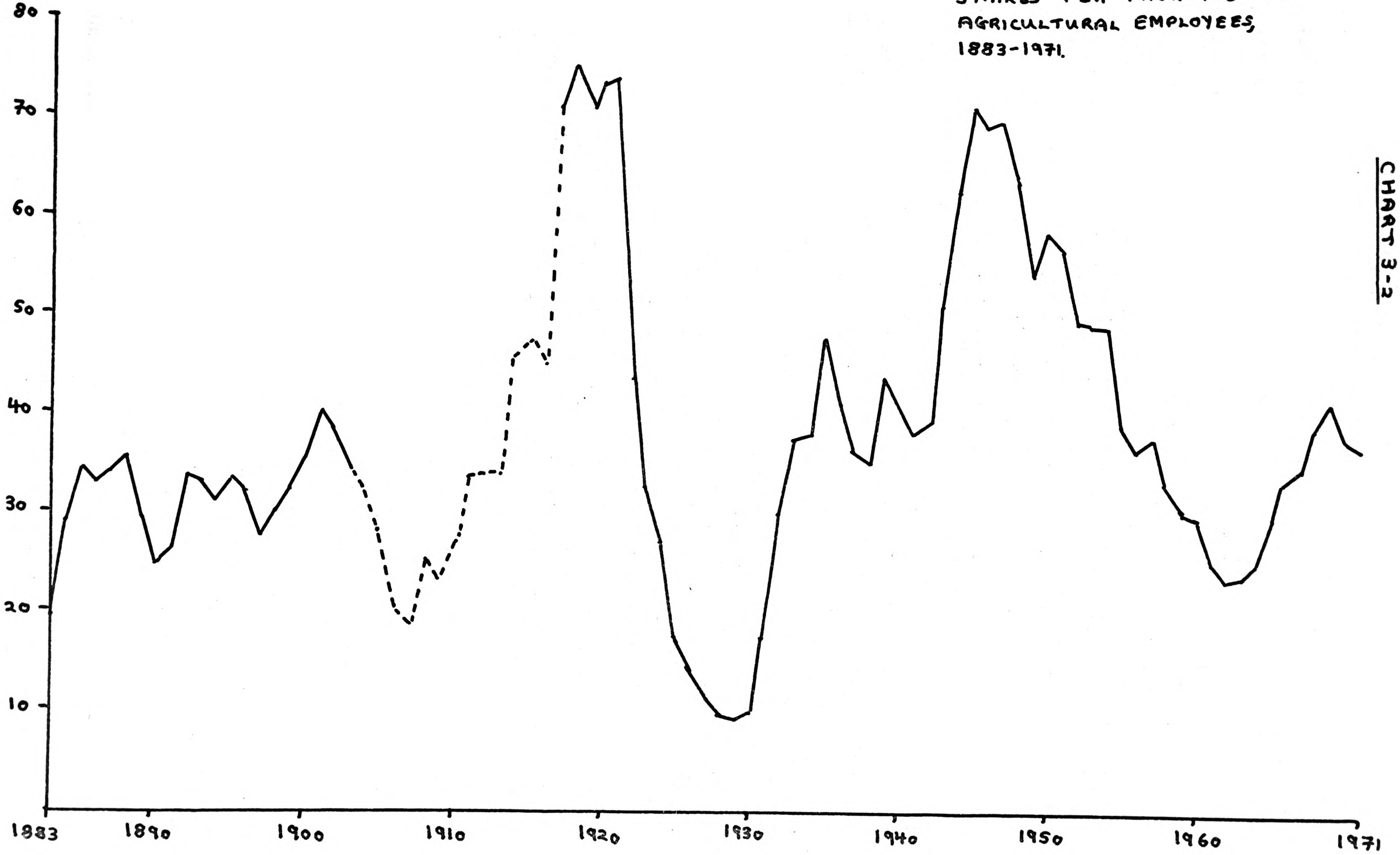
time-lag hypothesis is not consistent with the rest of the theory.

The argument from bargaining has a greater plausibility. After a period of conflict in the Thirties, when the unions were struggling for recognition, and the Forties, when the conflict turned on the scope of collective bargaining, strike frequency declined to very low levels (it would be said). This theory would not pretend to give a complete account of the movements of strike activity, but would merely suggest that it can explain what has happened since the Thirties. However, it is clear from the data for the period from 1881 as a whole that the decline in activity since 1950 is relatively insignificant. Although a fall can be observed, the period since the 1940's looks on Chart 3-1 more like a plateau than a downward slope. To be sure, the plateau is lower than that for the early years of the century, but the explanation for the shift to a low strike frequency need not stem from the institutionalisation theory; the experience of the 1920's might have led to an alteration in the workers' militancy which the subsequent depression did not reverse. We must also remember the weaknesses of the frequency measure which were mentioned in chapter 1. In particular, any trend towards the centralisation of bargaining and the increase in the mean size of plants will exert a downward influence on the number of separate disputes recorded. Thus, we must turn to the evidence on worker involvement.

The data in the tables and the graphical representation in Chart 3-2 give no support to the view that worker involvement has been declining in the long-term. To be sure, there has been a marked fall since the end of the Forties, but the

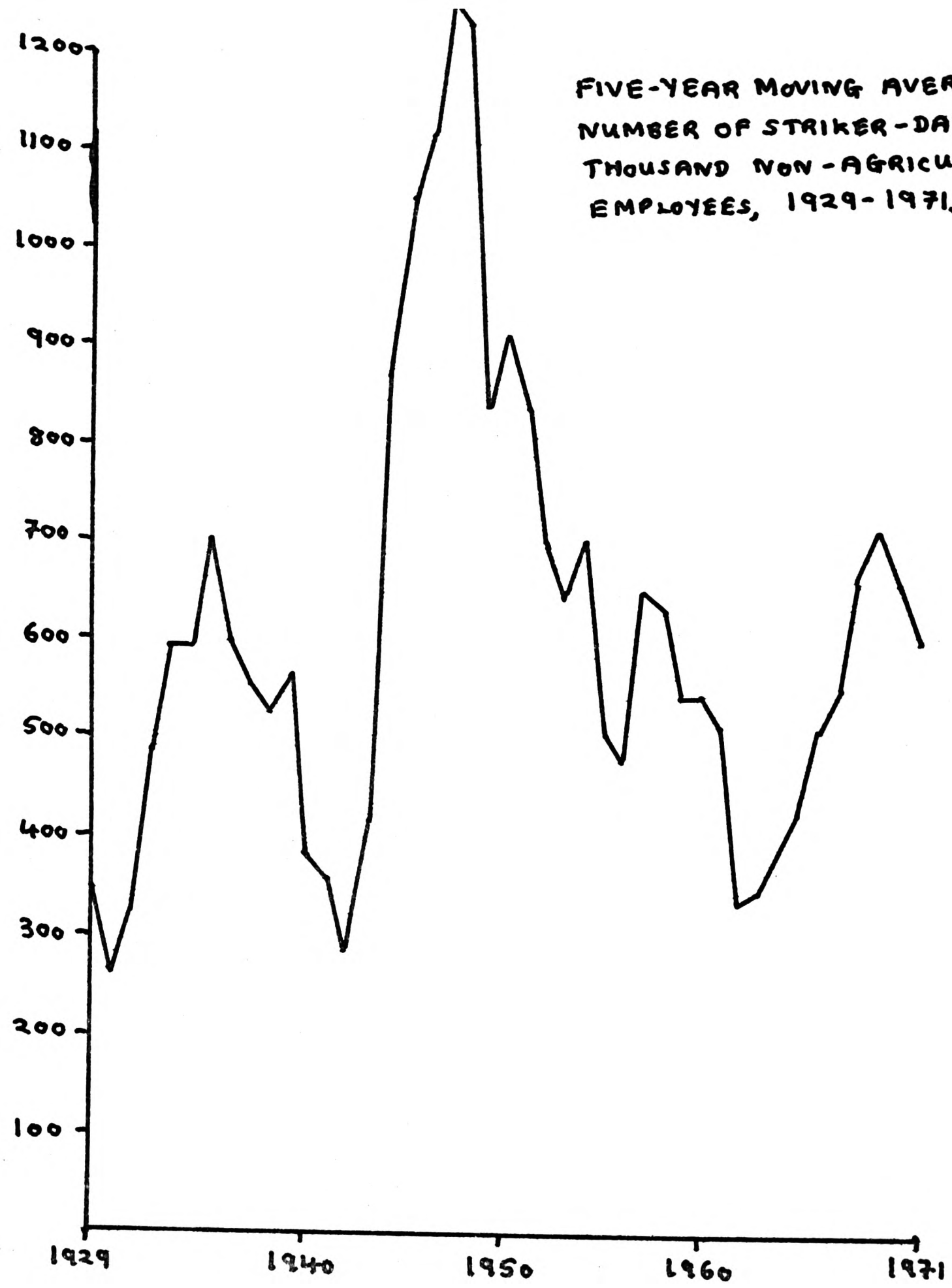
FIVE-YEAR MOVING AVERAGE OF NUMBER OF WORKERS INVOLVED IN STRIKES PER THOUSAND NON-AGRICULTURAL EMPLOYEES, 1883-1971.

CHART 3-2



reversal of this has been more marked since 1960 than has the alteration in the trend of strike frequency. And the level reached at the bottom of the trough was very similar to that prevailing at the end of the nineteenth century. It is the latter fact which is perhaps the more significant because it indicates the weakness of any approach which does not take into account the position of a short-term trend within the wider picture. The moving average has fluctuated around the level of about thirty workers involved in strikes per thousand non-agricultural employees and has shown no long-term tendency to rise or fall. The two great peaks in the series indicate the strike waves which occurred after each of the World Wars; and there is an interesting further parallel between the subsequent patterns. The fall in worker involvement in the Fifties is similar to, though less marked than, that in the Twenties and the recovery in the Sixties parallels that in the Thirties.

The pattern of some decline in strike frequency and no fall in worker involvement fits the 'weak' version of the institutionalisation theory, which suggests that bargaining can affect only the frequency with which disputes develop into strikes and not the size of those strikes that still occur.[7a] But, since the number of strikes is not a very reliable index, the support given in this version is not strong; and I argued in chapter 2 that any institutionalisation theory must suggest that there will be a decline in the intensity of conflict, so we need to turn to the other indices of activity. Data on days lost are available only from 1927 and are thus of less value than those on worker involvement in assessing long-term trends, but they are useful as far as they go. Tables 3-1 and A-1 and chart 3-3 show that there has been no overall tendency for strike volume (D/E) to decline.



FIVE-YEAR MOVING AVERAGE OF NUMBER OF STRIKER-DAYS PER THOUSAND NON-AGRICULTURAL EMPLOYEES, 1929-1971.

CHART 3-3

The year-to-year changes parallel those in worker involvement, although the amplitude of the fluctuations is greater; in particular, the rise in activity in the 1960's is very marked. A corollorary of this parallel movement is a fairly constant number of days lost per striker (D/W). Since the 'average striker' has consistently lost about 15 days, it does not seem that the intensity of conflict has changed.

From this, we may turn to the question, which is very important for the institutionalisation theory, of whether the duration of strikes has fallen. Table 3-2 contains data on the mean and median duration of stoppages, while Table A-4 gives a more detailed breakdown by categories of duration. The mean strike has consistently lasted about twenty days and the median strike about ten days. The meaning of the information on duration by worker involvement and strike-days is less straightforward since the term 'mean striker-day', for example, does not immediately signify very much. What it shows is the length of the strike in which the 'average' day was lost; the fact that this is much greater than the length of the average strike shows that most days are lost in the long stoppages.

Not only have the mean and median strikes remained much the same length, but there has also been a marked constancy in the proportion of stoppages of a given length. Table A-4 shows that, for example, strikes lasting one day but less than two days account for just over 10% of the total while those of 7-14 days' duration account for about 20%. This Table also shows the extent of the concentration of workers involved and days lost in the longest strikes. Well over 40% of all striker-days occur in stoppages lasting over 50 days, whereas only 5% or less occur in disputes that last less than a week. This bears out the statement, made in

Table 3-2: Estimated mean and median duration of strikes, in days, 1881-1972.

(a) 1881-1913

	Mean, by number of strikes			Median
	(1)	(2)	(3)	
1881-85	27.3	26.0	24.5	11.8
1886-89	19.8	24.9	25.2	9.13
1890-93	17.2	28.8	28.2	7.44
1894-97		26.1	26.4	
1898-1901		25.8	35.1	
1902-05		31.1	34.3	
1906-08		16.1		
1909-11		14.3		
1912-13		15.6		

Notes: Estimate (1) for the mean, and the median, are from part (a) of Table A-4, relating to the detailed evidence on 'cessations' from 1881 to 1894.

Estimate (2) is from J.I.Griffin Strikes: a study in quantitative economics (Columbia Univ.Press, N.Y.,1939) p.87.

Estimate (3) is from Commissioner of Labor data on mean duration per establishment involved.

For part (b) of table, see over page.

Table 3-2: (continued).

(b) 1916-72

	By number of strikes		By workers involved		By days lost	
	Mean	Median	Mean	Median	Mean	Median
1916-18	19.1	8.78				
1919-22	36.6	9.52				
1923-25	24.5	11.8				
1927-29	24.8	12.3	43.2	22.5	103	112
1930-33	20.2	10.7	27.7	16.9	60.6	50.5
1934-37	22.6	11.9	24.8	13.8	54.9	45.7
1938-41	21.8	11.0	21.9	12.6	49.5	53.6
1942-45	8.69	4.00	10.4	5.33	27.1	20.5
1946-49	23.7	11.4	31.1	17.4	67.7	54.4
1950-53	19.8	8.69	25.5	11.7	63.7	53.4
1954-57	20.1	9.53	22.2	10.7	58.7	49.7
1958-61	22.6	10.4	31.7	16.1	79.2	90.9
1962-65	23.0	10.3	24.4	12.9	60.3	50.9
1966-69	22.9	10.7	26.9	12.8	66.1	57.7
1970-72	25.3	11.3	25.9	11.5	77.8	82.7

Notes: Based on B.L.S. data (cf. Griffin loc.cit., where it is stated that the B.L.S. did not compute strike duration for 1916-26; the data are reported in various annual articles on strikes and lockouts in the Monthly Lab.Rev: see Appendix 1).

Estimates assume that the mid-point of the '90 days and over' category is 120 days.

chapter 1, that the series on worker involvement and days lost are very reliable because the heavy concentration in the long strikes means that the missing of short stoppages will bias the figures very little.

The only major deviation from the pattern of a constant strike length occurred in 1942-45 when the mean and the median duration fell markedly. The reason for this was, of course, the war and the efforts by the government and most union leaders to prevent strikes from breaking out. It is interesting that, on the limited evidence available, a similar pattern does not seem to have occurred in the First World War, despite the fact that 'no-strike' pledges were made in both wars. Many reasons may be suggested for this, but the point of interest here is whether the 'radical' view, that between the wars the unions became more effectively incorporated, receives support; the argument would be that in the Second World War the unions were prepared to work with the Administration in discouraging strikes that were seen as threats to national security, whereas in the First they were less willing and able to do this.

Since strike frequency in the Second World War was greater than in previous and subsequent periods, and worker involvement remained at high levels, it seems that there was a problem of rank-and-file dissatisfaction facing the union leaders; although it was possible to impose quick settlements and although the leaders could cite the low volume of strikes as evidence for labour's commitment to the war, the presence of large, frequent and short stoppages suggests that strikes were being used as rank-and-file protests. The available evidence does not show any such marked change in strike patterns in the First War. And there is evidence that in the so-called 'Defense period' as well as during

the war itself, union leaders in the Second War were prepared to help the government in restraining strikes wherever possible.[8] Between 1916 and 1918, the labour movement was much more divided on its attitude to the war and some of the most significant strikes were carried out by the I.W.W. or were without formal union involvement.[9] However, strikes between 1942 and 1945 cannot be seen as revolutionary or even as being directed against the war; the main focus was on the freezing of wages when prices were still rising so that the strikes can be seen as protests against the government and, to some extent, against the union leaders. Thus, the radical view receives some support, but it must also be said that the general level of support for the Second War was greater than that for the First;[10] in other words, the shift in strike patterns was not due solely to union collaboration with the government. We cannot go into this question further here, and will merely note that the 1942-45 period is the only one in which American strikes fit the pattern of being short demonstrations of protest, with direct political overtones, since it was the government and not the individual employer which was the focus of discontent.

Since there is no tendency for strikes to become shorter, a major prediction of the institutionalisation theory has not been borne out. However, the defence could be made that bargaining will reduce short strikes, with the long union-led disputes remaining important.[11] Although plausible, this argument is not wholly convincing. One might expect that there would be an increase in the proportion of stoppages in the longer duration categories, with a decline in the shorter categories, but, as we have seen (from Table A-4), this is not the case; there is no direct evidence for an increase in the importance of long strikes.

Alternatively, it might be said that there will be two processes at work; the reduction of short strikes and the shortening of long ones. Together, these would leave the overall distribution of strikes by duration unaffected. But there is no evidence to support this view; in particular, for this argument to hold there would have to be a long-term decline in strike frequency which, as we have seen, has not occurred. We may conclude that the data on strike duration do not accord with the predictions of the institutionalisation theory.

I noted in chapter two that several institutionalisation writers suggest that strikes will become less frequent but that those stoppages which still occur will be large battles. We may assess this view by examining Table 3-3, which shows the incidence of large strikes from 1927 to 1972. The Table gives figures for periods of three or four years to avoid the problem of 'exceptional' years; these periods are the same as those employed in the tables in Appendix two. If an institutionalised system can cope with small stoppages, and if those disputes which cannot be resolved develop into large strikes, the proportion of large strikes in the total will increase. The Table shows, however, that large strikes have not accounted for a rising proportion of all stoppages, workers involved or days lost. There is no overall trend in any of the three indices despite the changes in industrial relations which have occurred since the 1930's. Even during the Second World War, large strikes were important, which suggests that the war years were not as peaceful as has been claimed. There was a fall in the incidence of large strikes in the 1950's, but, as pressures such as inflation became more severe, there was an increase in the Sixties. Thus the trend of large strikes supports neither the view that large-scale conflicts will

Table 3-3: Incidence of large strikes, 1927-72.

	Percent. of strike measures accounted for by strikes each involving at least 10,000 workers.		
	N	W	D
1927-29	0.3	34.0	45.3
1930-33	0.8	35.7	34.0
1934-37	0.6	37.0	31.0
1938-41	0.4	36.2	27.5
1942-45	0.5	29.9	46.9
1946-49	0.5	57.3	58.6
1950-53	0.5	33.4	48.0
1954-57	0.5	36.0	42.3
1958-61	0.5	39.5	57.3
1962-65	0.4	26.4	27.7
1966-69	0.6	36.2	42.1
1970-72	0.5	47.5	46.9

become more important nor the alternative hypothesis that the growth of moderation in industry will make national stoppages less likely.

We have seen, then, that trends in the overall amount of strike activity and in the duration and size of stoppages do not fit the expectations of the institutionalisation theory. We must now consider the overall 'shape' of strikes.

3. The shape of strikes

Shorter and Tilly have measured the shape of strike activity by drawing a box the sides of which indicate the mean size (W/N), the frequency (N/E) and the duration of strikes.[12] They prefer the median to the mean as the measure of duration so that extreme values will not be given disproportionate weight; and one may add that the median has the advantage, when calculating from a frequency distribution, of being relatively unambiguous, whereas the estimate for the mean will depend on one's assumptions about how strikes are distributed over the final open-ended category (in America, 'Ninety days and over'). However, the mean has the advantage of giving some sense to the volume of the box generated by the three dimensions and I shall therefore use both the mean and the median in considering strike shapes. For any strike, the volume of the box,

$$\frac{W}{N} \times \frac{N}{E} \times \text{Duration}$$

is clearly equal to D/E, the volume of the strike. This relationship does not hold in the aggregate, as a comparison of the relevant columns of Tables 3-2 and A-1 will show, because one is dealing with averages. However, the volume of the box with mean duration as one of its sides has a greater meaning than the volume when the median is used.

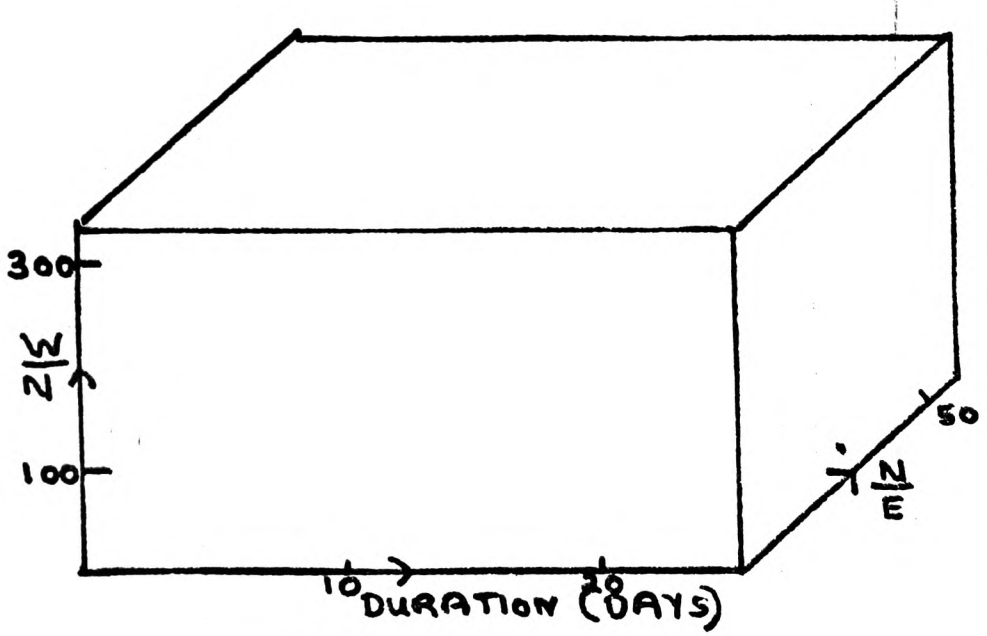
Shorter and Tilly argue that in France strikes have been

growing larger, shorter and more frequent; that is, the W/N and N/E dimmnsions of the box will increase, while the duration declines. Charts 3-4 and 3-5 show the shapes of American strikes for selected periods, by mean and median duration respectively. It is clear that the dramatic change of shape which occurred in other countries has been absent. When the median is considered, the shape in 1881-85 is not very different from that in the 1920's and early Thirties. Although more recently there has been an increase on the N/E dimension, this has not been accompanied by any fall in the median duration. For the mean duration, the boxes for the periods after the First World War are of a very similar shape, but before the war there is a tendency for them to be 'flat' in that the strikes are relatively small, but frequent, and with quite a high duration.

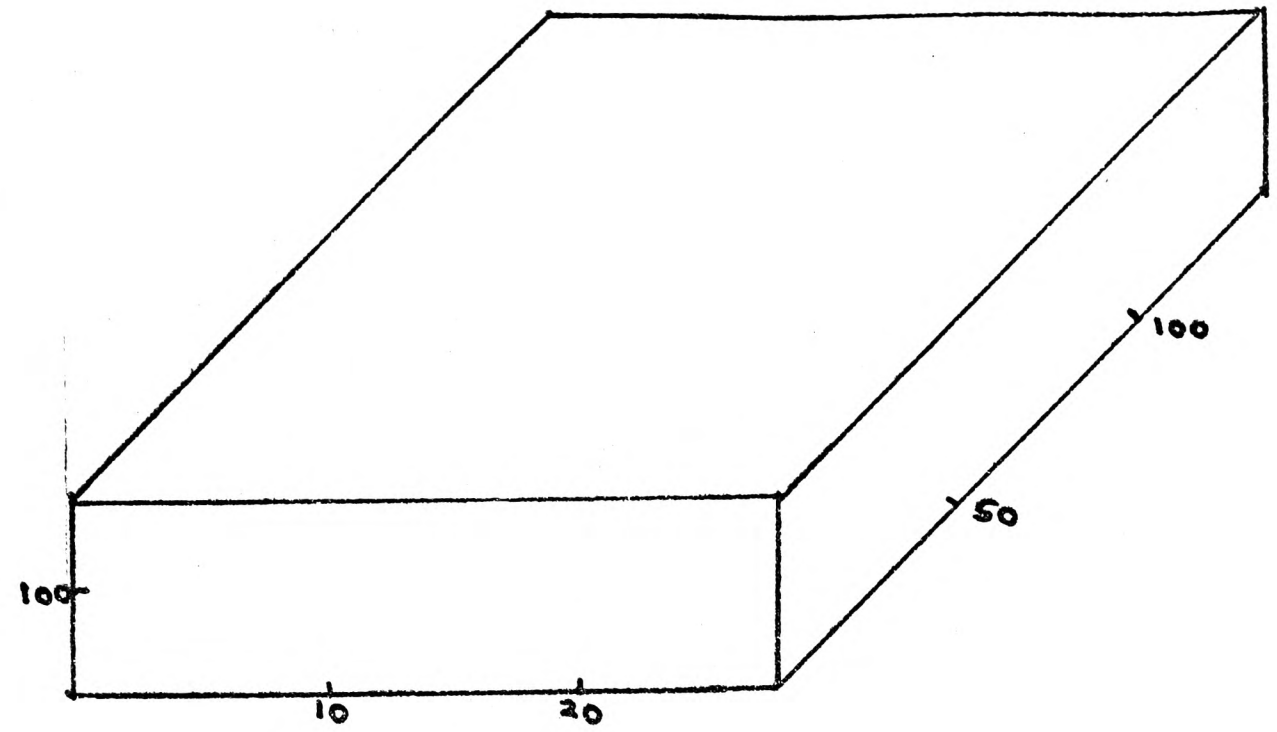
It is important to be clear what these boxes signify. Their shape shows only the relationship between the three dimensions and, since the scale on which each dimension is measured is a matter of choice, the only relevant comparison is with other boxes drawn to the same scale; a 'flat' box could represent strikes with a greater size (a higher W/N) than a 'tall' one. Further, there could be an increase in the relative size of one of the dimensions while in absolute terms there was a fall in the index concerned. With the dimensions used in charts 3-4 and 3-5, the remarkable thing about the shape of American strikes is the continued resemblance to a cube, particularly when the mean is the measure of duration. Any contrast is between the 'flat' strikes before 1916 and the larger ones since then; it is unfortunate that no data exist on the median duration of strikes for the period 1894-1916.

Since the boxes showing the shape of strikes are merely

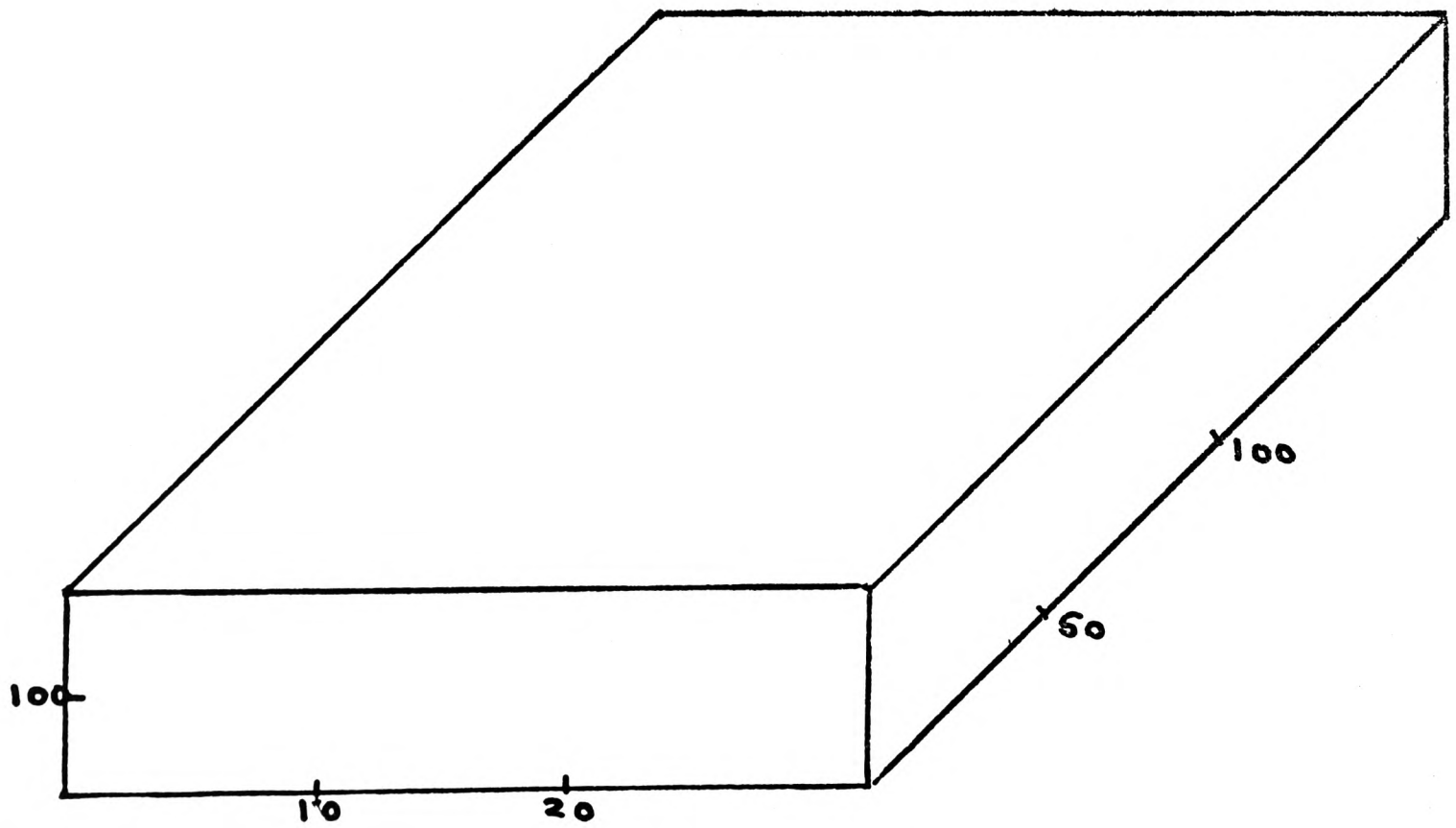
CHART 3-4: Strike shapes, by mean duration (W/N & N/E as defined in Table 3-I).



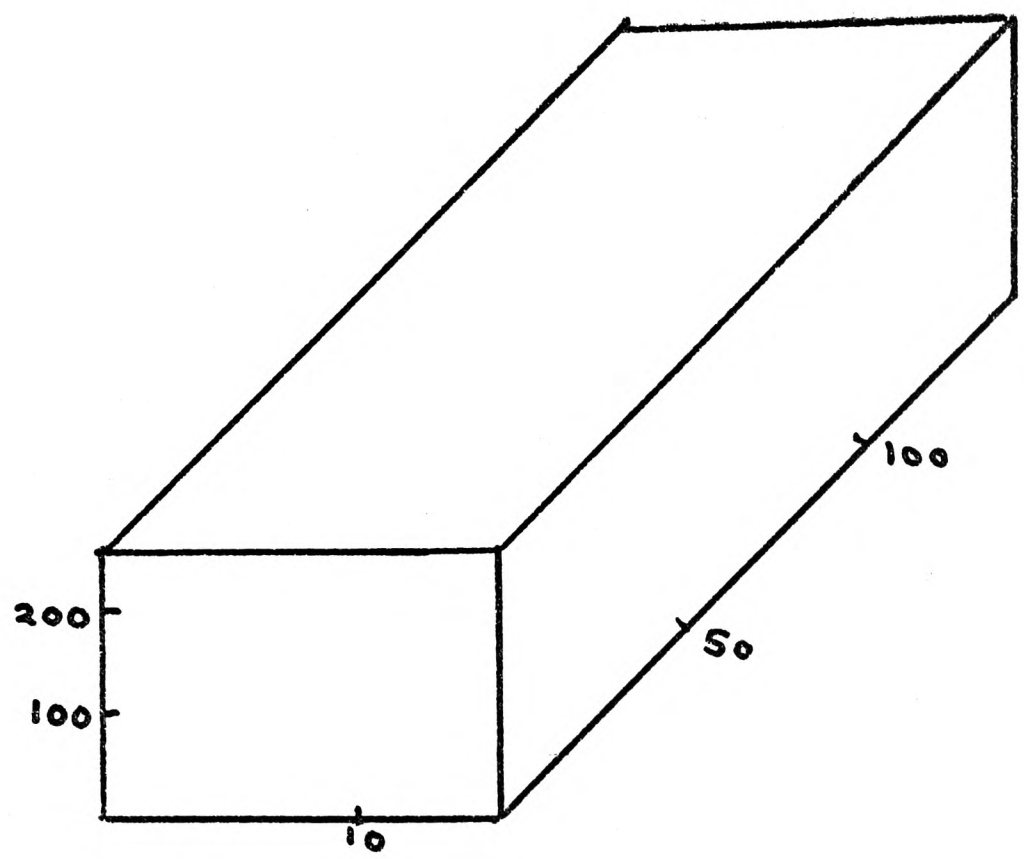
1881-5



1890-3



1902-S



1912-15

CHART 3-4: (comtinued)

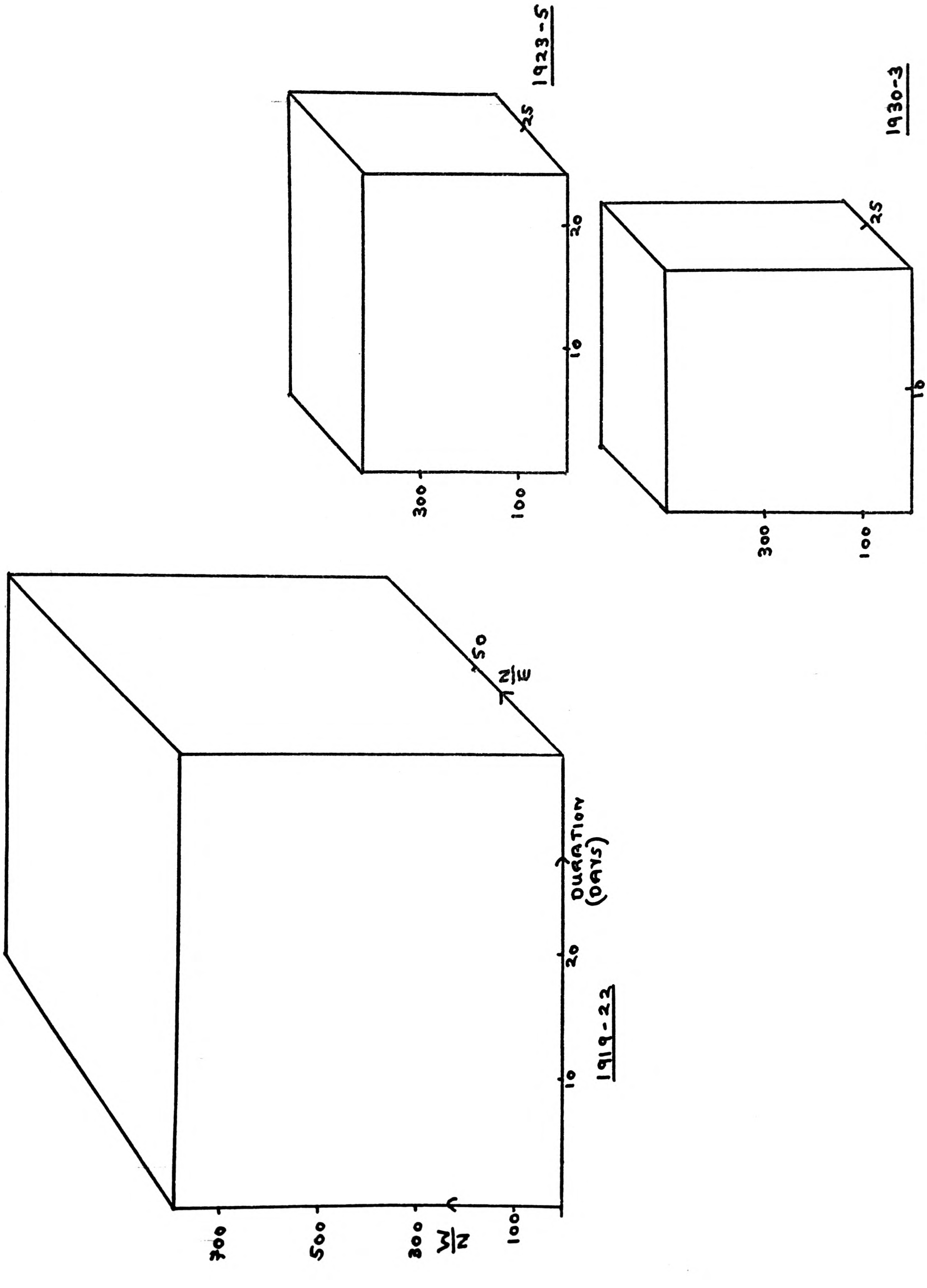


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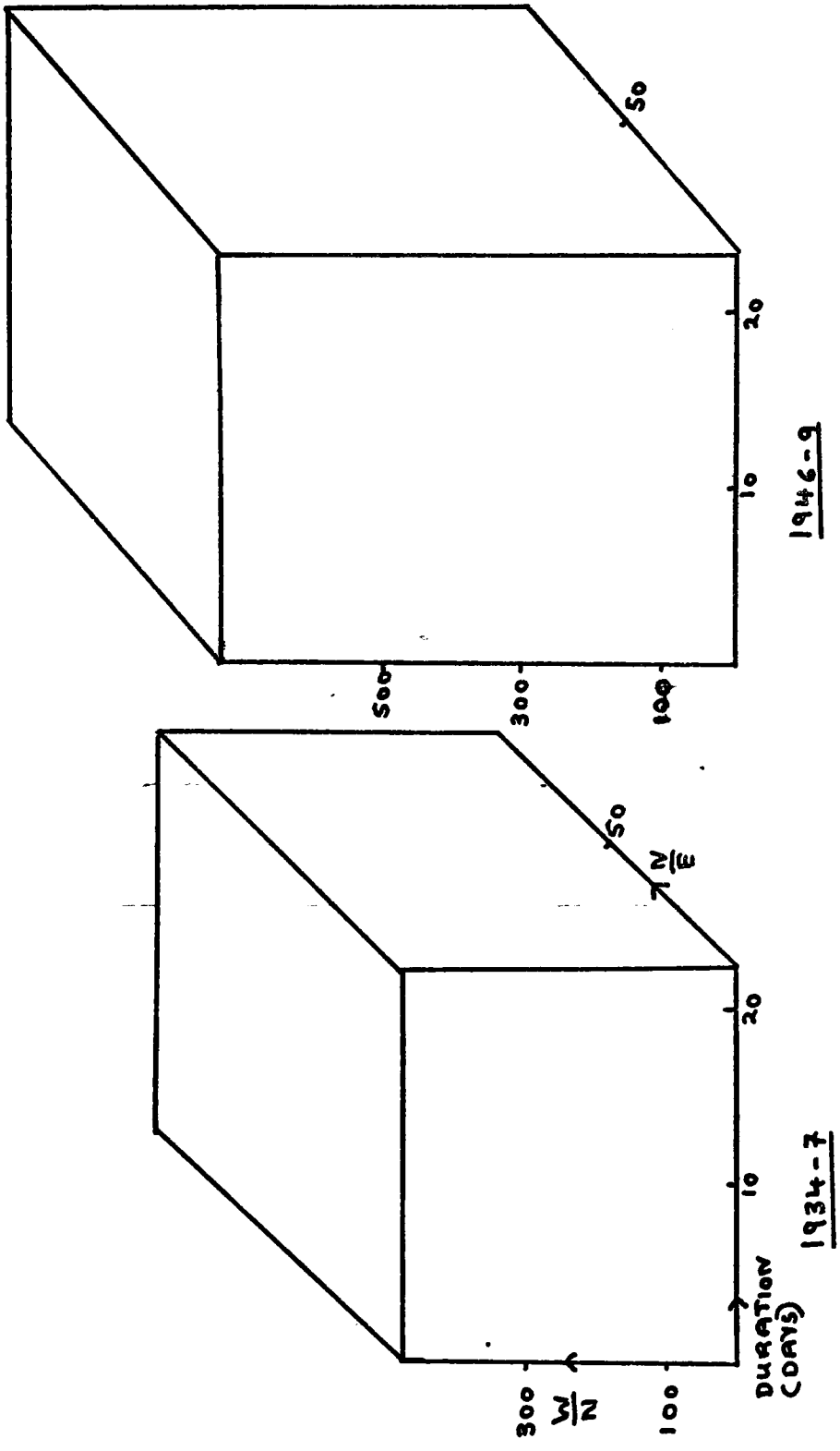


CHART 3-4: (continued)

CHART 3-5: Strike shapes, by median duration
(W/N & N/E as defined in Table 3-I)

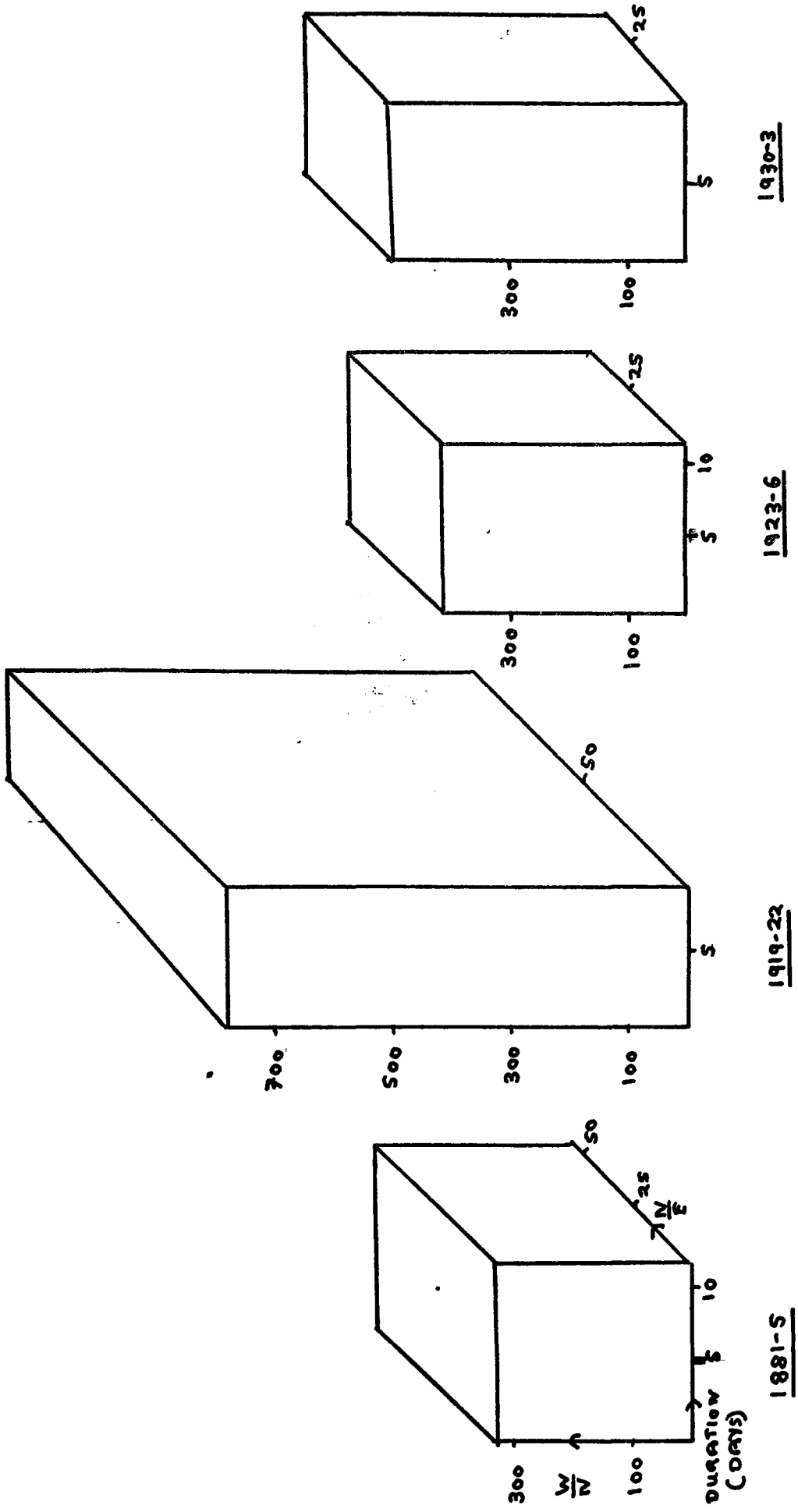
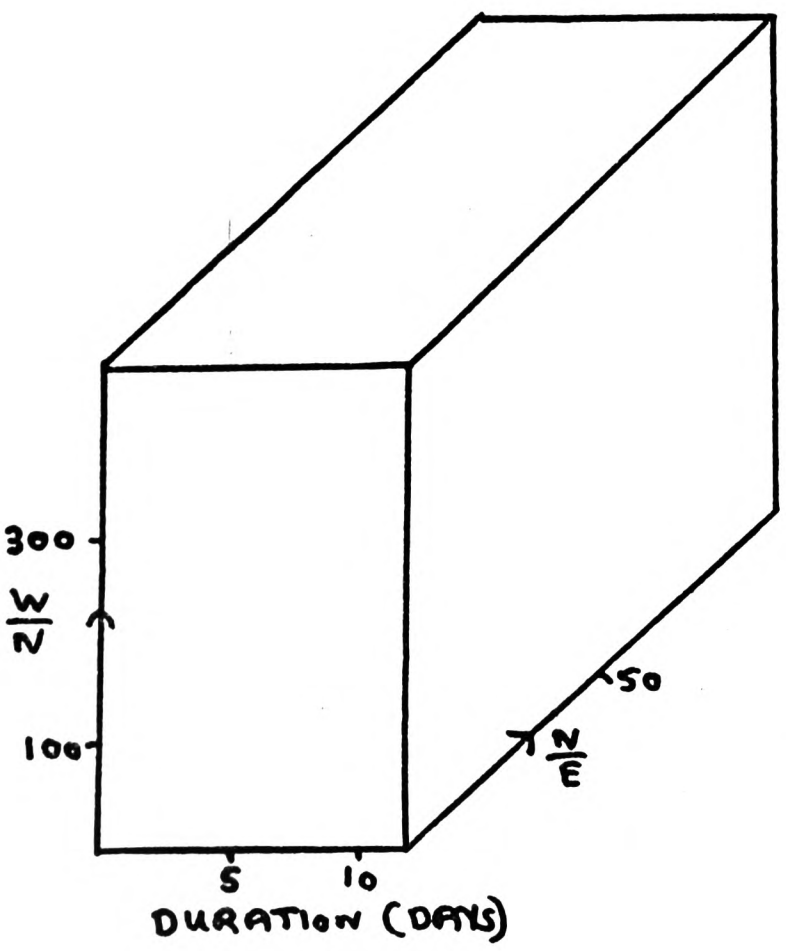
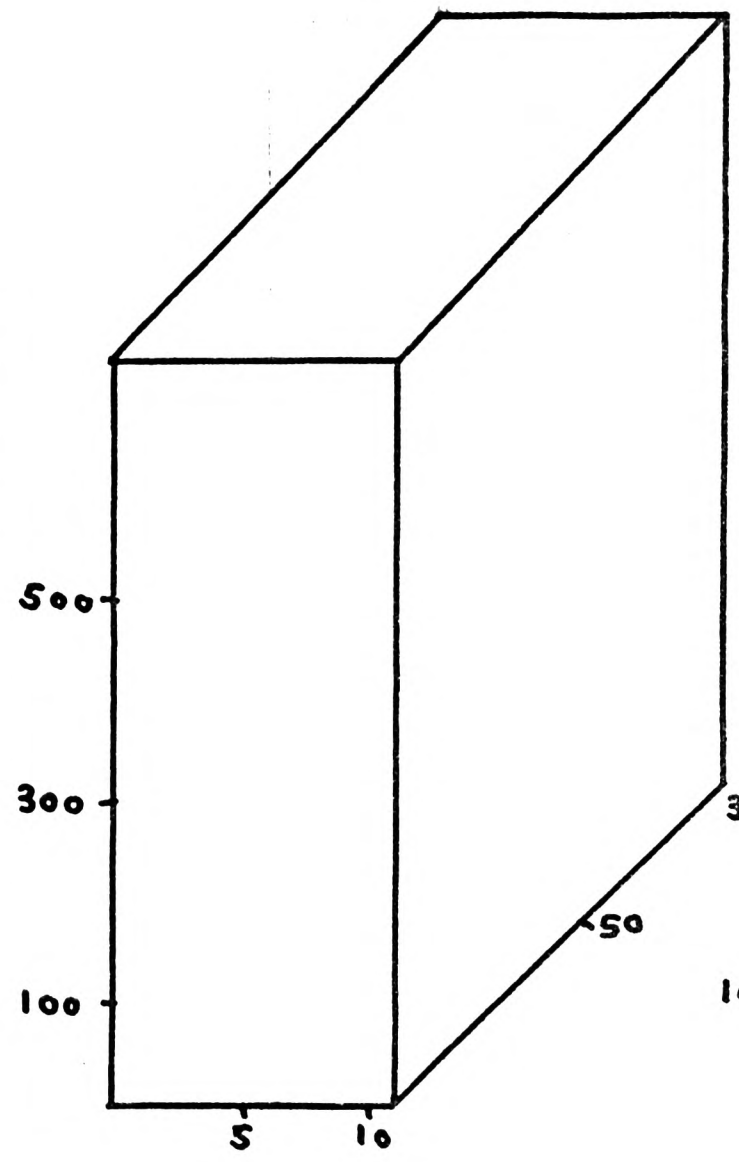


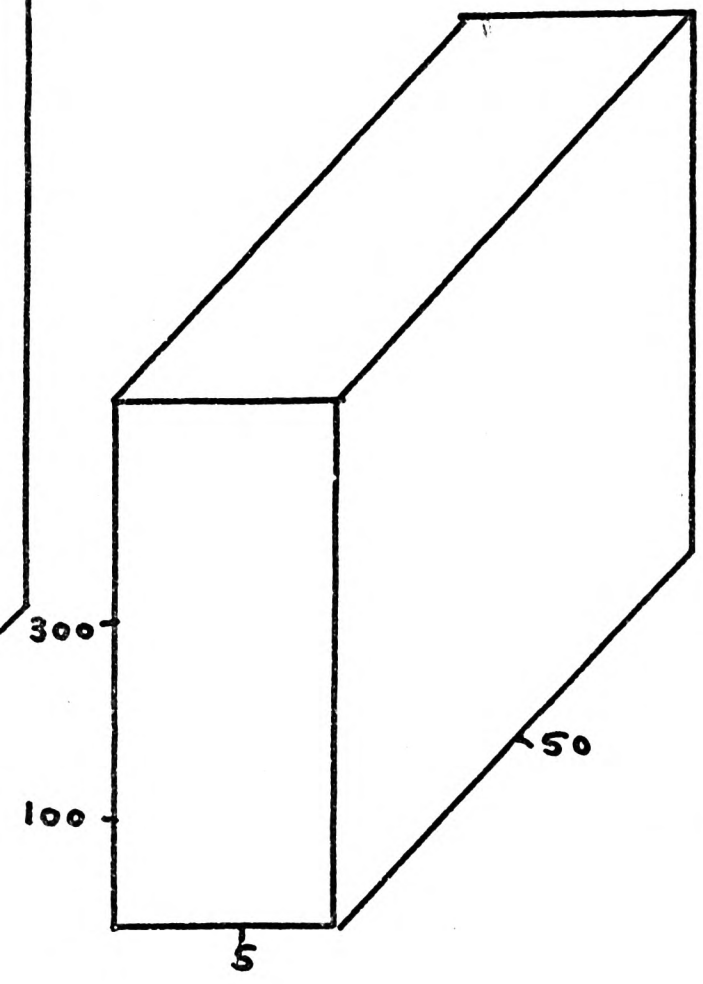
CHART 3-5: (continued)



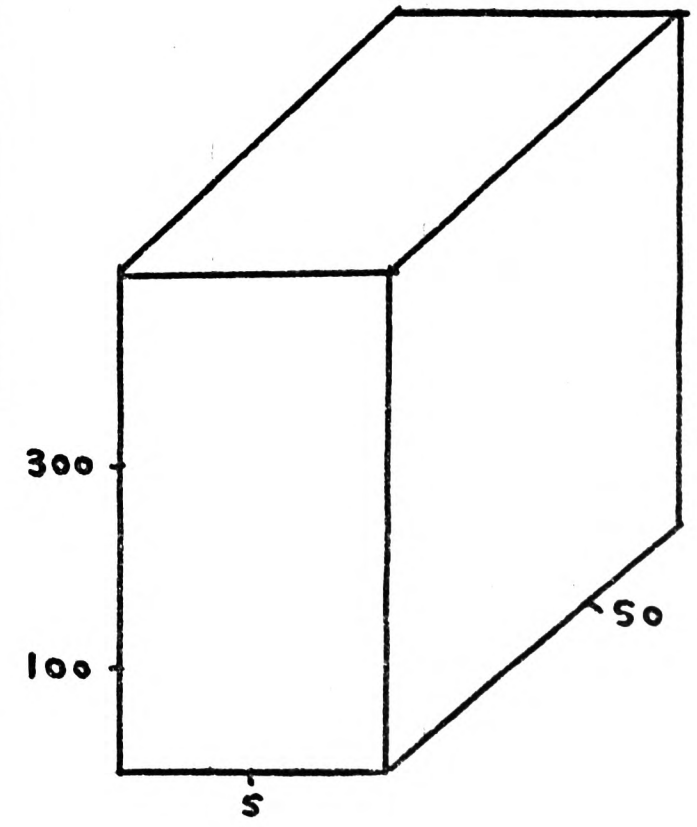
1934-7



1946-9



1950-3



1966-9

convenient devices with which to compare a number of dimensions at once, this finding is, in effect, identical to what was said above about the First World War as the apparent watershed for American strike activity. Strikes since then have been less frequent and larger than those before the war. But this contrast is not sufficient to represent a 'transformation' of the strike and in particular it does not conform to the Shorter-Tilly model for the differences between 'early' and 'modern' strike shapes. Early strikes, it will be recalled, are long, infrequent and small, whereas modern ones are shorter, more frequent and larger. Although there has been some increase in size in America, frequency has moved in the opposite direction to that predicted and duration has remained unchanged.

Although the volume of the boxes in chart 3-4 does not measure <u>strike volume</u>, it is possible to use the overall size of the boxes in order to make a rough comparison between periods of the total amount of strike activity. In the long-term, there has certainly been no tendency for the volume of the boxes to decline. If anything, there has been an increase, suggesting that arguments that there will be a tendency for strike activity to fall as industrialisation advances are incorrect. The other notable point about the volume of the boxes is the size of that for 1919-22 compared with that for 1946-49. As we saw above, these two periods marked the two great peaks in worker involvement but not only was the size of strikes greater after the First World War than after the Second, but the duration of stoppages was also larger. In other words, the unrest after the First war marks the overall peak of industrial conflict in America.

4. <u>The union and strikes</u>

The relationship between unions and strikes will be a

recurring theme of following chapters. In this section I shall give some basic information on union involvement, but it is first necessary to examine the general problems of assessing the relationship.

As I argued in the above chapter, writers like Shorter and Tilly assume that the union is a necessary mediating influence between workers' dissatisfactions and overt protests. But the union movement has grown in such a way that it is hard to demonstrate that this is the case. As a number of writers have argued,[13] unions in America have grown most rapidly in times of 'general social unrest' and it is these times that have also been characterised by a high rate of strike activity. There is, therefore, no reason to treat union growth as a variable logically prior to strike activity. It might be suggested that workers will first join unions and will then strike so that unionisation can be seen as an influence mediating the effects of 'unrest'. But there is a large body of writing which suggests that, in many cases, strikes break out before unions are organised and that it is this evidence of worker protest which stimulates the unions into starting an organising drive.[14] In other words, strikes can lead to union growth. Moreover, there are many cases where the failure of a strike has had disastrous effects on the union, which have continued for a very long time.[15] To be sure, it could be said that the defeat of the union would have come anyway, but the strike can be seen as an influence mediating the more basic causes of the defeat just as much as the union mediates the impact of unrest on strikes.

It is obvious that unions are in one sense important influences on strikes. They provide experienced leadership, organisation and discipline, a focus of loyalty and, not least,

finance to strikers who may be very uncertain of themselves and who may be awestruck by the power of the employers. I would not want to deny the central role of unions in enhancing the positions of the working class, but I would argue that accepting the importance of the union does not require us to treat it as a necessary factor in explaining strike activity. The link between unions and strikes is a complex one which should be considered without making assumptions as to its character.

Many institutionalisation theorists argue that unions have altered the nature of strike activity. For Ross and Irwin, strikes must be understood in relation to the 'institutional strivings' of unions:[16]

> 'the modern strike is not a spontaneous outburst and cannot be understood solely by reference to the grievances of the rank and file'.

Strikes come to serve the needs of the union and its leaders and are fought to strengthen the union's institutional position. The influence of unions on strike character is a matter that will be given attention in later chapters, but we may note here the obvious problems with determining the impact of unions on labour relations. As MacDonald has argued,[17] the fact that unionism is part of general social changes makes it hard to assess how management practices would have developed in the long term in the absence of unions. The hypothetical non-union standard may not be a valid basis for comparison with what has actually occurred. Certain results might have occurred even in the absence of the union as a particular form of organisation: the

> 'union is, after all, a device or vehicle that owes its origin to the existence of certain strongly felt needs'.

One may add that, since 'institutional strivings' and rank and file

needs and desires interact, it is hard in practice to separate them.

I turn now to the evidence on union involvement in strikes. The official agencies have always attempted to record the association of a strike with a union, but the methods employed have differed. The Commissioner of Labor recorded whether or not a strike was 'ordered' by a union, either by direct vote or by a business agent. The Bureau of Labor Statistics has recorded whether a union was called in during a strike or whether the strikers were union members.[18] Thus an 'unofficial' action by unionists would not be counted by the Commissioner as 'ordered' but it would be seen by the Bureau as 'connected' with a union. With this in mind, we may turn to Table 3-4 which shows the trend of union involvement in strikes. Since the 1930's, nearly every strike has had 'union involvement' but even during the First World War only 15% of those strikes whose connection with a union was reported were without a union presence. It would be dangerous to compare these figures directly with those of the Commissioner, but it is clear that there was a strong trend in the proportion of strikes 'ordered' during the period he covered. We may conclude that the union has attained 'proprietorship' of the strike, but may question the assertion by Ross that it was not achieved until after the First World War;[19] by 1902-05 three-quarters of all strikes were ordered by unions.

This finding does not, however, deal with the question of the relative strike-proneness of unionists and non-unionists. For this, we have to rely on indirect methods. The first serious attempt to derive a satisfactory measure was made by Douglas in 1923; with a little manipulation, the measure can be shown to be the ratio of the number of strikes called by a union to the number

Table 3-4: Trade union involvement in strikes, 1881-1972.

	Percent of strikes	Percent of workers involved
	Ordered by union	Ordered by union
1881-85	52.7	63.3
1886-89	62.9	75.0
1890-93	71.7	76.4
1894-97	59.3	77.0
1898-1901	68.0	77.5
1902-05	78.6	85.1
	Connected with union	Connected with union
1916-18	85.5 (58.4)	n.a.
1919-22	94.5 (70.4)	n.a.
1923-26	88.1 (81.3)	n.a.
1927-29	87.7	93.9
1930-33	82.1	92.7
1934-37	92.2	97.2
1938-41	96.4	98.7
1942-45	95.5	99.0
1946-49	98.3	99.7
1950-55	98.7	99.7
1959-60	99.1	99.8
1961-63	99.0	99.9
1964-66	98.8	99.7
1967-69	98.3	99.6
1970-72	98.1	99.5

Note: For 1916-26, figures in brackets are for the percentage of all strikes, figures without brackets for strikes where the association with a union was reported.

For changes of definition, see text.

not called by a union, multiplied by the ratio of non-unionists to unionists in the work force.[20] Douglas also calculated a similar measure based on worker involvement rather than the number of strikes. He found that union strike liability was over twenty times that of non-unionists and that for worker involvement the disparity was even greater. From this, and from the rise in his index between 1881 and 1921, he concluded that the union is a permissive factor in strikes, making possible the expression of what is on the minds of all workers.[21]

Table A-5 reports Douglas' findings and also brings them up to date. In addition, it contains calculations based on an index invented by Griffin. In the terms used here, the index is the ratio of workers involved in strikes ordered by unions, L, to the number of unionists in the work force.[22] As Griffin observes, the use of the index rests on two assumptions: that all the workers involved in strikes ordered by unions were union members and that no workers struck more than once in a year. The first assumption is probably the more serious since in the early years of union activity it is likely that many strikers will not be members,[23] with the result that the involvement of unionists will be overstated.

Table A-5 shows great increases in the two measures used by Douglas and a decline in Griffin's index. The reason for the latter trend is clear: the number of workers involved in union-led strikes, L, has increased little, but the number of union members, T, has risen very fast. Thus we need to add to Griffin's conclusion that[24]

> 'whatever decline is noted...must be ascribed to external forces rather than to a natural tendency within the union itself toward a more sparing use of the strike'

the observation that the major external force is a statistical

artefact. The rise in Douglas' indices reflects the way they were constructed. Thus the first component is the ratio of ordered to non-ordered strikes. A slight increase in the proportion of union-led strikes can lead to a very large rise in the ratio.[25] Despite the very large numbers involved in Douglas' calculations (the implication of the index is that in 1911-13 unionists were over two thousand times as likely as non-unionists to be involved in strikes) they avoid the problems of Griffin's index and show in a very notable way that the common arguments that unions will reduce strike activity are unfounded.[26] This gives more detailed support to the finding of the first section of this chapter that worker involvement in strikes has not declined despite the great increase in union density that has occurred since 1881 (see Table A-6 for illustrative figures on union density).

Brief mention must be made of the index using the ratio of workers involved in strikes to union membership (W/T). As we saw at the beginning of this chapter, Ross and Hartman regard this as a measure of strike patterns in general and not specifically of union involvement; it has therefore been included in the general Tables 3-1 and A-1. These tables show that the index fell consistently from very high levels as the end of the nineteenth century to a present level which is about one-sixth of that at the turn of the century. According to Ross and Hartman, this would be strong evidence that the strike has been withering away, but all it shows is that union membership has increased much more rapidly than has the number of workers involved in strikes. In other words, the W/T measure is even more imperfect as an indirect index of union involvement in strikes than is L/T.

A final feature of union involvement to be measured here is the strike activity of unions with differing national affiliations.

Parts (a), (b) and (c) of Table A-3 show the dominance over strikes of the major national federations, a position which has been maintained since 1927. Not too much should be read into the fluctuations that have occurred since these are often due to the affiliation or disaffiliation of various unions.[27] From these three parts of the table, we can see which federations had the largest strikes (W/N) and which the greatest loss per striker (D/W). It would be possible to do this by constructing new tables but this is not necessary since we can compare the <u>proportions</u> of strikes, workers involved and days lost accounted for by each federation. For example, if the A.F.L. had 80% of the strikes and 40% of the strikers, the mean size of its strikes would be half the average.

Using this method, we can see that, up to the foundation of the C.I.O., the A.F.L. had strikes that were slightly larger than average and that the loss per striker in its strikes was also greater than average. But after 1936 the C.I.O. had the largest strikes, which on the whole also had the greatest loss per striker. This fact might be attributed by the institutionalisation theorists to a high degree of militancy of new unions which would then decline as they aged, but even in the 1950-55 period the C.I.O. unions continued to have large strikes, a fact which is explained more by their concentration in the mass-production industries than by their age.

The final part of Table A-3 shows the relative strike-proneness of unions by their affiliation. On all three dimensions the A.F.L. unions are the least strike-prone and they were also the most likely to reduce their strike activity during the Second World War. The first fact can be explained by the differing industrial distributions of the A.F.L. and C.I.O. unions, but the second suggests a difference in the internal characteristics of

the members of the two federations. The A.F.L. unions were the more prepared to follow the no-strike pledge and can be seen as being the more fully 'incorporated'.

We have seen in this section that there is no evidence at the aggregate level to suggest that the presence of unions reduces strike activity. Indeed, the evidence from Douglas' index suggests the reverse of this, but, because of the difficulties with the index itself and because the available data record only union 'involvement', we cannot accept this as a firm conclusion. Nor can we say that the domination of strikes by unions has been a necessary development; the union has certainly come to play a central role in the planning and execution of strikes, but the nature of its influence on strike activity in general is less certain.

5. The issues in strikes

As I have said in chapter one, the difficulties with the statistical description of the issues over which strikes are fought are very great. The problems of principle are compounded by the changes of category which have taken place since 1881. But it is possible to say something about the trends in strike issues if we consider only the broadest categories, between which the definitional changes have not been too large.

Table 3-5 shows the distribution of strikes by class of cause; Table A-7 gives the breakdown by workers involved and days lost. Since the B.L.S. began to record strikes, the categories of issue have been reasonably consistent; but the Commissioner of Labor's data are less clear because of the very large number of categories used and because of the failure to identify the 'principal cause' in some cases.[28] In combining the categories into useful aggregates we are left with a large group over 'other

Table 3-5: Percentage of strikes with given issue, 1881-1972.

	(1)	(2)	(3)	(4)	(5)	(6)
1881-85	73.3	1.4	7.8	4.1		13.4
1886-89	60.6	2.1	14.3	4.1		18.8
1890-93	52.7	2.8	15.6	3.2		25.8
1894-97	60.0	3.0	15.9	2.9		18.2
1898-1901	51.8	4.6	22.6	3.4		17.6
1902-05	45.8	6.1	28.8	3.2		16.0
1914-15	55.3	5.8	20.8			18.2
1916-18	63.6	5.4	16.3			14.7
1919-22	63.1	4.7	16.5			15.7
1923-26	47.2	3.2	17.2			32.4
1927-29	39.3	8.2	30.2		3.1	19.2
1930-33	55.8	9.2	19.1		2.8	13.1
1934-37	34.1	28.8	23.5		2.7	10.9
1938-41	30.8	22.0	28.6		6.0	12.5
1942-45	45.5	8.4	11.7	30.0	4.4	
1946-49	47.2	12.9	14.6	20.6	4.8	
1950-53	51.0	4.7	12.7	25.4	6.1	
1954-57	50.5	7.1	12.0	22.7	7.8	
1958-60	50.6	8.4	8.6	23.1	9.3	
1961-65	50.1		15.7	22.9	11.4	
1966-69	56.2		11.7	22.1	10.0	
1970-72	54.8		10.0	26.4	8.7	

For key to issues, see over page.

Table 3-5: (continued).

Key to issues:

(1) Wages and hours (from 1961: wages and other contractual matters).

(2) Wages, hours and union recognition.

(3) Union recognition and security.

(4) Other work conditions.

(5) Inter/intra union.

(6) Other.

issues'. This can be reduced by following Millis and Montgomery[29] in their estimation of the number of strikes over work conditions, but the figures in this category are probably not very comparable with those for the more recent years.

The most notable feature of Table 3-5 is the continued predominance of disputes over wages. Although there has been some decline in their importance since the end of the nineteenth century, they still account for over half of all strikes, and, as Table A-7 shows, an even greater proportion of workers involved and days lost. The decline since the 1880's may be a part of a trend going back even further; the available information on strikes before 1880, presented in Table A-8,[30] shows that wages accounted for 78% of the strikes where the issue was known. Clearly, the data for these years are extremely incomplete, but they are consistent with those for the period since 1880. The tendency for the significance of wage issues to decline is contrary to that element of the institutionalisation theory which argues that collective bargaining will enable disputes on non-wage matters to be amicably settled; one would expect that shopfloor disputes which arise from 'misunderstandings' would be prevented from turning into stoppages and that recognition strikes would become less necessary. The lack of any such pattern is clear from Table 3-4.

The major challenge to the dominance of the wages dispute came during the New Deal; from 1934 to 1941 over half the number of strikes involved questions of union recognition and security. This represents, of course, the response to the provisions of the Wagner Act and its predecessor, the National Industrial Recovery Act of 1933.[31] Some measure of the direct stimulus to organisational demands is provided by the contrast with the 1916-18 period, when

the government took steps which were then unprecedented in assisting unions,[32] but when recognition strikes showed no increase. The impact of the recognition strikes of the Thirties is particularly notable when the series for days lost is examined; the proportion accounted for by wage strikes is usually very high, but in these years it dropped to about half its normal level. Organisational strikes remained important during the Second World War, which is somewhat surprising in that one would expect a resurgence of disputes over wages in an inflationary period; it seems that matters of 'union security' (closed shop provisions, the check-off of dues etc.) were particularly significant and that these provided a suitable focus for strikes during the war. In the late 1940's wage demands rose in importance under peacetime conditions.

An important prediction of the institutionalisation theory concerns the reduction of recognition strikes after the union has achieved a fixed status in industry. As Spielmans notes,[33] this proposition is hard to test. The strikes which the establishment of bargaining can be expected to reduce are less than the whole 'recognition and security' category; and the reduction will affect only those industries where bargaining has been established. However, in broad terms it does not appear that the expectation of the theory is met. Although there has been a fall in the importance of recognition strikes since the Thirties, such stoppages have by no means been eliminated and it is hard to equate those that remain with a struggle for recognition in industries where bargaining does not exist. Instead of a pattern of recognition strikes breaking out and then subsiding to very low levels, it appears that the proportion of these strikes in the total has fallen to levels similar to those prevailing before

the New Deal.

The other sort of strike which the conventional theory would expect to see declining is that over 'other work conditions'. Although a consistent series on this is available on this only since 1942, we can see that there is no marked downward trend. Such stoppages were important during the Second World War, but in the years since then their proportion in the total has remained stable. This category is also of interest to the radical version of the theory, since it is on shopfloor issues that one would expect rank-and-file protest to be concentrated. With such a heterogeneous category extending over only a short period, it is hard to say anything very definite. But there does not seem to be a marked rise in the 1950's, which conflicts with the view that in these years shopfloor protests took on a new signfficance. I have mentioned the non-comparability of the data on 'other work issues' strikes for 1881-1905, but some comparison with later years is possible if we include the category of 'other' strikes. In other words, we are taking all strikes other than those on wage and union matters. Such strikes account for about 20% of the total for 1881-1905, a figure similar to the proportion of 'other work conditions' stoppages in 1942-72. Thus this type of stoppage has played a relatively small, though significant, part in the strike movement as a whole. Its presence indicates that the pure bargaining strike has never been totally dominant, and has not tended to become more significant recently than it was in the past.

From Tables 3-5 and A-7 we can see which issues led to particularly large stoppages or to the loss of a large number of days per striker, following the same strategy as that adopted in the comparison of strikes between union federations. Wage strikes

have been larger than average for every period except 1934-37 and the loss per striker in them greater than average except for 1934-41. This suggests that in general these strikes are the most strenuously fought battles, but that during the Thirties the most intense conflicts occurred elsewhere. As one would expect, strikes over union recognition moved from an average loss per striker to above-average levels and their relative size also increased, although this increase was not very marked; that is, there was a tendency for recognition strikes to become the largest and 'longest'[34] battles, but this was not as great as might have been expected from the argument that the Thirties were the great time for organising battles. To be sure, recognition strikes became relatively more frequent, larger and longer, but the battle seems to have been spread over more fronts than is often suggested.

Apart from the Thirties, recognition strikes have not been marked by a great size or loss per striker. This suggests a need to modify Taft's statement that[35]

> 'the resistance to labor is greatest when it seeks by organization to affect the terms of employment'.

In general, it is wage strikes which seem, on the evidence presented so far, to involve the greatest battles. This point also affects arguments about the causes of, and not just issues in, strikes. A common view is that the insecurity of workers and the denial at work of the rights enjoyed outside it are prime causes of unrest.[36] The fact that wage disputes involve the greatest battles is indirect evidence against this, but it could still be said that these battles merely reflect a deeper discontent, which does not find its expression in any particular type of strike. However, when we consider the continued dominance of wage strikes together with the findings noted above

concerning the constancy of worker involvement in, and the duration of, strikes the emphasis on insecurity is seen to be unjustified. I am not arguing that workers no longer experience insecurity, but that the alleviation of particular forms of insecurity through the growth of bargaining rights has not led to the predicted changes in the level of patterns of strike activity.

Finally, we must note the characteristics of 'other work conditions' strikes. These are about average size but have a relatively low loss per striker, a fact which is consistent with the view of them as quite large but brief job actions. But at the present level of analysis it is not possible to say any more about them.

6. <u>The results of strikes</u>

The interest of the data on the results of strikes lies in the light they throw on the view that early strikes tend to fail, whereas experience and organisation increase the rate of success. We can examine not only the results statistics in isolation but also the cross-classification of causes with results and the effect of union involvement on the outcome.

Table 3-6 shows the results of strikes from 1881 to 1945. It will be seen that there is a problem of comparability since the first part of the table refers to establishments while the second deals with strikes. And the status of Griffin's data for 1906-15 is unclear; although he states that his figures are for strikes, the information he gives for 1881-1905 comes directly from the Commissioner of Labor's statistics relating to establishments.[37] It therefore seems advisable to treat Griffin's and the Commissioner's data together.

The institutionalisation theory would expect that the rate of success of strikes will increase, and might also suggest that

Table 3-6: Strike results, 1881-1945.

	% of establishments where strikes were:		
	Won	Comp.	Lost
1881-85	56.1	8.7	35.2
1886-89	44.2	13.1	42.8
1890-93	43.7	9.8	46.5
1894-97	53.0	15.1	31.9
1898-1901	54.4	15.0	30.6
1902-05	38.5	19.1	42.4
1906-08	30.0	16.3	53.7
1909-11	34.1	17.6	48.4
1912-15	38.2	19.9	41.9

	% of strikes:			% of workers involved in strikes which were:		
	Won	Comp.	Lost	Won	Comp.	Lost
1916-18	34.6	37.8	27.7			
1919-22	29.0	29.5	41.5			
1923-26	44.4	19.0	36.4			
1927-29	29.1	27.6	43.4	20.3	32.6	47.1
1930-33	32.8	23.5	43.8	29.4	44.6	26.0
1934-37	45.8	28.8	25.3	41.4	42.5	16.2
1938-41	44.9	36.0	19.1	42.9	45.5	11.5
1942-45	41.2	29.0	29.8	27.7	40.9	31.4

Note: For difference between 1906-15 and earlier period, see text.

'Comp' means compromised.

compromises would tend to replace simple victories for one side or the other. It is clear from the table that there has been no very strong trend towards an increase in the proportion of worker victories and neither has there been a very significant drop in the proportion of outright defeats. In view of the special circumstances operating in particular periods, it is hard to be more definite than this. The increase in the success rate in the late Thirties, for example, may be only a temporary feature and for 1934-45 as a whole the rate is probably not very different from that at the end of the nineteenth century. The figures of strike results put into perspective the various claims that one period was a time of great gains for labour and that another was marked by continuous defeats; even in the period 1938-41, one fifth of all strikes, and one tenth of workers involved and days lost in them, were counted as 'lost'.

There is evidence for a growth in the number of compromise solutions. However, this gives only weak support to the institutionalisation theory because of the general problems relating to data on results. Thus, if there is a tendency to hold strikes on an increasing number of issues, it will be more likely that a compromise will be worked out. And a strike may be seen as a compromise merely because it was ended by negotiations rather than by the surrender of one of the parties; a negotiated settlement is likely to contain face-saving clauses for the side which has to give way on the key issues and may thus appear to be a compromise when in fact it was a defeat for one side. If anything can be concluded from the growth of compromise, the figures for 1942-45 are interesting. They show that there was no increase in the proportion of strikes compromised but that there was a marked rise for striker-days; although the costly

strikes in terms of days lost were settled by mutual concessions, a significant number of stoppages remained to be fought ont. This suggests, in line with comments made in the above sections, that the war years were not marked by as high a degree of industrial peace as is often thought.

It is important to know whether particular issues in strikes are associated with a high or low rate of success. Table 3-7 gives the results of strikes on selected issues for 1881-1905 and 1927-36. Although the different statistical bases of the figures for the two periods make comparisons between them dangerous, it is interesting to note that wage strikes have, if anything, tended to become less successful. This is remarkable in view of the claim that business unionism is particularly capable when it comes to winning material gains for the workers. And comparisons within each section indicate that, at one time, wage strikes are no more likely to be won than are stoppages on other broad categories of issue.

The sub-divisions of table 3-7 show many of the patterns one would expect. Thus strikes for wage increases are notably more successful than those against wage decreases and sympathy strikes are notably unsuccessful. But there have been notable fluctuations in the rate of success of various types of strikes. This is shown in Table A-9, which gives the results of stoppages over particular issues for a number of sub-periods. Thus the rate of success of wage increase strikes seems to have fallen between 1881 and 1905. Not only is there considerable fluctuation in all categories, but the periods of success do not go together, suggesting that one type of strike may be appropriate for one period and another type for a different one. For 1927-41 there was, as one would expect, an increase in the number of

Table 3-7: Results of strikes, by issue,

1881-1905 and 1927-36.

% establishments with given result and issue, 1881-1905

Issue	Result: Won	Comp.	Lost
All wage strikes	47.9	20.3	31.8
Wage increase	50.0	18.7	31.4
Against wage decrease	34.5	12.7	52.3
Wage increase, and other	46.9	25.2	28.0
Against wage decrease, and other	67.4	6.2	26.4
All hours strikes	52.0	17.5	30.5
Hour decrease	50.7	10.1	39.2
All union recognition and rules	46.8	13.5	39.7
Recognition and rules	55.5	1.6	42.9
" " " and other	38.7	24.6	36.8
Docking, fines, work conditions and rules	45.2	17.6	24.6
Sympathy	20.0	3.0	77.0

% strikes with given result and issue, 1927-36

Issue	Result: Won	Comp.	Lost
All wage strikes	35.0	28.1	36.8
Wage increase(1)	40.3	31.5	28.2
Wage decrease(2)	26.5	22.7	50.8
All hours strikes	37.8	23.8	38.5
Hour decrease	43.3	25.8	30.9
All union organisation	42.0	21.6	36.4
Recognition, wages and hours	44.3	31.9	23.8
Recog.,discrimination, closed shop etc	40.5	14.9	44.6
Sympathy	29.2	31.2	39.6

Notes: (1) includes 'wage increase and hours increase'.

(2) includes 'wage decrease and hours increase'.

organisational strikes which were won, but the rate of success of wages strikes also rose markedly. Thus, for all issues, the period 1938-41 was remarkably successful, suggesting that, although 1937 may have been the 'turning point' for labour,[38] it was in the years up to the Second World War that the advantage was pushed home.

For the years 1881-1905, information is available on the results of strikes by union involvement; this is summarised in Table 3-8. Strikes ordered by unions have been consistently more successful than those not so ordered; when the data are examined on a year-to-year basis, it can be seen that only in 1886, 1889 and in 1894 was the proportion of victories in union-led strikes lower than the proportion in non-union strikes. And, as Griffin notes,[39] there has been a widening of the gap between union and non-union rates of success, although this is not very pronounced. It is hard to assess whether the size of the gap is smaller or larger than would be expected from arguments about the advantages of union organisation to strikers. But it is clear that organisation is no guarantee of success and, conversely, that it is quite possible to win strikes without the presence of the union; extreme arguments about the efficacy of union involvement must be rejected.

It would be possible to deal with this question more adequately if data were available on union involvement by issues; we could see if, for example, high rates of success in union-led strikes were associated with their being concentrated on those issues where success was particularly likely. We can make some progress without direct data, though. Since table 3-7 showed that the rates of success did not vary much between classes of issue, it is unlikely that a concentration on particular issues

Table3-8: Results of strikes, by union involvement, 1881-1905.

	% of establishments in which strikes ordered by unions were		
	Won	Comp.	Lost
1881-85	61.5	9.8	28.7
1886-89	42.8	14.6	42.6
1890-93	46-4	9.4	44.2
1894-97	53.9	16.2	29.9
1898-1901	60.1	16.3	23.5
1902-05	42.3	20.3	37.4
1881-1905	49.5	15.9	34.7

	% of establishments in which strikes not ordered by unions were		
	Won	Comp.	Lost
1881-85	36.1	6.4	57.5
1886-89	37.6	8.0	54.4
1890-93	36.5	8.7	54.8
1894-97	33.6	12.0	54.4
1898-1901	32.7	11.9	55.4
1902-05	26.1	11.9	62.1
1881-1905	33.8	9.9	56.3

can explain much of the advantage of union-led strikes. Moreover, the trends in the success rates of strikes on various issues shown in Table A-9 are not strongly associated with the fluctuations in the rate of success of strikes ordered by unions. Chapter 5 will contain information on the results of strikes by industry and region. This does not suggest that there is a strong concentration of union involvement in sectors where the rate of success was very high. Thus we can conclude that the difference between strikes ordered and those not ordered is a 'genuine' one.

The final question to be considered in this section concerns the link between the results of strikes and their duration. It is commonly held that the rate of success will decline with the length of stoppages, because the workers' resources will be exhausted more rapidly than those of the employer. The official tabulations provide relevant information only for 1927-41, but I have been able to build up data relating to 'cessations' for the period 1881-94.[40] The results are presented in Table 3-9, which shows a very marked tendency for the proportion of successes to decline, and of failures to rise, as the length of stoppages increases. For cessations, the decline is continuous, but for strikes between 1927 and 1941 a different pattern emerges. For the first seven years, there is a marked break around the 30 days' duration mark, with shorter strikes having about the same rate of success; in addition the overall rate of decline in the success rate is quite shallow. By contrast, in the years 1934-41, a continuous and more rapid decline is evident. In view of the fact that the overall rate of success was rising from 1927 to 1941, this suggests that long strikes have a more or less constant success rate and that the variation in the overall rate is due to fluctuations within the shorter categories. However, the

Table 3-9: Results of strikes, by duration, 1881-94 and 1927-41.

Duration (days):		1-6	7-14	15-29	30-59	60-89	90 and over
		% of estabs in which 'cessations' of given length were won or lost					
1881-85:	Won	55.8	47.2	42.3	33.7	32.4	28.5
	Lost	39.1	45.9	48.8	57.1	61.1	63.4
1886-89:	Won	49.3	35.6	32.2	26.6	23.2	25.3
	Lost	43.6	54.2	57.9	63.5	68.2	68.7
1890-94:	Won	57.5	41.4	35.9	28.0	20.4	21.8
	Lost	36.6	50.3	54.1	61.4	69.6	67.3
		% of strikes of given length which were won or lost					
1927-29:	Won	31.4	32.6	31.1	22.3	18.2	20.5
	Lost	43.6	36.2	41.6	44.4	55.6	64.1
1930-33:	Won	34.6	37.2	34.2	23.4	24.2	21.7
	Lost	47.1	35.0	39.1	54.4	41.4	44.6
1934-37:	Won	51.1	42.1	43.0	32.8	30.0	24.4
	Lost	28.5	29.4	27.1	40.9	37.4	45.5
1938-41:	Won	51.6	46.5	41.0	38.4	28.0	26.8
	Lost	17.4	17.0	18.2	21.8	27.3	37.9

evidence on which this conclusion is based is limited and it may not have general applicability. But it does accord with commonsense to argue that employers will either give way to the workers' demands quickly or will hold out as long as they can, and that in the latter case the balance of resources will be more or less constant so that one can expect a constant rate of success of strikes.[41]

7. Trends in selected industries

In this section I turn to the aspect of the institutionalisation theory which argues that the process of labour-management accommodation will proceed at different speeds in different industries. I am not, for the moment, concerned with differences between industries but only with whether, within industries, trends can be discerned which fit the theory. In particular, do individual sectors show a peak of activity during industrialisation or a period in which bargaining is established, followed by a withering away of the strike?

Chart A-1 shows the trends of worker involvement for nine industry groups. The difficulties of establishing consistent series for the period since the 1880's are considerable (see Appendix 1) but the data are reasonably comparable; in particular, definitions of industry groups do not seem to have altered so much that comparison would be impossible. There is also the practical problem that, except for coal and clothing, no data are available for the period 1906-26, but this is not too serious since the end of the nineteenth century can be taken as indicating experience during industrialisation and the Thirties as the period of the establishment of bargaining.

Three industries show the expected pattern of a peak of activity followed by a decline. These are clothing, textiles and

tobacco (parts C, D and H of the chart). The clothing industry provides the ideal example for the institutionalists. After a period of frequent and spontaneous strikes run by ephemeral unions during the 1880's and 1890's, established unions appeared at the start of the twentieth century and conducted an organised campaign for recognition. This culminated in the great strikes of 1909-10, after which recognition was achieved and the unions settled into a pattern of mutual acoommodation with the employers which often developed into the final 'stage' of full co-operation between the two sides. Although there were challenges to this system, it has survived largely intact and, as the graph of worker involvement shows, strike activity has been at very low levels since the Second World War.[42] The chart also shows that the industry was not immune from the increase of activity in the Thirties, but the theory would explain this in terms of the need to re-establish bargaining after the problems of the Twenties.

Although the textile industry shows the predicted trends, it is not a case which fits the theory. The C.I.O.'s Textile Workers Union has established itself more firmly than previous organisations, but the industry is still not marked by a pattern of accommodation with the employers. Union density and the coverage of workers by collective agreements remain low. The decline in strike activity is associated with union weakness rather than strength and the industry remains one in which the workers make irregular challenges to the domination of management.[43]

Developments in the tobacco industry are usually related to the mechanisation of production and the growth of cigarette production at the expense of the cigar trade.[44] At the end of the nineteenth century the method of making cigars entirely by hand was replaced by a number of processes which reduced the need for

skilled craftsmen; the challenge to the position of the Cigar Makers' Union may be seen as a central cause of the high rate of strike activity in the 1880's, a matter which will be taken up again in chapter 5. The growing importance of cigarettes made possible the introduction of mass production methods in the twentieth century; the industry thus seems to fit the expectation of a high rate of protest against the changes associated with industrialisation, followed by a period of accommodation. But the marked increases in activity in the 1940's and 1960's suggest that the process of accommodation has been far from complete.

The remaining six industries fail in various ways to match the expectations of the theory. Later chapters will consider particular cases in more detail, but we may note the salient points here. In the primary metals industries (part A of Chart A-1) there was a very high level of worker involvement throughout the 1940's and 1950's and even in the Sixties the level was greater than that in the organising period of the Thirties. This, combined with the very low levels at the end of the 1920's, suggests that the recognition of the union has given the workers the opportunity to strike which the previous system of 'industrial absolutism' denied them.[45] Strike activity declined at the end of the nineteenth century as the system was being established and has since recovered to levels similar to those of the 1880's. The coal industry (part B of the chart) has been characterised by very marked fluctuations of activity with no clear trend being apparent. Although it has one of the longest histories of bargaining and union recognition, it has never achieved lasting industrial peace.[46] The notable fall in worker involvement in the 1950's was seen by some observers as marking a great change from the past since the union seemed to have achieved important

breakthroughs on pension rights and other fringe benefits, but the sharp rise of activity in the Sixties showed these hopes to be premature.

The vehicle and machinery industries (parts E and G of the chart) have a pattern similar to that of steel, with levels of activity being high, by historical standards, since the Second World War. Although worker involvement in vehicles has been declining, its overall level remains high, even in comparison with the Thirties, which is remarkable when it is remembered that this industry is widely seen as the leader of militancy in the New Deal period.[47] Here, and in machinery, current levels of activity are greater than those at the end of the nineteenth century, which suggests that the shift to mass production has increased the 'proneness to conflict'. The contrast between the modern and early vehicle industries is particularly notable.

One might expect that the printing and publishing industry would have a stable and low level of activity in view of the tradition of the control of work by the craftsmen and the central role of the union in the industry's affairs. But part F of chart A-1 shows that, although the level of worker involvement is lower than that elsewhere, there has been a strong upward trend since the end of the 1920's. Although explanations of the increase in activity in the paper-milling industry might be advanced which are consistent with the institutionalisation theory,[48] the parallel rise in printing and publishing goes counter to the theory's predictions. The final part of the chart shows the trend of activity in the contract construction industry. Again, no pattern of the withering away of the strike is apparent; on the contrary, the long-term trend is strongly upward. Particular reasons might be adduced as to why the industry has high levels

of activity[49] but the rising trend cannot be explained by the institutionalisation theory.

This brief review suggests, then, that the theory is on weak ground when trends within industries are to be explained. Mention has also been made of the possibility that industrialisation has had different effects in different industries, with mass production tending to increase activity in some industries and to reduce it in others. This is a question to which more attention will be paid in chapter 5.

8. The regional distribution of strike activity

Table 3-10 shows the strike-proneness of the nine standard regions of the United States. Because of the difficulty of obtaining reliable estimates of non-agricultural employment for the early years, the basis of the table is population. Since the regions differ in the importance of agriculture, there will clearly be a bias in the table for comparisons between regions at one time; and differential changes in the position of agriculture will similarly affect the comparison of trends. However, the biases are unlikely to be so large that all comparison is meaningless. Also, one may argue that the correct basis is the whole employed population and not merely the industrial work force; strikes in agriculture, although rare, have occurred. In this case, the bias will be reduced since population is being used as a proxy for total employment and not for a variable component of employment.

The table shows much the expected pattern, with the Mid Atlantic region, comprising the industrial States of New York, New Jersey and Pennsylvania, having a consistently high level of activity, although its position as the most strike-prone region has been taken over recently by the East North Central region.

Table 3-10: Regional strike-proneness, 1881-1972.

	1881-1905	1914-26	1927-41	1942-57	1958-72
	Number of strikes per million population.				
New England	40.8	56.7	24.2	32.4	27.9
Mid Atlantic	51.6	36.5	31.1	42.0	34.2
East North Central	27.1	20.2	15.9	40.4	33.1
West " "	10.8	11.1	8.3	18.6	21.4
South Atlantic	8.7	9.7	7.8	20.5	20.5
East South Central	7.7	5.5	8.2	32.1	23.5
West " "	5.6	7.5	4.7	12.1	12.7
Mountain	23.8	16.9	7.9	23.0	24.3
Pacific	21.0	27.7	22.7	20.9	19.6
Total	24.3	21.5	16.3	29.6	25.7
	Number of workers involved per thousand population				
New England	7.38	8.01	10.6	8.93	
Mid Atlantic	14.3	13.1	21.3	14.5	
East North Central	7.53	8.38	26.7	17.3	
West " "	1.95	2.43	8.10	9.13	
South Atlantic	2.04	4.77	10.6	7.81	
East South Central	1.43	5.00	17.3	9.87	
West " "	1.24	1.07	5.12	4.90	
Mountain	4.95	2.32	8.81	8.91	
Pacific	3.34	7.85	11.3	9.38	
Total	6.05	7.02	15.8	11.3	

For definitions of regions, see over page.

Table 3-10: (continued).

The States in each region are as follows:

New England: Connecticut, Maine, Massachusetts, Rhode Island, Vermont.

Mid Atlantic: New Jersey, New York, Pennsylvania.

East North Central: Illinois, Indiana, Michigan, Ohio, Wisconsin.

West " " : Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

East South Central: Alabama, Kentucky, Mississippi, Tennessee.

West " " : Arkansas, Louisiana, Oklahoma, Texas.

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming.

Pacific: California, Oregon, Washington.

The indices are constructed differently from those in other tables. Here, the total of N or W for a period is divided by the number of years, to put the figure on an annual basis, and then by the population at a census year. Elsewhere, the indices used represent the totals for N or W divided by the sum of the employment figures for every year of the period in question.

(This pattern also holds when, for the years since 1927, non-agricultural employment is the basis of comparison; see Table A-10). As industry has spread throughout the country, the regions have become more alike in their levels of strike activity. In 1881-1905, the most strike-prone region had a strike frequency nine times greater than that of the least strike-prone, and worker involvement seven times greater; by 1958-72 these figures had been reduced to 3½ times and 2⅓ times.

It is not easy to interpret trends in activity from Table 3-10. Every region shows marked increases in worker involvement, which contrasts with the evidence presented above pointing to a constant level of worker involvement per non-agricultural employee; the reason for the disparity is, of course, a more rapid increase in non-agricultural employment than in the size of the population. However, it is possible to examine the strike-proneness of one region relative to the others; the expectation from the institutionalisation theory would be that the areas where industry has been established the longest will cease to have a high strike rate and will tend to have average or below-average rates. The experience of New England, whose textile industry introduced the factory system to America,[50] appears to follow this pattern; the region had high N/E and W/E indices at the end of the nineteenth century, but has subsequently moved to average levels. However, an alternative explanation can be advanced. This would suggest, of course, that the observed pattern is due to the spread of industry to new areas; it is not that old-established areas achieve accommodation in industry but that the new areas move towards the level of strike activity in the older ones. Such a view is supported by the data in Table A-10; between the periods 1927-41 and 1958-72, activity in New England fell slightly, but

in the West North Central and West South Central regions it rose rapidly.

If industrial growth is the key to regional strike-proneness, one might expect the aspects of the institutionalisation thesis concerned with the process of industrialisation to be applicable. It is certainly true that strike activity in the South and West has increased, in relative and absolute terms, but this does not necessarily support the thesis. The argument is that industrialisation disrupts the lives of workers already in a region, but it is hard to separate this from the effect of importing strike-prone industries from elsewhere. This is an important point which does not seem to be recognised by the writers involved. They speak in general terms about the impact of industry on established expectations, but do not consider the problem of separating this from the characteristics of the particular industries which are the bearers of the new forms of the organisation of work. The analysis of the same industry in different regions would help to resolve the problem, but this discussion will be left for later chapters.

An example of the strike-proneness of one region will indicate the difficulties of putting the industrialisation arguments into a precise form. It will be observed from table 3-10 that the Mountain region had a very high level of strike activity in the 1881-1905 period, which is remarkable for an area so far removed from the industrial States of the Eastern seaboard. During this period labour relations in the metal-mining districts reached a state which has often been described as a case of class war.[51] This would be explained as a product of the clash between industry and pre-existing social structures, but the immediate causes of the conflict need to be identified. For

Perlman and Taft, these lie in the conditions of the frontier prevailing in the Mountain states: there were no middle groups between the workers and employers and this, combined with the tough and uncompromising nature of the men involved, led to polarisation and bitterness.[52] But this is challenged by Dubofsky, who sees the mining communities as 'islands of industrialism' in which the characteristics of early industrialisation were particularly sharply revealed. It was not a lack of respect for the law caused by conditions on the frontier, but rapid technical change and the desire of the new corporations to split the workers from their former allies, which led to conflict.[53] Both these views see the conflict as a product of the early stages of industrialism, but the implications they draw are very different. The strike data do not enable us to differentiate between them, but they show clearly the extent of the Mountain region's industrial conflict.

Thus, in general terms, the industrialisation argument helps to explain differences in regional strike-proneness, but it has to be stated more precisely to be applicable to concrete cases. Apart from the Mountain region, there is no pattern of a high rate of conflict giving way to more moderate levels as industry moves from the 'early' stages of growth. The view that the coming of industry leads to a once-and-for-all shift in a region's strike-proneness receives more support; later chapters will examine whether the regions experiencing industrialisation follow the Shorter-Tilly model of the transformation of 'early' into 'modern' forms of protest.

9. Conclusions

The above sections have given a lengthy review of the overall strike experience of the United States. The data here form the

basis of the discussion in the following chapters. It has also been possible to conduct an initial examination of the institutionalisation theory. Its 'strong' version, suggesting that there will be a natural tendency for strike activity to decline, has been shown to be inadequate: the great feature of American strike patterns is their long-term constancy, with measures of worker involvement and duration showing no general downward or upward trend. Similarly, the contrast between early and modern types of protest has been shown to be largely inapplicable. There is some evidence for a 'transformation' of the strike immediately after the First World War, but this is not very strong and the shift in strike patterns took a direction different from that predicted by the 'early-modern' contrast.

Thus the broadest expectations of the institutionalisation theory are unfounded. However, two sorts of defence could be advanced. Firstly, it might be said that I have not examined the 'weak' form of the conventional approach, which stresses that institutionalisation is contingent on economic conditions, or the arguments of 'radical' writers. The weak form of the theory will be examined in the following chapter, in which economic, organisational and political determinants of strike activity are considered; no doubt the reader has wondered whether the trends identified in the present chapter can be related to some external cause such as the business cycle, and chapter four will answer some of these questions. On the radical approach, some differences from the conventional view are already apparent. Thus those writers who stress the 'limits of institutionalisation'[54] can point to the long-run constancy of strike activity, and to the short-run increase in the 1960's, as supporting their views. But it is one thing to say that there

are limits and another to identify them and relate them to other parts of the radical case. In later chapters, I shall give more detailed attention to the question of limits to institutionalisation.

The second defence of the institutionalisation theory is that it is making an analytical statement: to the extent that institutionalisation occurs, strike activity will decline. Thus it could be argued that American industrial relations have not become institutionalised and that the predictions of the theory do not, therefore, apply. However, the well-known and marked differences between the period since the Second World War and earlier periods, in terms of the extent of collective bargaining and the degree of union-management accommodation,[55] suggest that this argument has limitations. As I noted at the end of chapter two, the precise meaning of institutionalisation is hard to establish; but the growth of institutional control of industrial relations since the New Deal has been clear. It would still be possible to argue that the <u>form</u> of the institutionalisation of conflict has been such that strikes have been brought under institutional control but not eliminated. I shall examine this argument in chapter seven, when I consider the working of the institutionalised system, and chapter eight, when I turn to the general implications of the institutionalisation theory.

In this chapter, we have seen that the theory's predictions do not hold at the aggregate level. We have also seen, from the analysis of trends in particular industries, that the theory cannot be rescued by arguing that its expectations are industry-specific. Trends of worker involvement do not, in general, exhibit the expected patterns; in particular, there is no decline in activity after the recognition of unions and the acceptance of

collective bargaining. It might still be said that the technical characteristics of an industry such as vehicles have changed to such an extent that it cannot be analysed as an entity. There is much to commend this view, and in chapters five to seven I shall give particular attention to the effect of technical conditions on the industrial distribution of strikes. But it does not affect the test of the institutionalisation theory, which argues (in its strong form) that changes in the character of labour relations in a given sector will be the determining influence on strike activity. Indeed, the part of the theory concerned with industrialisation suggests that the change in technical conditions is the mechanism leading to a reduction of conflict; but we have seen that the shift to mass production methods may have had different effects in different industries, a conclusion which will be examined in more detail in chapter five.

I have argued, then, that the broadest expectations of the institutionalisation theory are incorrect. The following four chapters will examine its more subtle predictions, beginning with the view that economic and other influences on strikes will vary in their impact according to the extent of institutionalisation.

NOTES:

1. A.M. Ross and P.T. Hartman Changing patterns of industrial conflict (Wiley, N.Y., 1960) p. 12.

2. C. Kerr and A. Siegel 'The interindustry propensity to strike' pp. 189-212 in A. Kornhauser, R. Dubin & A.M. Ross (eds) Industrial conflict (McGraw-Hill, N.Y., 1954).

3. P. Galambos and E.W. Evans 'Work stoppages in the United Kingdom, 1951-64' Bull. of the Oxford Univ. Instit. of Stats, 28, pp. 33-57 (1966).

4. K.G.J.C. Knowles Strikes: a study in industrial conflict (Blackwell, Oxford, 1952) pp. 152-53.

5. This is shown in the following example:

	W	Duration	D
Strike A	10	10 days	100
Strike B	90	1 day	90
	100	11 days	190

D/W is 1.9 but the mean duration is 5½ days.

6. D. Britt and O.R. Galle 'Industrial conflict and unionization' Amer. Sociol. Rev., 37, pp. 46-57 (1972) at p. 48. The great feature of their formula, that by logging both sides of the identity one can alter a multiplicative relationship into an additive one, was clearly realised by Knowles since he used a logarithmic scale to indicate the role of each component of strikes in the total.

7. Four reasons are suggested by H.M. Douty 'The trend of industrial disputes, 1922-1930' J. Amer. Statistical Assoc., 27, pp. 168-72 (1932) at pp. 171-72: a relatively stable price level and a rise in money wages; the growth of company unions and welfare plans; a lack of aggression by the labour movement; and the effect of increased industrial concentration on the corporations' power. Cf. I. Bernstein The lean years (Houghton-Mifflin, Cambridge, Mass., 1960) pp. 84-103; G. Soule Prosperity decade (Pilot Press, London, 1947) pp. 198-227.

7a Cf. E.T. Hiller The strike (Univ. of Chicago Press, Chicago, 1928) p. 14, where it is said that the size of strikes can be expected to increase as industrial integration proceeds.

8. J. Seidman American Labor from Defense to Reconstruction (Univ. of Chicago Press, Chicago, 1953) pp. 24, 48, 132; A. Preis Labor's giant step: twenty years of the C.I.O. (Pathfinder Press, N.Y., 1972) pp. 99-131, 184-86, 212; M. Josephson Sidney Hillman (Doubleday, N.Y., 1952) chaps 21 & 22.

9. A.M. Bing Wartime strikes and their adjustment (E.P. Dutton & Co., N.Y., 1921); J.S. Gambs The decline of the I.W.W. (Russell & Russell, N.Y., 1966; orig. publ. 1932) pp. 36-52; M. Dubofsky We shall be all: a history of the Industrial Workers of the World (Quadrangle Books, Chicago, 1969) pp. 349-448; D. Montgomery 'The "New Unionism" and the transformation of workers' consciousness in America, 1909-22 'J. Social Hist., 7, pp. 509-29 (1974).

10. Seidman op.cit., p. 275. See also G.W. Taylor 'Labor's no-strike pledge: a statistical view' pp. 137-42 in C.E. Warne et.al. (eds) Yearbook of American labor Vol. 1 (Philosophical Library, N.Y., 1945).

11. G. Owen Industry in the U.S.A. (Penguin, Harmondsworth, 1966) p. 106.

12. E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974) pp. 46-56.

13. J.T. Dunlop 'The development of labor organization: a theoretical framework' pp. 163-96 in R.A. Lester & J. Shister (eds) Insights into labor issues (Macmillan, N.Y., 1948); I. Bernstein 'Union growth and structural cycles' pp. 73-89 in W. Galenson & S.M. Lipset (eds) Labor and trade unionism (Wiley, N.Y., 1960); Bernstein 'The growth of American unions' Amer. Econ. Rev., 44, pp. 301-18 (1954). For a general review of the causes of union growth see A.A. Blum 'Why unions grow' Labor. Hist., 9, pp. 39-72 (1968). For criticism of the 'unrest' theory see O. Ashenfelter & J.H. Pencavel 'American trade union growth: 1900-60' Quart. J. Econs, 83, pp. 434-48 (1969).

14. This is most obvious in the case of the early New Deal period. See S. Fine The automobile under the Blue Eagle (Univ. of Michigan Press, Ann Arbor, Mich., 1963) pp. 142-208; C.R. Daugherty, M.G. de Chazeau & S.S. Stratton The economics of the iron and steel industry (McGraw-Hill, N.Y., 1937) pp. 932-77; R. McKenney Industrial Valley (Harcourt, Brace & Co., N.Y., 1939) pp. 93-188.

15. See, for example, L. Wolff Lockout: the story of the Homestead strike of 1892 (Harper & Row, N.Y., 1965); D. Brody Steelworkers in America: the non-union era (Harvard Univ. Press, Cambridge, Mass., 1960) e.g. pp. 50-112; G. Soule Prosperity decade (Pilot Press, London, 1947) p. 202.

16. A.M. Ross & D. Irwin 'Strike experience in five countries, 1927-47' Ind. & Lab. Rels Rev., 4, pp. 323-42 (1951) at p. 336.

17. R.M. MacDonald Collective bargaining in the automobile industry (Yale Univ. Press, New Haven, Conn., 1963) pp. 49-53; following quote from p. 52.

18. Twenty-first annual report of the Commissioner of Labor, 1906 (U.S.G.P.O. Washington, D.C., 1907) p. 109; F. Peterson Strikes in the United States, 1880-1936 (U.S. Dept. of Labor Bulletin No. 651, Washington, D.C., 1938) p. 166; J.I. Griffin Strikes: a study in quantitative economics (Columbia Univ. Press, N.Y., 1939) p. 99.

19. A.M. Ross 'The natural history of the strike' pp. 23-36 in Kornhauser et.al. (eds) op.cit., at p. 24.

20. P.H. Douglas 'An analysis of strike statistics' J. Amer. Statistical Assoc., 18, pp. 866-77 (1923). In my terminology, Douglas' definition becomes

$$\frac{\frac{S}{N} \times \frac{E-T}{E}}{\frac{T}{E} \times \frac{N-S}{N}}$$

where S is the number of strikes called by a union. This is clearly equal to

$$\frac{S(E-T)}{T(N-S)}$$

which can be expressed as

$$\frac{S}{N-S} \times \frac{E-T}{T}$$

The index for worker involvement is obtained by replacing S by L and N by W.

21. Douglas op.cit., p. 876.

22. Griffin op.cit., pp. 106-08. Griffin defines his index as

$$\frac{W}{T} \times \text{\% of workers involved in strikes ordered by unions}$$

Writing L for the number of workers involved in strikes ordered, the second term becomes

$$\frac{L}{W} \times 100$$

and the whole expression therefore equals

$$\frac{L}{T} \times 100$$

23. For example, in the anthracite strike of 1900 union membership was about 9,000 but 112,000 workers went out. M. Coleman Men and coal (Farrar & Rinehart, N.Y., 1943) pp. 64, 68.

24. Griffin op.cit., p. 116.

25. Thus if the proportion of strikes called by a union rose from 98.5% to 99.5%, the first term, S/(N-S), in the formula in note 20 would increase threefold, from 98.5/1.5 to 99.5/0.5.

26. For the view that unions will reduce strike activity see, in addition to the writings of the institutionalisation theorists, S. Gompers Seventy years of life and labour (Hurst & Blackett Ltd., London, 1925) Vol. 1, p. 286; and the recommendations of the government report on the Pullman strike of 1894, cited in M. Derber The American idea of industrial democracy, 1865-1965 (Univ. of Illinois Press, Urbana, Ill., 1970) p. 87. Cf. Griffin's remarkable anticipation of later writing:

> 'does the establishment and maintenance of a union in a particular industry cause strikes to "wither away" and industrial relations to assume the aspect of peace and tranquility that many authors seem to imagine will be the result of thorough unionization?'

(op.cit., p. 96).

27. Thus the increases registered by the 'other union' category in 1942-45 can be attributed to the disaffiliation of the United Mine Workers from the C.I.O. in 1942.

28. See Griffin op.cit., pp. 73-74.

29. H.A. Millis & R.E. Montgomery Organized labor (McGraw-Hill, N.Y., 1945) pp. 700-01.

30. This information is clearly very incomplete; more strikes were recorded for 1880 than for the whole of the period 1741-1879. The data were collected by a search by the Commissioner's staff through the major trade and labour papers. They thus represent a sample of those strikes which were important enough to receive comment in the press. The starting date of 1741 implies acceptance of the view that a bakers' dispute of that year was a true strike. Cf. J.R. Commons et.al. History of labour in the United States (Macmillan, N.Y., 1918) Vol. 1, p. 25 where it is argued that the first true strike of wage earners occurred in 1786. The same view is expressed by P.S. Foner in History of the labor movement in the United States (International Publishers, N.Y., 1947) Vol. 1, p. 70; but R.B. Morris in Government and labor in early America (Columbia Univ. Press, N.Y., 1946) p. 201n argues that a number of strikes in 1778 and later years take precedence.

31. The N.I.R.A.'s section 7a contained guarantees on the right to organise but it lacked means of enforcement. After the whole Act was declared unconstitutional in 1935 it was replaced by the National Labor Relations Act (the Wagner Act). See, e.g., I. Bernstein The New Deal collective bargaining policy (Univ. of California Press, Berkeley and Los Angeles, 1950); R.C. Cortner The Wagner Act cases (Univ. of Tennessee Press, Knoxville, Tenn., 1964).

32. See J.S. Smith 'Organized labor and government in the Wilson era, 1913-21: some conclusions' Labor.Hist., 3, pp. 265-86 (1962); G.D. Nash 'Franklin D. Roosevelt and labor: the World War 1 origins of early New Deal policy' Labor Hist., 1, pp. 39-52 (1960); Bing op.cit., (note 9).

33. J.V. Spielmans 'Strikes under the Wagner Act' pp. 179-88 in F.S. Doody (ed.) Readings in labor economics (Addison-Wesley Press, Cambridge, Mass., 1950); orig. publ. in J. Pol. Econ. (1941).

34. 'Longest' in the Ross-Hartman sense i.e. having a high D/W ratio.

35. P. Taft 'The philosophy of the American labor movement' pp. 133-42 in W. Haber (ed.) Labor in a changing America (Basic Books, N.Y., 1966) at p. 136. Cf. B.M. Selekman Labor relations and human relations (McGraw-Hill, N.Y., 1947) pp. 14-41; Daugherty et.al. op.cit. (note 14) p. 1056.

36. L.D. Brandeis 'The fundamental cause of industrial unrest' pp. 232-34 in E.W. Bakke, C. Kerr & C.W. Anrod (eds) Unions, management and the public (Harcourt, Brace & Co., N.Y., 2nd edn 1960) (excerpt from evidence to the Commission on Industrial Relations, 1916); R.W. Johnson 'An employer looks at labor-management relations' Ind. & Lab. Rels Rev., 1, pp. 486-92 (1948) at p. 486; F. Peterson 'Causes of industrial unrest' Annals of the Amer. Acad. of Pol. & Soc. Sci., 274, pp. 25-31 (1951).

37. Griffin op.cit., p. 91.

38. W. Galenson '1937: the turning point for American labor' Univ. of California at Berkeley Instit. of Ind. Rels Reprint No. 120 (1959); orig. publ. 1958.

39. Griffin op.cit., p. 114.

40. It will be remembered that in chapter 1 (section 4) I introduced the term 'cessation' to refer to a line of data in the first two of the Commissioner's reports devoted to strikes.

41. This is, of course, a short-term prediction; in the long-term the balance of resources will change as union strike funds grow or as strikers come to make more systematic use of social security payments. On the latter see A.J. Thieblot & R.M. Cowin Welfare and strikes (Univ. of Pennsylvania Press, Philadelphia, 1972); for a sceptical view see J.W. Durcan & W.E.J. McCarthy 'The State subsidy theory of strikes: an examination of statistical data for the period 1956-70' Brit. J. Ind. Rels. 12, pp. 26-47 (1974).

42. See L. Levine The women's garment workers: a history of the International Ladies' Garment Workers Union (B.W. Huebsch Inc., N.Y., 1924); J.M. Budish & G. Soule The new unionism in the clothing industry (Harcourt, Brace & Howe, N.Y., 1920); M. Dubofsky When workers organize: New York City in the Progressive Era (Univ. of Massachusetts Press, Amherst, Mass., 1968); R.J. Myers & J.W. Bloch 'Men's clothing' pp. 381-449 in Twentieth Century Fund How collective bargaining works (Twentieth Century Fund, N.Y., 1942); S.H. Slichter Union policies and industrial management (Brookings Instit., Washington, D.C., 1941) pp. 504-28.

43. H.J. Lahne The cotton mill worker in the twentieth century (Farrar & Rinehart, N.Y., 1944); G.S. Mitchell Textile unionism in the South (Univ. of North Carolina Press, Chapel Hill, N.C., 1931); W. Galenson The C.I.O. challenge to the A.F.L. (Harvard Univ. Press, Cambridge, Mass., 1960) pp. 325-48; International Labour Office The trade union situation in the United States (I.L.O., Geneva, 1960) pp. 105-12.

44. W.D. Evans 'Effects of mechanization in cigar manufacturing' Monthly Lab. Rev., 46, pp. 1100-20 (1938); E.F. Baker Technology and woman's work (Columbia Univ. Press, N.Y., 1964) pp. 31-35.

45. A. Preis Labor's giant step: twenty years of the C.I.O. (Pathfinder Bress, N.Y., 1972) pp. 419-21. See also Galenson op.cit., pp. 75-119; R.R.R. Brooks As steel goes... unionism in a basic industry (Yale Univ. Press, New Haven, Conn., 1940).

46. W. Fisher 'Bituminous coal' and 'Anthracite' pp. 229-79 and 280-312 in Twentieth Century Fund op.cit.; Coleman Men and Coal; M. Baratz The union and the coal industry (Yale Univ. Press, New Haven, Conn., 1955).

47. Fine op.cit. (note 14); Fine Sit-down: the General Motors strike of 1936-37 (Univ. of Michigan Press, Ann Arbor, Mich., 1969); I. Howe & B.J. Widick The U.A.W. and Walter Reuther (Random House, N.Y. , 1949).

48. See P. Eliel 'Industrial peace and conflict: a study of two Pacific Coast industries' Ind. & Lab. Rels Rev., 2, pp. 477-501 (1949); P.L. Kleinsorge & W.C. Kerby 'The pulp and paper rebellion: a new Pacific Coast union' Ind. Rels, 6, pp. 1-20 (1966).

49. Disputes between craft unions and the power of the workers to halt production at critical points are often mentioned. See W. Haber & H.M. Levinson Labor relations and productivity in the building trades (Bureau of Ind. Rels, Univ. of Michigan, Ann Arbor, Mich., 1956).

50. On early strikes in New England see J.T. Cumbler 'Labor, capital and community: the struggle for power' Labor Hist., 15, pp. 395-415 (1974); T. Dublin 'Women, work and protest in the early Lowell mills' Labor Hist., 16, pp. 99-116 (1975).

51. See V.H. Jensen Heritage of conflict (Cornell Univ. Press, Ithaca, N.Y., 1950); G.G. Suggs Colorado's war on militant unionism (Wayne State Univ. Press, Detroit, 1972).

52. S. Perlman & P. Taft Labor movements (Vol. 4 of J.R. Commons et.al. History of labor in the United States; Macmillan, N.Y., 1935) pp. 169, 178.

53. M. Dubofsky 'The origins of Western working class radicalism, 1890-1905' Labor.Hist., 7, pp. 131-54 (1966) esp. pp. 133, 138-39.

54. R. Hyman Strikes (Fontana-Collins, London, 1972) pp. 104-05.

55. For studies of the changing coverage of collective bargaining see, for example, F. Peterson 'Industrial relations in 1938' Monthly Lab. Rev., 48, pp. 493-508 (1939); Industrial relations branch 'Extent of collective bargaining and union recognition in 1945' Monthly Lab. Rev., 62, pp. 567-72 (1946); H.M. Douty 'Collective bargaining coverage in factory employment, 1958' Monthly Lab. Rev., 83, pp. 345-49 (1960).

CHAPTER FOUR

THE ECONOMIC, ORGANISATIONAL AND POLITICAL DETERMINANTS OF STRIKE ACTIVITY, 1881-1972

The previous chapter dealt with long-term trends in strike activity, treating groups of three or four years as the unit of analysis. In this chapter, year-to-year changes are the focus. The central issue is two-fold: how is strike activity related to economic, organisational and political factors; and has the nature of the relationship changed? The weaker versions of the institutionalisation theory stress that industrial peace is contingent on economic circumstances and we must, therefore, examine how strikes are related to measures of economic activity. But the theory also suggests that there will be a shift in the patterning of union-management relations, in the direction of increased harmony, as institutionalisation proceeds; we must see if the establishment of institutionalised relations has affected the link between economic conditions and strikes. As we saw in chapter two, Shorter and Tilly have argued that organisational and political factors are more important than economic ones in explaining strike trends, and we must also test this view.

I shall investigate these hypotheses by comparing three periods. The precise coverage varies slightly according to the availability of data, but the periods are approximately 1881-1910, 1900-39 and 1946-72. These represent, respectively, the 'early' period of rapid industrialisation and the breakdown of craft methods of production; the period in which relations were not institutionalised; and the years in which the institutionalised system has been in operation. The overlap between the first two periods is due to the need for runs of years which are long enough for statistical analysis. I do not want to suggest that

the distinctions between these three periods are rigid or clear-cut; but the differences are sufficient for present purposes.

Before turning to the determinants of strikes activity, I consider, in section one, the interrelationships between aspects of the strike movement. To understand the overall pattern of activity, we must see how the various measures of activity co-vary; for example, we must examine whether there is a tendency for periods of high strike frequency to be marked by large, long or successful strikes. With this basis, I consider the determinants of activity. Section two discusses the theory of the economic determination of strikes, while section three examines the empirical relationship between strikes and the business cycle. Section four used regression analysis to establish the <u>strength</u> of the relationship between economic variables and strike activity. Section five introduces into this framework organisational factors, measured by trade union density, and section six brings in political variables.

1. <u>Changes in the character of the strike movement</u>

The contrasts between 'early' and 'modern' and between 'non-institutionalised' and 'institutionalised' forms of conflict refer to secular changes in strike activity, but they also contain implications for the ways in which strike indices co-vary. Thus, from the argument that early strikes are unsuccessful measures, one would expect strike frequency to be positively associated with the proportion of strikes lost, and negatively with the proportion for 'aggressive' demands. Similarly, one might suggest that early strikes represent mass upheavals and that indices of frequency, worker involvement and duration will move together; as strikes become predictable and planned, one

might expect frequent and short stoppages during prosperous periods, and large long ones in recessions, so that frequency and duration become inversely related.

With these expectations in mind, we may turn to Table 4-1, which reports the zero-order correlation coefficients between selected strike measures for our three periods. The indices for strike frequency (N/E), worker involvement (W/E), size (W/N) and duration are already familiar, but some comment on the other measuresis required. The '% wage and hour' variable refers to the proportion of strikes called on issues of wages and hours; it may be taken as an index of the proportion of stoppages which are over economic matters rather than union organisation and the like. Similarly, '% wage increase' means the proportion of strikes in which the issue was a demand for a wage increase; it is a rough indicator of the proportion of strikes over 'aggressive' demands. It is only rough since other forms of demand may be equally aggressive and since, in a period of rising prices, a demand for increases in wages to restore real incomes need not indicate militancy. However, there is a difference between seeking to change the economic terms of the labour contract and trying to preserve the status quo, and between making wage demands and attempting to alter the way that the contract is negotiated; thus this index can be used, with caution. The '% won' and '% lost' measures refer simply to the proportions of strikes with the results given.

One other preliminary point must be mentioned. It is well known that correlations between indices which contain common terms may be 'spurious'; the fact that both indices contain the common term means that they are not fully independent.[1] If the common term is in the numerator of the indices, the correlation

Table 4-1: Zero order correlations between strike indices.

	N/E	W/E	W/N	% wage and hour	Duration	% wage increase	% won
1881-1915							
W/E	0.55						
W/N	-0.39	0.52					
% wage and hour	-0.50	-0.08	0.52				
Duration	0.07	0.25	0.28	-0.32			
% wage increase	-0.07	0.04	0.17	0.67	-0.60		
% won	-0.53	-0.18	0.36	0.34	0.07	0.07	
%lost	0.30	-0.03	-0.38	-0.25	0.04	-0.17	-0.86
1916-39							
W/E	0.66						
W/N	-0.02	0.63					
% wage and hour	0.13	0.26	0.21				
Duration	0.01	0.26	0.37	0.28			
% wage increase	0.64	0.53	0.05	0.22	-0.27		
% won	0.09	0.01	0.07	0.59	-0.25	0.04	
% lost	-0.56	-0.27	0.09	-0.55	0.43	-0.43	-0.65
1940-72							
W/E	0.81						
W/N	0.51	0.90					
% wage and hour	-0.36	-0.16	0.09				
Duration	-0.51	-0.20	0.04	0.33			

For notes, see over page.

Table 4-1: (continued).

Notes: Series on percentages won and lost not available for 1940-72; series on wage increase strikes available only up to 1960. Significance levels are not indicated in the body of the table since it is unclear whether a One- or two-tailed test should be applied. To be significantly different from zero, coefficients must exceed the levels given below:

		1881-1915	1916-39	1940-72
Two-tailed test:	5% signif. level	0.335	0.404	0.345
	1% " "	0.432	0.515	0.443
One-tailed test:	5% " "	0.283	0.344	0.284
	1% " "	0.393	0.472	0.404

will, other things equal, be positive, whereas if it is the numerator of one and the denominator of the other the correlation will be negative. For example, one would expect W/N to be associated positively with W/E and negatively with N/E.

Table 4-1 shows that in 1881-1915 strike frequency is positively associated with the proportion of strikes lost, even though the expectation from the above paragraph is for a negative correlation. In other words, the more strikes there are, the more are lost. This relationship alters radically in the next period, 1916-39, suggesting that a shift occurred in line with the predictions mentioned above. But there is no significant association between strike frequency and the proportion of aggressive strikes in the earlier period, whereas a negative link would be expected. However, the fact that the correlation becomes strongly positive in 191 -39 suggests that some shift may have occurred. Similar, but weaker, correlations are apparent between worker involvement and the indices of the results and aggressiveness of strikes.

One would expect from the institutionalisation theory that the growth of institutional control of strikes would mean that the strike movement would become more 'concentrated': instead of strike frequency moving relatively independently from worker involvement, these measures will vary together because they both reflect institutional decisions rather than more 'random' influences. This expectation is supported by the rise in the coefficient of correlation between N/E and W/E. A corollary is a strengthening of the association between these indices and the size of strikes; the correlation coefficient for the link between W/N and W/E rises from 0.52 to 0.90. For N/E and W/N the correlation is negative in 1881-1915 but becomes positive

by 1940-72.

This change in the direction of the association between the size and frequency of strikes raises the question of whether it is part of a shift from 'early' to 'modern' types of protest. We have seen that the types are distinguished in terms of the size, frequency and duration of strikes,[2] but there is no necessary implication for the correlations between <u>variations</u> in these measures. However, we can derive predictions which are consistent with the early-modern model. If early strikes are small and frequent, it seems reasonable to expect that the <u>more</u> frequent they are the smaller they will be.[3] In other words, the size and frequency of strikes will be negatively associated; similarly, there will be a negative link between duration and frequency and a positive one between size and duration. For modern strikes, the same directions of association should be apparent, but for reasons which are the obverse of the argument regarding early strikes; for example, strikes will be infrequent and long and therefore frequency and duration will be correlated negatively. We have seen that, for 1881-1915, frequency and size are inversely related but that this does not hold for 1940-72. The link between frequency and duration is not significantly different from zero in the earlier period but becomes quite strongly negative in the later one. The duration-size correlation is positive, but not significantly so, for these two periods, but it is significant in 1916-39. In other words, of the nine correlations (three for each of the three periods) three are in the predicted direction, five are not significant (although one of these is very nearly so, and in the predicted direction) and one goes counter to predictions. There is thus some very limited evidence in support of what we might call the

'second-order' predictions from the early-modern contrast. But since the 'first-order' predictions, about strike shapes, received little support in the above chapter, the status of the contrast is uncertain.

We must note briefly the remaining important points about Table 4-1. As we shall see in the following section, a common view about the effect of the business cycle on strikes is that in booms stoppages will be frequent, concentrated on economic demands and short; but in depressions they will be long and large battles and less concerned with economic matters, particularly those related to wage increases. One would thus expect strike patterns to reflect this effect. As we have seen, frequency and duration are not associated in 1881-1939, although in 1940-1972 the correlation is inverse, as predicted. But frequency is generally inversely associated with the proportion of strikes on economic matters. The proportion for wage increases is not associated with size, but it has the predicted negative relationship with duration, at least for 1881-1915. One would expect more strikes to be lost in depressions than in booms and the fact that the link between the percentage lost and duration is direct supports this view. But at the same time there is an inverse link between the proportion lost and the size of strikes.

We could continue to analyse Table 4-1 in this way, but little would be gained by such a course. The fundamental point is that the strike movement does not exhibit the tidy patterns which the institutionalisation theory and business cycle arguments might expect. One relationship is in the predicted direction and another is not; and the direction of the correlation between two variables alters, without apparent cause. We may be in a position to see what is happening when the business

cycle theory has been examined more fully.

2. The economic determination of strike activity

It is a commonplace that economic conditions influence the development of the labour movement. For example, both Commons and Ware argued that business fluctuations influenced not only the rate of growth of the movement but also its character: in recessions the labour movement would be reformist, backward-looking and keen on co-operative ventures whereas in expansions it would adopt trade unionism and a forward-looking approach.[4] But the nature of the impact of economic conditions has been much in dispute.[5] In this section, we must pause to consider the arguments as they relate specifically to strikes, so that the direction of the discussion in later sections will be clear.

Nearly every writer on the association between strikes and the business cycle has noted a general tendency for the amount of strike activity to be directly associated with the level of business activity.[6] Further, there is a systematic tendency for the turning points of the two cycles to be close together, with the strike cycle slightly leading that of business. This circumstance led Griffin and other writers to suggest that strikes had a direct effect on levels of business activity by affecting employers' expectations about the future; Rees casts severe doubt on this by pointing out that strike activity is never high enough to be able to influence business confidence in the aggregate, but his own interpretation of the lead of the strike cycle is also incomplete.[7]

The reasons for the close link between strikes and economic fluctuations are spelt out less clearly than one would expect. Since the impact of economic conditions is such a well-known feature of the labour movement, the need for rigorous theoretical

explanations has been overlooked. As Levitt points out, the implicit argument goes as follows.[8] The strike is potentially more effective in booms than in recessions for two classes of reason. On the workers' side, resources to last out a strike are relatively great and the tight conditions of the labour market means they need not fear the use of strike-breakers. On the employer's side, inventories will be relatively low (so that customers cannot be supplied from stockpiles or production continued using stockpiled raw materials) and the chances for making profits too tempting to miss. It might also be argued that rising prices will reduce the workers' real income and will therefore contribute to feelings of discontent, or that the pressures of working at full capacity will make the men restless and will cause petty disputes over breakdowns of machinery and the like to break out into stoppages.

This is clearly not a complete account of why strike activity should be dependent on economic conditions. No one would deny that the bargaining power of the workers is influenced by the economic climate, but there is no reason why this should necessarily be reflected in patterns of strike activity. If the employer is anxious to continue production he will be likely to give way to his workers' demands without a strike being necessary. And prosperity will take the edge off the workers' discontents so that the ability to strike may not be matched by a willingness to stop work. Moreover, the economists have not shown the <u>strength</u> of the aggregate link between strikes and business conditions; they have indicated only a general tendency for the two series to move together. In the following section, I shall examine the strength of the relationship and consider why this general tendency may exist, in view of the fact that it

is not explained by the economists.

A rather different approach argues that the characteristics of the strike movement will vary over the business cycle. One obvious argument is that strikes will be more successful in booms than in depressions; another is that demands for wage increases will be concentrated in prosperous periods. Less immediately obvious is the argument that booms will be characterised by short stoppages, which are generally small, whereas strikes in depressions will be large and long.[9] The rationale for this is that bargaining disputes in booms will be settled quickly and will often relate only to limited aspects of the employment contract. By contrast, the more fundamental disputes in recessions, over redundancies or management attempts to regain some of the control over the work place yielded when business was brisk, will be lengthy battles involving many workers. Again, we shall investigate the evidence for this in the following section.

There has recently been a renewed interest in the economic determination of strike activity. Unlike the older interest in the joint timing of cycles of strikes and business, a multivariate approach is adopted and the attempt made to show that the link between strikes and economic variables is a strong one. I shall concentrate here on the work of Ashenfelter and Johnson, since it relates to the United States and is the starting point of other analyses.[10] Ashenfelter and Johnson criticise other writers for assuming that strikes are caused by misjudgements or by 'irrational' behaviour[11] and propose a model derived from Ross[12] in which there are three parties: management, the union leadership and the union rank-and-file. The last group will have some desired level of wage increase. If this is

met by management, no strike will occur, but if it is not met the union leaders can accept a lower settlement or call a strike:[13]

> 'The second alternative, although actually contrary to the membership's best interests, is preferred to the first by the leadership. Under strike conditions the leadership may at least appear as adversaries against management in a crusade which may even raise their political "stock" and will unify the workers'.

The shock of the strike will reduce the members' expectations so that, after a while, the leaders can safely settle with management. The quoted passage reveals that, for Ashenfelter and Johnson, one party is 'irrational': the workers are prepared to strike even though this is not in their own interests. The strike is seen solely as 'an equilibrating mechanism to square up the union membership's wage expectations with what the firm may be prepared to pay'.[14] No attention is given to the possibility that the strike may achieve something for the workers and that it is management that will have to adjust its expectations.

Unlike other economists' interpretations, this theory does not see the strike as a planned action taken on the principles of economic rationality, but the means adopted to test it are similar. It is argued that the workers' desired wage increase will depend on the rate of unemployment, and the previous rate of change of real wages: the faster wages have been rising, the lower will be the further increase demanded. The arguments for an inverse link between the unemployment rate and strike activity have already been mentioned,[15] but some consideration must be given to the role of wage changes. It might be argued that large increases in the past will lead workers to expect current increases that are at least as large; in other words expectations

will rise at least as fast as achievements. We cannot go into the complexities of the expectations-achievements gap or the theories that use it to explain outbreaks of protest,[16] but will merely note that the rate of change of real wages seems to be an important fndex of the economic aspects of it. Section four will examine whether past changes are directly or inversely associated with strikes.

Ashenfelter and Johnson treat the unemployment rate and the change in real wages as proxies for variables in a particular theoretical model. But they are attempting to test a model stated at the 'micro' level using aggregate data.[17] The data can be used to test a number of models and there is a severe problem of a gap between the theoretical and empirical variables. Thus the unemployment rate may affect the workers' desired wage increase but it has not been shown that this is the only influence or that it is the rate of unemployment rather than its rate of change which is important. This gap is evident in another part of their discussion. Their theory is stated in terms of the probability that a strike will occur in a given period[18] and they need to translate this into practice. They argue that data on the number of contract expirations would enable them to do this, since the probability of a strike could be estimated from the ratio of the number of strikes to the number of expirations. (It is explicitly assumed that a strike will occur only at the end of a contract which, as we shall see in chapter seven, is not wholly justified.) In the lack of such data on contract expiration, the writers proceed on the assumption that the annual number of expirations is constant and that seasonal fluctuations can be caught by using a set of dummy variables. But it has long

been known that strike activity fluctuates seasonally[19]; in practice these variables measure the impact of a number of seasonal factors and not just the effect of contract expirations.

Thus the empirical test applied has moved away from the theoretical formulation in a number of very important ways. The equation finally used predicted the number of strikes per quarter from 1952 to 1967; the independent variables were the seasonal dummies and a time trend, the unemployment rate, the rate of change of real wages and a measure of the rate of profits. The overall fit achieved was very good, with over 90% of the variance in the number of strikes being explained. The coefficients of the unemployment and wage indices were in the direction expected by Ashenfelter and Johnson; that is, both were negative. But the rate of profit did not exert a significant influence. The time trend had a negative coefficient, indicating a tendency for strike frequency to 'wither away' in the period in question, and all the seasonal dummies had significant and positive coefficients.

Section four will report some tests of this model, but we may note here the findings of Skeels.[20] He used quarterly data for a period very similar to that studied by Ashenfelter and Johnson (1952-68) but did not limit his attention to strike frequency, using in all eight measures of strike activity. The details of his estimating equation will be considered further in section 6, since the consideration of his political variables is best left until then, but we may note here the differences from Ashenfelter and Johnson. Only in the equations predicting to the number of strikes were the measures of unemployment and the change of earnings significant; and the coefficient of the latter

was positive. The reason for this difference from Ashenfelter and Johnson is, of course, that a different model was being employed. The direction and strength of the link between one independent variable and the dependent one, in a multiple regression model, depends on the other variables employed; as different variables are employed, the relationship will change. Skeels' findings suggest that a number of models can be applied and that they can all achieve impressive results; the amount of variance explained was similar, when predicting to the number of strikes, to that of the Ashenfelter-Johnson model.

How, then, are we to choose between economists' models of strike activity? The answer usually given is that regression equations cannot be considered apart from the theory that underlies them; a theory must be developed and suitable empirical measures derived to test it. Skeels might be criticised for not developing adequate theoretical arguments for the use of particular measures. But I have argued above that in the case of Ashenfelter and Johnson the gap between theory and operational test is such that their theory cannot be said to have been tested. I would argue that the existence of this gap presents a very large problem for the standard economic approach; no attempt will be made to overcome it here. Rather, I will treat the question in much broader terms. We have seen that the rate of unemployment and the level and rate of change of wages are important economic indices and I will examine how closely they are related to strike activity without attempting to build up an explanation on the lines of the economists. We cannot legitimately move from the aggregate level of analysis that must be employed to hypotheses about individual actions. We are dealing with an aggregate

relationship: the impact of economic conditions on the strike movement as a whole.

As we saw in chapter 2, the 'conventional' side of the institutionalisation theory stresses increasing prosperity as a factor reducing discontent; the 'radicals' similarly argue that rising real national income enables the capitalists to 'buy off' the workers. Thus an inverse relationship is expected between the level of real wages and the rate of strike activity; but cyclical factors will also be at work since a depression, it is argued, can disrupt a growing pattern of accommodation. In the next section, the general impact of business conditions on strikes is examined, while in section 4 we turn to regression analyses employing economic variables. In doing this one is not committing the logical errors of the economists because it is only aggregate relationships that are being assessed; the theory to be tested makes statements about the overall nature of industrial relations and patterns of conflict and is appropriately tested using aggregate data.

3. Strikes and the business cycle

I have used two indices for the business cycle: the unemployment rate, and a constructed index measuring the broader impact of economic conditions. The significance of the unemployment rate is obvious.[21] But it might be suggested that the link between business activity and strikes is less direct than the use of the unemployment rate implies: strike activity may reflect only broadly the impact of economic changes, with a small change in the unemployment rate having little effect but with a large change having a disproportionate impact. Thus, in their paper on trade union growth, Ashenfelter and Pencavel[22] argue that the

amount of discontent felt by workers will be a function of the depth of the previous depression, with the discontent being dissipated as time goes on. I have therefore constructed two measures of the depth of depressions and the height of booms called, respectively, 'trough' (for the trough of business activity) and 'peak'. These are even more loosely connected with immediate conditions than the Ashenfelter-Pencavel index since no allowance is made in them for the dissipation of the effects of a depression or boom. They can be seen as measuring the broad impact of the business cycle, while the unemployment rate indicates its immediate effects.

The measure of unemployment troughs is calculated as follows. The annual series of unemployment was examined and a number of recessions (defined as years in which unemployment was greater than in preceding and subsequent years) identified. For the years between each trough the value of the index is the unemployment rate of the previous trough, unless the rate in the current year exceeds that in the recession year, in which case the current rate is substituted. Thus the index reflects the depth of the last recession to have occurred, unless the present one is deeper than the previous one. The peak measure, reflecting peaks of business activity, is calculated analogously.

Table 4-2 reports the correlation coefficients between measures of strike activity and the three indices of the business cycle; U is the symbol used for the number of men unemployed and thus U/E refers to the rate of unemployment. The strike indices are the same as those in Table 4-1; that is, worker involvement and the number of strikes are deflated by the level of employment. This is essential when any long run of years is

Table 4-2: Zero order correlations between strike indices and measures of the business cycle.

	N/E	W/E	W/N	% wage and hour	Duration	% wage increase	% won	% lost
1881-1915								
U/E	-0.24	0.04	0.19	-0.07	-0.16	-0.11	-0.19	0.10
Trough	0.03	0.17	0.06	-0.08	-0.40	0.08	-0.22	-0.15
Peak	-0.14	0.14	0.19	0.09	-0.33	0.17	0.04	0.08
1916-39								
U/E	-0.07	-0.08	0.01	-0.14	-0.29	-0.37	0.17	-0.06
Trough	0.19	0.14	0.08	-0.17	-0.34	-0.13	0.35	-0.28
Peak	0.29	-0.03	-0.28	-0.64	-0.28	-0.18	0.40	-0.63
1940-72								
U/E	-0.24	-0.31	-0.33	-0.50	0.33			
Trough	0.40	0.06	-0.20	-0.58	-0.75			
Peak	-0.25	-0.42	-0.49	-0.52	0.20			

Notes: For significance levels, see Table 4-1.

U is the number unemployed; i.e. U/E is the unemployment rate.

For the meaning of Trough and Peak, see text.

considered; it is remarkable that the early investigations of the economists, and indeed many more recent approaches, used uncorrected measures. The overwhelming impression from Table 4-2 is that the association between strikes and business activity is a very weak one. The only significant correlation for U/E is with the proportion of wage and hours strikes in 1940-72; as one would expect, the correlation is inverse, showing that strikes over economic demands are concentrated in times of economic expansion. And only for 1940-72 does the trough measure achieve a number of significant correlations; there is a direct link with strike frequency, suggesting that the deeper the previous depression the greater will be the subsequent strike rate. There is a strong inverse relationship with strike duration, which also holds less strongly in the earlier periods, indicating that deep recessions make subsequent protests shorter. Similarly, the 'peak' measure is most significantly associated with strikes in the most recent period; it reflects the height of the previous boom and its inverse association with strike activity indicates that a previous period of prosperity is associated with a reduction of the strike rate.

We may conclude that the link between strikes and the business cycle is not strong or consistent, but it is still possible that there is some broader pattern of aseociation.[23] Thus it has been argued recently by Hill and Thurley that the <u>sociological</u> significance of conflict will vary with the cycle.[24] Conflict will be greatest during the upswing and downswing of the cycle since in the former the workers will use 'rational' bargaining techniques to obtain concessions from the employer and in the latter there will be increasing perceptions of class

conflict. By contrast, the bottom of the depression will be characterised by depression and withdrawal and the top of the boom by individual rather than collective feelings of anomie. In Table 4-3 I report the results of dividing the business cycle into the four periods indicated; this is naturally only a rough method when annual data are used since the turning points of the cycle cannot be very clearly established, but some comparison is possible. There is no consistent tendency for strike frequency to be greatest in the up and downswing. Neither is it the case that the longest and largest strikes are concentrated in the downswings, contrary to the prediction that it is here that class conflict will be most apparent. The recession period has generally had the longest and largest stoppages; only in 1882-1905 did the downswing have the longest strikes, and only in 1901-38 the largest.

The view that strikes will be large in recessions and smaller in booms receives some support from the data for 1901-72 as a whole; strikes are larger in the downswing than the upswing and are larger still in the recession period. However, this does not hold for the various sub-periods; thus in 1947-72 the size of strikes is greater in boom periods than in the up or downswings and in 1901-38 the size in booms and recessions is nearly identical. Indeed, there is no pattern of relationship between strikes and the level of business activity which holds for all the periods considered. Moreover, there is no simple shift from one pattern to another, a point which will have to be given much more attention when we come to consider the 'institutional parameters' of conflict.

It would appear, then, that the view that strike activity

Table 4-3: Strike indices for periods of the business cycle, 1882-1972.

		Upswing	Boom	Downswing	Recession
1882-1905					
	N/E	136	101	125	115
	W/N	218	314	250	326
	Duration	27.6	35.1	31.5	23.3
1901-28					
	N/E	127	105	105	125
	W/N	318	281	394	269
	Duration	23.7	18.8	23.7	30.9
1901-38					
	N/E	103	115	86.3	110
	W/N	363	311	392	313
	Duration	23.4	19.2	23.4	29.1
1947-72					
	N/E	78.6	80.8	71.1	71.7
	W/N	488	513	467	589
	Duration	21.9	21.5	22.8	23.4
1901-72					
	N/E	87.4	97.6	80.3	87.9
	W/E	436	412	453	527
	Duration	21.3	18.5	22.0	25.7

will depend on the business cycle has won rather too easy acceptance. Even writers like Levitt who criticise the view that 'prosperity leads to strikes' accept that there is an empirically regular link between economic activity and strikes. But the different forms of analysis in Tables 4-2 and 4-3 have failed to indicate any very clear patterns. How can this be equated with the findings of the early economists that cycles of strikes and business go together? The answer is that these writers showed only that the turning points of the cycles occur at similar points and that in any one business cycle strike activity is directly associated with business activity. But over a number of cycles the relationship is not a stable one and different levels of unemployment will be related to different levels of strike activity. Many factors affect the decision to strike and we may group these into two. On the one hand, there are those which increase strike activity in booms, such as the growth of the workers' bargaining power. On the other hand, there are those, such as the complacency which comes with properity[25] and the willingness of the employers to give way without a strike, which reduce strike activity. The balance between these two sets of forces will vary between cycles and thus the overall effect of the business cycle on strikes will be limited. As I argued at the start of the previous section, the theory linking strikes to business cycle is very incomplete.

4. Regression equations using economic variables

We have seen in section two that the unemployment rate and the rate of change of real wages are important variables for economists and have also noted the significance, for present purposes, of the level of real wages. In this section I report

the results of a number of regression equations using business cycle and wage measures as the independent variables, using annual and then quarterly data.

The most obvious procedure is to carry out the simple regression of strike arequency on the unemployment rate of the rate of change of real wages for the longest time span for which data are available. In both cases, virtually no association is present and there is evidence for the presence of positive autocorrelation.[26] The latter problem can often be overcome by taking the first differences of the independent variables or by lagging them; that is, one is predicting, in the first case, from the absolute (not proportionate) change in the variables and, in the second, to strike frequency in the current year from their level the previous year. Lagging clearly has a theoretical as well as a practical value since it is likely that there will be a gap between the change of a structural variable and the reflection of this in strike activity. But a number of attempts to improve the solution using lagging and first differences were unsuccessful. 'nd the replacement of the rate of unemployment by the 'peak' and 'trough' measures mentioned above did nothing to improve the situation. Details of the relevant equations will be found in Table A-11.

When we turn to various sub-periods, however, the situation improves markedly. Table 4-4 reports the results of applying three simple equations to five periods. The dependent variable is the number of strikes, N, and this variable, or strike frequency (N/E) will be used in most of the other Tables. As earlier writers have shown, and as will become apparent later, indices of frequency are more closely related to structural

Table 4-4: Results of regression equations, selected periods: dependent variable, number of strikes (N).

Period	Equation (1)				Equation (2)				Equation (3)			
	Indeps		R^2	D-W	Indeps		R^2	D-W	Indeps		R^2	D-W
	U	Time			A/P	Time			H/P	Time		
1906-15	Neg	Pos	0.32	1.87	Pos	Neg	0.15	1.71	Pos	Neg	0.49	2.89
	5%	5%			NS	NS			1%	1%		
1916-27	Neg	Neg	0.87	2.04	Neg	Neg	0.84	1.63	Neg	Neg	0.85	1.75
	NS	1%			NS	5%			NS	1%		
1928-39	Neg	Pos	0.65	2.18	Pos	Pos	0.60	2.10	Pos	Neg	0.68	2.19
	NS	1%			NS	5%			NS	NS		
1940-51	Neg	Pos	0.19	2.01	Pos	Neg	0.49	2.29	Pos	Neg	0.43	2.30
	NS	NS			1%	NS			5%	5%		
1952-63	Neg	Neg	0.66	2.11	Neg	Pos	0.53	2.47	Neg	Pos	0.58	2.67
	5%	NS			NS	NS			NS	NS		

/ For notes, see over page.

Table 4-4: (continued).

Notes:

U Number unemployed

A Average annual money wage

H Average hourly money wage

P Price level

(i.e. A/P and H/P are the real annual and hourly wage levels).

R^2 Coefficient of determination, corrected for degrees of freedom

D-W Durbin-Watson statistic.

Neg Coeff. of independent variable negative

Pos " " " " positive

NS " " " " not signif.

1% " signif. at 1% level

5% " " " 5% "

factors than are other measures of strike activity[27] and it is desirable to test the economic models where they have the greatest chance of performing well. And in order to compare different models it is best to retain the same dependent variable throughout. The procedure in reporting the results is to give the sign of the coefficients of the independent variables and to state whether they achieve one of the two conventional levels of significance or are not significant; this seems preferable to cluttering the tables with the actual coefficients and their 't' values. All the equations include a constant term, but, again for reasons of clarity, this is not reported. The coefficient of determination (R^2) is given when the correction for degrees of freedom has been carried out; finally, the Durbin-Watson statistic, the measure of autocorrelation, is reported.

One other preliminary point about Table 4-4 concerns the use of the time variable. This is commonly employed in economic analyses and on general grounds one may question its usefulness as a measure of economic conditions; thus in many of the later equations it is not included. But it is important for the institutionalisation theory; as Walsh puts it:[28]

> 'The inclusion of a time trend...is intended to provide a tentative indication of the extent to which bargaining relationships mature and become more responsible with mutual understanding that knowledge and accumulated experience permit'.

In all three equations, the sign of the time variable alters between periods, indicating that no continuous trend towards 'maturation' is present. It is also notable that it takes on a

different sign in the three equations in the same period; for instance its coefficient in equation (1) for 1906-15 is positive whereas in the other two equations it is negative. This brings out a fundamental point about regression models which has been touched on above and which will be of central importance for the rest of the discussion: the direction and strength of the effect of any independent variable depends on the other variables included in the equation. Thus in combination with the unemployment rate the time trend exerts an upward influence on strike frequency, but in combination with the wage indices it has a downward effect.

Throughout the five periods, the number of unemployed is negatively associated with the number of strikes; this bears out the finding in the above section that in any one business cycle there is a clear effect on strike activity, but that this is not consistant between cycles. The signs of the wages coefficients vary. There is thus no clear tendency for prosperity to reduce strikes; none of the negative coefficients is significant. The differences between equations (2) and (3), particularly in 1906-15, should be borne in mind during the later discussion. Even when a theoretical variable has a clear empirical reference, the precise measure to be employed may not be obvious. Here, the level of prosperity should be measured by the level of real wages, but whether hourly or annual earnings (or some other index) should be used is unclear; since different measures lead to different results even apparently unambiguous models need to treated with caution.

The overall explanatory power of these three equations varies considerably, which further strengthens the conclusion that the impact of economic variables on strike activity is of a

shifting and inconsistent kind. It is notable that the greatest level of variance explained occurs in the 1916-27 period, whereas the Twenties are often seen as an anomalous period in which labour was 'suffering from prosperity';[29] but the economic model performs well here, a finding which is confirmed by the quarterly data presented later. We are not concerned at present with explaining why economic variables are important in some periods and not in others (see section 6) but we may note in passing that the low level of success in 1940-51 cannot be attributed to the effects of the war years. Not only does the First World War fail to affect the results for 1916-27, but results of equations for the 1928-51 period (reported in Table A-12), in which a dummy variable for the war years was introduced, show that the war was not an important factor.

In Table 4-5 we turn to the joint determination of strike frequency by business cycle and wage indices. The former are the peak and trough measures since the use of these generally appears to improve the solution, compared to the use of the rate of unemployment (see Table A-13). In the first three equations, these are used in combination with the level and rate of change of real wages; quite high, and increasing, R^2's are obtained. The rate of change of wages never contributes significantly to the result, which is surprising in view of the common argument that this variable will measure the 'expectations-achievement gap' and will therefore be an important predictor of strike activity. The level of wages begins by exerting a direct effect on strike frequency, but since 1900 has had an inverse impact. The latter effect is, of course, that predicted by the institutionalisation theory, but it would be on stronger ground if the shift in direction occurred after the Second World War:

Table 4-5: Regression results, economic variables: dependent variable N/E.

Period	Independent variables						R^2	D-W
	Trough	Peak	A/P	Ch.A/P	Ch.A	Ch.P		
1890–1910	Neg	Neg	Pos	Pos			0.47	1.50
	1%	NS	1%	NS				
1900–39	Pos	Pos	Neg	Pos			0.69	1.33
	5%	5%	1%	NS				
1946–72	Pos	Neg	Neg	Pos			0.65	1.74
	5%	1%	5%	NS				
1890–1910	Neg	Neg	Pos		Pos	Pos	0.51	1.70
	1%	NS	1%		NS	NS		
1900–39	Pos	Pos	Neg		Pos	Pos	0.78	1.65
	1%	1%	1%		NS	NS		
1946–72	Pos	Neg	Neg		Pos	Neg	0.68	1.53
	5%	1%	1%		5%	5%		

Note: 'ch.' denotes 'proportionate change in' i.e. Ch.A/P, Ch.A and Ch.P are, respectively, the rates of change of real wages, money wages and prices.

that is, after institutionalised bargaining had been established. The coming of the shift around the turn of the century strengthens the arguments from industrialisation, but since Table 4-4 indicated, <u>for a different model</u>, a much less dramatic shift, the status of that observed in Table 4-5 is somewhat uncertain.

In the latter part of Table 4-5 the change in real earnings is broken down into its wage and price components. For the first two periods neither achieves significance, but the R^2's are increased and the solutions are improved by the rise in the Durbin-Watson statistic. As one would expect, the coefficient for the change in prices is positive, but in the period 1946-72, when it achieves significance, it is negative; in other words, the faster the rate of increase of prices, the lower is the level of strike activity. This is surprising in view of the general expectation that rising prices will tend to increase strike frequency and the fact that such an association has been found to hold in Canada.[30] And a fast rate of increase of money earnings is associated with a rise in N/E whereas the level of wages is associated with a fall in strike frequency. Thus it appears that a rising level of real wages reduces discontent but that a fast rate of increase of money wages encourages workers to strike.

The interpretation of the peak and trough variables is rather complex. It will be recalled that 'trough' measures the depth of the previous recession, and 'peak' the height of the previous boom. Thus in 1890-1910 a deep recession reduces subsequent strike activity, whereas since then it has tended to increase it. In the first two periods the direction of the influence of the peak variable has been the same as that of trough; that is, in 1890-1910 deep recessions and high booms reduce subsequent strike frequency whereas in 1900-39 they

increase it. Other things equal, one might expect the discontent caused by depressions to stimulate protests later, so the early negative coefficient of the trough variable is a puzzle. Expectations for the peak measure are less clear. One might argue (as do Hill and Thurley in the article discussed in section three) that the downswing of the business cycle will be marked by class conscious protest; thus the higher the previous boom the greater will be the subsequent protest. On the other hand, past prosperity may make workers relatively content, so that they will be prepared to take a passive line in recessions. The evidence from the Table suggests that the latter view holds for the first and third periods; in other words, high levels of business activity reduce subsequent protests. But in 1900-39 the reverse situation holds. Only in 1946-72 is there a clear situation in which past booms reduce activity whereas past recessions increase it.

An explanation of this pattern of events can be found, however. When the negative coefficient of the trough variable in 1890-1910 is considered with the positive one for the level of wages, and contrasted with the reverse situation in later years, the view that early and later protests have a different character is strengthened. In the early years, rising wages seem to enable workers to strike: when their living standards are very low they lack the resources to support a strike, but when real wages have reached a somewhat higher level they are in a position to protest against their conditions. But at the same time a deep recession destroys much of what they have gained previously and leads to a cautious approach subsequently. After this early period, real wages have reached higher levels and prosperity takes the edge off discontents; on the other hand, a

recession makes the workers determined to regain their losses during it. We can now fit the evidence from the peak variable into this interpretation. In the early period, a high level of business activity leads to complacency, but, in the years after the shift in the effects of the trough and wage variables, booms encourage workers to strike subsequently to defend their gains. But this is not a permanent position since, as prosperity increases further, the need to defend the gains declines. Or, as the institutionalisation theorists would put it, bargaining has become established by this final period and employers no longer try to destroy unions after a boom and therefore there is less need to strike. This interpretation clearly cannot stand on the basis of the regression results alone; the next three chapters will bring evidence of a different kind to bear on it.

We now turn to a model in which the previous level of strike frequency is used to explain the present level. It may seem odd to explain a variable in terms of itself, but it is quite a common procedure among economists; to give an example close to the present case, Ashenfelter and Pencavel use the previous level of union density to predict the present level, on the assumption that a high density will make further growth difficult.[31] The view of the institutionalisation theory is that strike activity will become more planned and less 'random'; it will therefore come to depend more on itself. It is also important to see how far strikes in the current year can be explained by their previous level, compared with the effect of economic conditions; in other words, how independent is the strike movement of economic trends?

Table 4-6 gives the results of the model combining economic measures with the previous level of strike activity as independent

Table 4-6: Regression results, lagged variables: dependent variable N/E.

Period	Independent variables				R^2	D-W
	$(U/E)_{t-1}$	$(A/P)_{t-1}$	$(N/E)_{t-1}$	$(T/E)_{t-1}$		
1890-1972	Pos	Pos	Pos		0.62	2.11
	NS	NS	1%			
1890-1972	Pos	Neg	Pos	Neg	0.63	2.07
	NS	NS	1%	NS		
1890-1915	Neg	Pos	Pos		0.15	1.78
	NS	NS	NS			
1900-39	Pos	Neg	Pos		0.70	2.17
	5%	1%	1%			
1946-72	Neg	Neg	Pos		0.56	1.97
	NS	NS	1%			

Note: Suffix 't-1' denotes lagging variable by one year; i.e. value of N/E in current year is being predicted from values of independent variables in previous year.

variables.[32] For the period 1890-1972 as a whole and for the third sub-period considered, economic measures, represented by the unemployment rate and the real wage level, fail to achieve significance. The previous level of strike activity has the only significant impact on the current level; as one would expect, the association is direct. This certainly does not mean that economic conditions are unimportant; all it shows is that in the present model variations in them are less able to explain strike activity than is the previous level of activity. It is highly probable that this variable is itself strongly affected by economic circumstances. The results show that strike activity is strongly dependent on its own past levels; it does not alter randomly from one year to the next.

For 1890-1915, however, none of the independent variables can explain current strike frequency. In view of the success of the model as a whole for the other periods considered, this suggests that in these 'early' years strike activity fluctuates randomly; in other words, strikes are spontaneous outbursts at first and only later do they develop into a movement in which high activity in one year is carried over into the following year. For 1900-39, the economic variables attain significance, but this is lost in the final sub-period. Thus we have a three-stage development which is similar to that noted above: in the first sub-period, no independent variable is significant; in the second, all are significant; and in the third only $(N/E)_{t-1}$ is significant.

On the dependence of the strike movement on itself, Shorter and Tilly have suggested that the frequency of strikes should be used to predict worker involvement, on the grounds that the decision to strike can be seen as logically prior to the number

of workers who strike.[33] However, N/E and W/E will be influenced by the same economic circumstances, so that they cannot be seen as truly independent; and factors such as the size of bargaining units will have different effects on the two measures. As Table A-14 shows, the number of strikes exerts a strong positive effect on the number of workers involved. But the status of this finding is uncertain. Other attempts to use strike frequency to predict to other aspects of the strike movement have been largely unsuccessful.

While we are considering the predictability of the strike movement, attention must be paid to findings of a more general nature. The view that strikes will be more predictable carries the implication that the variability of activity will decline. This is investigated in Table 4-7, which gives the coefficients of variation of the three main measures of strikes for eight time periods. It is clear that the variability of activity has declined and that it has done so in a way that fits the arguments of those who stress the importance of collective bargaining in making conflict predictable and orderly. For the number of strikes, the coefficient of variation is (except for 1906-15) about 50% in the periods up to 1928; it then rises with the events of the Thirties and falls to 20% or less subsequently. A similar, though less marked, trend exists for the number of workers involved. The apparent disagreement between this and the fall in the extent to which strike frequency depends on its own previous level is explained in the institutionalisation theory in terms of the character of institutionalised bargaining. With fixed-term contracts, strikes in any one industry will show a three, four or five year cycle depending on the length of the contracts typically in force. Over all industries, the

Table 4-7: Strike indices: variability and correlations with time trend, 1882-1972.

	Coefficients of variation (%)			Coefficients of correlation with time trend		
	N	W	D	N	W	D
1882-93	45.2	47.0		0.75	0.23	
1894-1905	44.8	35.9		0.75	0.24	
1906-15	20.1	45.2		0.06	0.69	
1916-27	56.6	83.3		-0.93	-0.57	
1928-39	66.6	67.4	52.4	0.82	0.69	0.58
1940-51	20.7	46.3	92.3	0.43	0.41	0.38
1952-63	16.2	39.1	59.1	-0.77	-0.79	-0.39
1964-72	19.1	35.6	43.4	0.77	0.51	0.53

Note: Coefficient of variation is the standard deviation, divided by the mean, times 100.

distribution of contract expirations may be about even, but it so happens that some years have 'heavy' bargaining because many contracts expire while others have only 'light' bargaining.[34] Hence, strike frequency in one year will not depend strongly on frequency the previous year because of the variation caused by changes in the rate of contract expiration. In many ways, this is a reasonable argument which explains the results in Table 4-6 quite neatly, but, to judge from earlier Tables, it does not mean that economic forces have ceased to operate. I return to the question of contract expiration when I come to the seasonal data.

Table 4-7 also gives the correlation coefficients between the strike indices and the time variable. This is the most convenient way to assess independently the effect of time on strike activity since it abstracts from the impact of other variables. As one would expect from the findings of chapter three, there is no clear tendency for the strike to wither away; in only two of the eight periods is the correlation between time and the strike measures inverse. It is notable, in the light of the discussion of the 'conventional' theories in chapter two, that it is the 1920's and the 1950's which have the inverse relationship; these are the periods in which these theories flourished. In combination with the findings reported in Table 4-4 and the results given below, Table 4-7 indicates that there is no tendency towards the 'maturation' of relations.

Shorter and Tilly argue that the most appropriate way to construct a model of the determinants of strike activity is to acknowledge that there are two sides to industrial conflict: not only must factors affecting the prosperity and organisation of the workers be considered, but the well-being of the employers must also be brought into the picture.[35] Thus they

proceed to use such indices as the level of industrial production as measures of the employers' propensity to take a strike. The difficulty with this is, of course, that the well-being of the employers (or at least any index of it that is readily available) will be highly associated with that of the workers, with the result that it will be very hard to separate them in practice. The difficulty is compounded by the approach these writers adopt, which is to state the argument in terms of path models in which some of the possible paths are present and others are not. The rationale for the use of certain paths is that a theoretical argument exists for them, but since the writers' own arguments are included this is not a strong condition. What they end up with is a model which generally fits their broader arguments. In other words, strike activity is affected directly by four variables: the short-run hardships of the workers, the prosperity of the employers, the political position of labour and the size of trade unions. The unions mediate part of the influence of the political variables and also the long-run prosperity of the workers, which is in turn affected by the prosperity of the employers.

It might appear that this model has been verified by the regression analyses Shorter and Tilly carry out but, as I have been at pains to stress, their model is only one of the many which might be applied to, and fit, the data. To be sure, their approach does fit the evidence, but other, and simpler, models might do so equally well. Since we know little about the long-run economic determinants of strike activity in America (for all the recent multivariate models apply only to the years since the Second World War) it has seemed preferable not to start from an established theoretical position but to explore the structure

of various models.

Although with most measures of employer prosperity there is the problem of a high level of association with the prosperity of workers, it is possible to follow Shorter and Tilly's suggestion that the employer must be considered. Chapters six and seven report the results of using the rate of profit as a predictor of strike activity, but, since profits data are not available for the whole of the period since 1881, I focus here on the rate of change of productivity. Mandel has argued that what matters to capitalists is not keeping wages at an absolutely low level but maximising the extraction of surplus value from the workers.[36] Their concern is to ensure that wages rise less rapidly than productivity, so that profitability can continue to rise even in the face of rising wages. Thus in Table 4-8 I report the results of a model in which the difference between the rates of change of wages and productivity is one of the independent variables; the latter measure relates to labour productivity, but very similar results are obtained when an index of capital productivity is used.[36a] Mandel's argument is that employers will be most satisfied when this variable is negative, that is when productivity is rising faster than wages; when it is positive, resistance to labour will be highest and there will therefore be a direct association with strike activity. The first four equations in the Table show that only in 1941-69 does the model as a whole attain anything like a satisfactory fit. And the coefficient of the 'wage change minus productivity change' variable is negative; in this model, a growth of wages in excess of productivity growth reduces strike activity and Mandel's expectation is not fulfilled. The Table also reports the result of adding union density as an

Table 4-8: Regression results, productivity model: dependent variable N/E.

Period	Independent variables				R^2	D-W
	Trough	H/P	(Ch.H/P- Ch.Prod)	T/E		
1891-1969	Neg	Pos	Pos		-0.02	0.41
	NS	NS	NS			
1891-1940	Pos	Neg	Pos		0.21	0.61
	NS	1%	NS			
1916-40	Pos	Neg	Pos		-0.01	0.37
	NS	NS	NS			
1941-69	Neg	Pos	Neg		0.50	1.57
	NS	1%	5%			
1891-1940	Pos	Neg	Pos	Pos	0.45	1.06
	5%	1%	5%	1%		
1916-40	Pos	Neg	Pos	Pos	0.39	0.76
	5%	1%	5%	1%		
1941-69	Pos	Pos	Neg	Pos	0.57	1.73
	5%	1%	5%	5%		

Note: 'Ch.Prod' is the rate of change of productivity.

explanatory variable, but consideration of this will be left until the next section.

Finally in this section I turn to the quarterly data on strike activity. Rees, for example, suggests that such data are more useful than are those on an annual basis for aseessing the detailed turning points of strike cycles and comparing them with the business cycle.[37] And, as we have seen, Ashenfelter and Johnson test their model against quarterly data. What I want to do here is to examine the performance of their model for the period 1962-72, not only for the number of strikes but also for workers involved and days lost; also, an attempt will be made to compare it with one in which data on contract expirations are employed directly. That is, the seasonal dummies are replaced by variables representing the number of contract expirations and the number of workers covered by expiring contracts. The data are taken from B.L.S. reports on contracts filed with them. It is true that this is only a sample of the total number of contracts in existence, and it is non-random since it relates only to contracts covering at least one thousand workers; but these drawbacks do not mean that we must follow Ashenfelter and Johnson in rejecting out of hand the use of information on expirations.[38]

The first equation in Table 4-9 reports the result of applying the preferred equation of Ashenfelter and Johnson to 1962-72. The overall R^2 remains high but there are two important differences from the results these writers obtained for 1952-67. The coefficient of the time trend has become positive, indicating a strong upward tendency in strike frequency, in addition to that which can be explained by the other variables in the equation. More importantly, the measure of the change in real

Table 4-9: Regression results, quarterly data, 1962-72.

Dependent variable	Independent variables								R^2	D-W
	U/E	(Ch.H - Ch.P)	Number of C.E.s	Workers in C.E.s	Time	Q_1	Q_2	Q_3		
N	Neg 1%	Neg NS			Pos 1%	Pos NS	Pos 1%	Pos 1%	0.85	1.44
N	Neg 1%	Neg NS	Pos 1%		Pos 1%				0.56	2.02
W	Neg NS	Neg NS			Pos 1%	Neg NS	Pos 1%	Pos NS	0.54	0.92
W	Neg 5%	Neg NS		Pos 1%	Pos 1%				0.42	1.58
Log D	Neg 5%	Neg NS			Pos 1%	Neg NS	Pos NS	Pos 5%	0.52	0.97
Log D	Neg 5%	Neg 5%	Pos NS	Pos NS	Pos 1%				0.46	1.47

Note: 'C.E.' denotes contract expiration; thus the two variables are the number of contracts expiring in a quarter and the number of workers covered by contracts that expire. Q_1, Q_2, and Q_3 are dummy variables for each of the first three quarters of the year.

wages (defined, following Ashenfelter and Johnson, as the difference between the rate of change of wages and the rate of change of prices) fails to attain significance. This suggests that the great weight that was placed on the negative coefficient for 1952-67 was misplaced. In the second equation, the seasonal dummies are replaced by the number of contract expirations. The R^2 falls to 0.56 from 0.85 even though the new variable achieves a 1% significance level; as one would expect, the number of contracts expiring exerts a direct effect on strike frequency. Thus it seems that the seasonal dummies cannot be taken as proxies for contract expiration. And, as we shall see below, seasonal influences on strike activity have been strong in the inter-war years, when this cannot be attributed to a quarterly variation in the rate of expirations.

The remaining equations in Table 4-9 repeat the above exercise for the number of workers and the logarithm of the number of striker-days. In neither case does the Ashenfelter-Johnson model explain a high proportion of the variance of the dependent variable; and the Durbin-Watson statistic is not within the acceptable region. For worker involvement, the seasonal dummies are replaced by the number of workers covered by expiring contracts; the D-W statistic improves, and, although the R^2 declines, this fall is not as marked as it is in the case of the number of strikes. The pattern with striker-days is similar, although here both measures of contract expiration are used.

In all six equations, the coefficient for the change in real wages is negative, following the predictions of Ashenfelter and Johnson, but in only one does it achieve significant levels. This, together with the findings concerning

the seasonal dummies, casts considerable doubt on the empirical side of their model; I have already suggested that the theoretical side of it is inadequate, or at least is not testable by aggregate data. More generally, the strong negative effect of the unemployment rate on all measures of strikes agrees with the findings noted above, while the positive effect of the time variable points to the powerful upward rise in strike activity during the Sixties.

With Table 4-10 we turn to quarterly data for 1919-41. For this period adequate unemployment series are not available and the rate of change of employment has been used as a rough proxy: the assumption is that, between one quarter and the next, any change in employment is due to cyclical factors rather than the secular trend in employment. The wage index is constructed by dividing an index of the total amount paid in wages by one of employment; it is thus an index of money wages, albeit an unsatisfactory one. In view of these difficulties, it is not surprising that the results reported in Table 4-10 are less satisfactory than those in Table 4-9. Other attempts were made using N rather than Log N as the dependent variable and the unlagged forms of the independent variables, but the results reported are the best that were obtained. Only for the equation using three independent variables in the period 1919-29 is the Durbin-Watson statistic acceptable. But the quarterly dummies play an impressive role; in the equation in which they are used, they reduce the two economic variables' coefficients to non-significance and themselves attain high levels of significance. And the pattern of the greatest influence on strikes coming in the second and third quarters of the year is the same as that observed for the post-war years. Thus the seasonal variation

Table 4-10: Regression results, quarterly data 1919-41: dependent variable Log N.

Period	Independent variables						R^2	D-W
	$(Ch.E)_{t-1}$	H_{t-1}	Time	Q_1	Q_2	Q_3		
1919-29	Pos	Pos	Neg				0.67	1.40
	Ns	5%	1%					
1919-29	Pos	Pos	Neg	Pos	Pos	Pos	0.84	0.86
	NS	1%	1%	5%	1%	1%		
1930-41	Pos	Neg	Pos				0.67	1.01
	NS	NS	1%					
1930-41	Pos	Neg	Pos	Pos	Pos	Pos	0.76	0.64
	NS	NS	1%	NS	1%	1%		

Note: For definition of H_{t-1}, see text.

in strike activity precedes the growth of widespread collective bargaining.

We have seen in this section that economic circumstances have a clear effect on strike activity, although the nature of this effect alters between periods. In particular, I have identified a change in the direction of the influence of business cycle and wage variables which can be related to changing patterns of worker mobilisation. In the following sections, I introduce organisational and political variables into this framework.

5. Unionisation and strikes

In chapter three the direct evidence relating to union involvement in strikes was examined. We now turn to the association between union density and strike activity; following the approach taken in earlier parts of this chapter, we begin with the correlation between union density and measures of the strike movement. Table 4-11 shows a mixed pattern with the correlation coefficients being quite large in the first and third periods considered, but with little significant association apparent in the intervening years. In line with the argument that the organising power of unions will enable workers to strike, the correlations with N/E and W/E are positive; and the negative association with strike duration suggests that unions avoid long stoppages. But other features of the Table are less clear. Thus there is a negative link with the proportion of strikes on economic issues whereas one might expect a direct association; similarly, there is no significant link with the proportion for wage demands, when a direct link might be expected.

Perhaps the most remarkable feature of the Table is the

Table 4-11: Zero order correlation coefficients between union density and strike indices.

	Union density (T/E)		
	1881-1915	1916-39	1940-72
N/E	0.62	0.35	0.46
W/E	0.25	0.19	0.53
W/N	-0.43	-0.04	0.47
% wage and hour	-0.44	-0.37	-0.18
Duration	-0.30	0.23	-0.29
% wage increase	0.05	-0.20	
% won	-0.73	0.19	
% lost	0.46	-0.40	

Note: For significance levels, see note to Table 4-1.

strong inverse association between nnion density and the proportion of strikes won in 1881-1915; this goes against all assertions that the union will make striking more successful. The explanation may lie in the pattern of association with the strike movement as a whole. In this period, union density is associated with small strikes over non-economic matters, which are short and tend to be lost. Since unions were concentrated among the skilled craftsmen, this suggests that union growth encouraged these workers to protest at the erosion of their traditional position with the coming of large-scale industry; strikes with the characteristics I have enumerated are typically those associated with this form of protest, a point to which I shall return in the next chapter. Thus in the early period the union was used to support the skilled men's struggle against industry and only later came to be associated with planned economic actions. The change in the direction of association between union density and the size of strikes and their rate of success supports this view.

The central question which the regression equations can help provide an answer concerns the importance of union density in explaining strike activity, in combination with economic variables. Since it is the organisational power of the workers which is being assessed, the most appropriate measure is the level of union density, rather than its rate of change. In Table 4-12 we start with the simplest model, in which union density and the peak and trough measures are considered together.[39] Only in 1945-72 are satisfactory overall results achieved and in this period the T/E measure does not attain significant levels of association with strike frequency. Similarly, in the models in which T or T/E is considered in

Table 4-12: Regression results, economic and union density variables: dependent variable N/E.

Period	Independent variables								R^2	D-W
	T	T/E	Trough	Peak	H/P	A/P	Ch.A	Ch.P		
1881-99		Pos	Neg	Neg					0.41	0.91
		1%	NS	NS						
1900-39		Neg	Neg	Pos					0.07	0.41
		NS	5%	NS						
1945-72		Pos	Pos	Neg					0.58	1.45
		NS	NS	1%						
1900-39	Pos		Pos	Pos	Neg				0.52	1.00
	NS		1%	1%	1%					
1945-72	Neg		Pos	Neg	Neg				0.59	1.76
	NS		5%	1%	NS					

/Table continued over page.

Table 4-12: (continued)

Period	Independent variables								R^2	D-W
	T	T/E	Trough	Peak	H/P	A/P	Ch.A	Ch.P		
1945-72		Neg	Pos	Neg		Neg			0.67	1.77
		NS	5%	1%		1%				
1890-1970		Neg	Neg	Neg		Pos	Neg	Pos	0.48	1.67
		NS	1%	NS		NS	NS	NS		
1900-39		Pos	Pos	Pos		Neg	Pos	Pos	0.78	1.71
		NS	1%	1%		1%	NS	NS		
1946-72		Neg	Pos	Neg		Neg	Pos	Neg	0.70	1.64
		NS	5%	1%		1%	5%	5%		

Note: T is number of trade union members; i.e. T/E is union density.

combination with business cycle and wage measures, union density does not attain significance. For 1900-39 the Durbin-Watson statistic does not fall within the aceeptable region; thus it is hard to compare the performance of these models between time periods. However, the final part of the Table reports the results of a model in which the changes in money wages and prices are included; here, the D-W statistic is acceptable for all three periods considered. Of the six variables in the model, only T/E fails to attain significant levels throughout. And a comparison of the R^2s with those reported in Table 4-5 for the five economic variables indicates that the addition of union density to the model does not raise its overall explanatory power. In 1890-1910 the R^2 <u>falls</u> by 0.04, in 1900-39 it is unchanged and in 1945-72 it rises by 0.02.[40]

The influence of union density is not always so unimpressive. As the second part of Table 4-8 shows, the addition of T/E to the model using the rate of change of productivity raises the R^2s for 1890-1940 and 1916-40 and also increases the D-W statistic, although not by enough to place it in the acceptable region. For 1941-69 the amount of variance explained is raised by 7% and for all three periods the influence of union density on strike activity is direct and significant. This illustrates again the dependence of the effect of one variable in a model on the influences exerted by all the others. But the failure of union density to operate significantly in combination with the more general economic variables casts very great doubt on the view that organisational factors must be given an independent role in the determination of strike activity. The contrast between the results reported in Table 4-12 with those for the zero-order correlations between union density and strike

activity also suggests that reliance on correlational analysis can be very misleading.[41]

The reader may wonder why union organisation seems to be relatively unimportant in America when Shorter and Tilly attached so much significance to it in France. One answer, of course, is the the countries are (in some unspecified way) different. But a more mundane explanation is possible. In a number of cases, I used economic variables to predict to union density as well as to strike activity. The details of this experiment do not concern us here, but we may note the more remarkable findings. Thus predicting the number of union members in 1890-1910 from the peak and trough variables and the level and rate of change of real wages resulted in an R^2 of 0.96. Similarly the peak and trough variables and the level of wages explained 94% of the variance in the number of union members in 1930-41. The level of union density thus depends strongly on economic conditions and Shorter and Tilly's findings may simply reflect this. In other words, union density may merely mediate part of the effect of economic variables, without adding any explanatory power of its own.

I am not denying that union organisation <u>may</u> be crucial to the expression of protest in strikes. But, if it is crucial, the approach of Shorter and Tilly has not demonstrated it. Indeed, such an approach <u>cannot</u> do so because it does not begin with economic variables and then examine the independent influence of union density. On the logical level, as I have noted above, the path analysis model used by these writers merely tests a set of theoretical arguments against the data and does not compare their validity with that of other arguments; it is one of many models which may fit the evidence. On the

technical level, Shorter and Tilly insert union organisation as a variable intervening between economic conditions and strike activity; but, since union density is strongly associated with these conditions, it is bound to appear to be an important factor in its own right, whereas in fact it may be merely passing on part of the direct influence of the economic variables on strike activity.

I must stress that the failure of union organisation to exert a significant influence in the regression models does not mean that we can dismiss unionisation as an important factor in strike activity. Regression models explain the <u>variance</u> in the dependent variable in terms of the variance of the independent ones. Those things which exert a <u>constant</u> influence on the dependent variable, and which may be necessary for any activity to occur, will not appear to be important within a regression model.[41] The inclusion of union density in the regression models used here neither taps the whole of the influence of unions on strike activity nor takes into account their effect on the character of this activity. But the failure of union density to operate as a significant influence in the years before the Second World War is important. For the years after the war, when union density was relatively constant, it is not surprising that it cannot account for variations in strike activity, but for the earlier years it was fluctuating considerably and could have been expected to have been important.

The conclusion must be that changes in the coverage of unions, even at a time when they were growing fast, did not affect strike activity, as compared with the influence of ecpnomic variables. In later chapters we shall investigate whether the character of strikes has been changed by unions and

whether differences in the strike-proneness of different industries at one time are associated with the density of union organisation.

6. The institutional parameters of industrial conflict

The above sections have indicated that economic conditions do not exert a consistent impact on strike activity. One theory which might explain this has recently been advanced by Snyder, who derives his approach from the work of Shorter and Tilly.[42] He criticises economists for playing down the role of organisational factors in strike activity and suggests that they give economic fluctuations primary significance solely on the basis of *a priori* assumptions. Quantitative analysis has concentrated on a limited number of countries and time periods and this has led to an overemphasis on economic factors and a corresponding lack of attention to the 'institutional settings' within which they operate. Two ideal types of institutional setting are identified. In the first, collective bargaining is well institutionalised, unions are large and have a stable membership and labour has an established political position. In the second, there is a low level of institutionalisation, unions are small and there is no participation in political activities.

Snyder tests this model using strike activity in three countries as the dependent variable. He argues that in France and Italy the second type of setting has been a persistent feature of industrial relations, but that in the United States there has, since the Second World War, been a shift from the second to the first. This view, which has very obvious and close affinities with the 'conventional' theory discussed in chapter 2, is tested by comparing the 1900-48 period with 1948-70. The argument is that, in the former, 'political' and

'organisational' factors will exert most influence on strike activity but that in the latter economic forces will be more significant. The political measures used are the political party of the President and the percentage of seats in Congress held by Democrats; the organisational variable is union density; and the economic indices are the unemployment rate and a lagged moving average of the rate of change of real wages. Snyder argues that his results support the contention that a change in the institutional setting of industrial conflict has altered the parameters of strike activity.

I am concerned here solely with Snyder's arguments as they apply to the United States; after presenting an assessment of them using the same sort of variables as Snyder uses, I turn to the more fundamental problems of measuring changes in 'institutional settings'. I begin with the operation of the political variables in isolation before examining their impact in a model in which other variables are included. Table 4-13 gives the results of using Snyder's two political variables, plus the time variable, as the independent factors for three groups of years since 1881. For the whole period these variables share the problems of auto-correlation experienced by the economic variables, but this is not serious for the sub-periods. It is clear that there has been no marked change in the explanatory power of this model as far as strike frequency is concerned; for worker involvement there is an increase. There is no evidence for a decline in the period since 1948.

We now add in the measures of the business cycle 'peak' and 'trough' (Table 4-14). The model as a whole performs well only in the 1946-72 period, when Snyder expects that only economic variables will be significant; but it is apparent that one

Table 4-13: Regression results, political variables.

Dependent variable		Independent variables			R^2	D-W
		P.P.	% Dem.	Time		
1881-99	N/E	Neg	Pos	Neg	0.43	1.67
		5%	NS	5%		
	W/E	Neg	Neg	Pos	0.02	2.07
		NS	NS	NS		
1900-48	N/E	Neg	Neg	Neg	0.58	1.11
		1%	NS	1%		
	W/E	Neg	Neg	Neg	0.30	1.98
		1%	5%	NS		
1949-72	N/E	Neg	Neg	Neg	0.48	1.29
		NS	1%	5%		
	W/E	Neg	Neg	Neg	0.24	1.39
		NS	5%	NS		

Note: P.P. is Party of President: dummy variable with value 0 for Democrat and 1 for Republican.

% Dem. is percentage of seats in Congress filled by Democrats.

Table 4-14: Regression results, political, economic and union density variables: dependent variable N/E.

Period	Independent variables							R^2	D-W
	P/P.	% Dem.	Trough	Peak	H/P	A/P	T/E		
1881-99	Neg	Pos	Pos	Neg				0.22	1.27
	1%	NS	NS	NS					
1900-39	Neg	Neg	Neg	Neg				0.14	0.53
	5%	NS	5%	NS					
1946-72	Neg	Neg	Pos	Neg				0.51	1.71
	5%	NS	5%	1%					
1900-72	Neg	Neg	Pos	Pos	Neg			0.02	0.46
	5%	5%	NS	NS	NS				
1946-72	Neg	Neg	Pos	Neg	Pos			0.56	1.97
	NS	NS	5%	1%	5%				

/Table continued over page.

Table 4-14: (continued).

Period	Independent variables							R^2	D-W
	P.P.	% Dem.	Trough	Peak	H/P	A/P	T/E		
1881-99	Neg	Neg	Neg	Neg			Pos	0.45	1.21
	1%	NS	NS	NS			1%		
1900-39	Neg	Neg	Neg	Pos			Neg	0.23	0.61
	1%	NS	NS	5%			5%		
1946-72	Neg	Neg	Pos	Neg			Pos	0.59	1.63
	NS	NS	NS	1%			NS		

economic index, of business cycle troughts, and one political measure, the party of the President, are significant, while the other two variables do not attain significant values. For 1881-99 only the party of the President variable is significant and the explanatory power of the model as a whole is low; for 1900-39 a very low R^2 of 0.14 is obtained and there are problems of autocorrelation. As yet, then, there is no evidence for a change in the institutional parameters of conflict.

Next, we add the level of real wages to the four variables so far considered. For 1946-72, this adds little to the explanatory power of the model as a whole, but the results are consistent with Snyder's expectations since all three of the economic variables are significant whereas neither of the political ones is significant. But for 1900-72 as a whole this model completely fails to explain strike frequency. Finally in Table 4-14 we consider the model in which the 'organisational' variable, union density, is added in place of the level of wages. For two of the three periods considered, and in contrast to the findings of the above section, this variable attains significant levels; the negative value of its coefficient for 1900-39 would be of interest if the overall amount of variance explained were higher and the Durbin-Watson statistic acceptable. The model as a whole performs better as time goes on and it is notable that the 'party of the President' variable loses significance while the index of unemployment troughs gains it.

In Table 4-15 we arrive at a model similar to that used by Snyder in that political, economic and organisational variables are considered together. The difference is that the time variable is not included and that the operational definitions of the three types of variable are not the same. The proportions

Table 4-15: Regression results, political, economic and union density variables: dependent variable N/E.

Period	Independent variables						R^2	D-W
	P.P.	% Dem.	Trough	Peak	A/P	T/E		
1900-39	Neg	Pos	Pos	Pos	Neg	Pos	0.76	1.71
	5%	NS	NS	NS	1%	NS		
1946-72	Pos	Pos	Pos	Neg	Neg	Neg	0.64	1.76
	NS	NS	NS	1%	5%	NS		

of total variance explained (76% for 1900-39 and 64% for 1946-72) are lower than the figures obtained by Snyder (83% and 70%). This can be explained by four things: the absence of the time variable in the model of Table 4-15, the fact that Snyder predicts to the logarithm of the number of strikes, the possibility that his R^2 is not corrected for degrees of freedom and the fact that the periods used differ slightly. In their overall explanatory power, therefore, the two models are similar. But my model does not indicate that any marked shift in the parameters of conflict has occurred. To be sure, the 'party of the President' variables loses significance and the trough variable gains it (in line with the findings of Table 4-14), but the 'percent Democrat', peak and union density measures are not significant in either period. Hence there is no rigid division to be made between these two periods in terms of the variables which explain strike activity. Moreover, the levels of R^2 reported in Table 4-14 are rather lower than those for the economic variables alone given in Table 4-5. We cannot reject the hypothesis that levels of economic activity are adequate predictors of the rate of strike activity.

The approach I have taken above avoids the criticisms Snyder makes of the economists: that they ignore organisational factors and that they concentrate on economic forces on purely a priori grounds. After the analysis of a number models in which economic, organisational and political variables are considered singly and in combination we reach the conclusion that economic factors are of prime importance. Although there is some evidence that the parameters of conflict have altered, this is far from being as conclusive as Snyder thinks.

This scepticism is reinforced by re-examining Skeels' work.

It will be recalled that he uses eight measures of strike activity, explaining their variations by economic and political factors. In addition the time trend and seasonal dummies are employed, as well as a dummy variable supposed to measure 'public attitudes'. It is argued that at the end of the 1950's public attitudes to labour hardened and that this can be captured by giving the variable a value of zero up to 1958 and a value of one subsequently.[43] But it is highly questionable whether such a complex factor as public attitudes can be caught by such a simple variable; all it really indicates is the fact that strike activity has risen in the Sixties. Skeels finds that the 'party of the President variable' is significantly related to his indices of strike frequency; in line with the findings reported above, a Republican President is associated with a decrease in strike frequency. But it is not related to indices of workers involvement or days lost. The other political variable, the party in power in Congress, is related to measures of worker involvement but not to strike frequency or days lost. Similarly, of the economic indices, the rate of unemployment is related only to strike frequency and the rate of change of earnings only to the number of strikes beginning in a quarter. The level of real Gross National Product is the only variable, apart from the time trend, the seasonal dummies, and the 'public attitude' variable to be significantly related to all aspects of the strike movement. Thus, for the post-war period, Skeels' findings confirm that economic measures are not uniformly important for strike activity and that political ones have not entirely lost their significance.

We must now turn briefly to the broader questions raised by Snyder's approach. We have seen that the 'percentage of

Congress Democrat' variable consistently fails to have a significant effect on strike activity; and Skeels found that the use of a dummy variable representing Presidential election years did not add to the explanatory power of his model. This suggests that the choice of indicators of 'political' variables is far from straightforward. More importantly, Snyder has not demonstrated that his approach is the most appropriate for the study of political influences on strikes. Indices of strike frequency and worker involvement are not necessarily the most relevant dependent variables since political influences may affect the character and aims of a strike movement more than the total amount of protest. And, although it is reasonable to suppose that strikes which are seen as threatening the health and welfare of the country as a whole will be subject to political influences,[44] this need not hold for strikes in general. Economic factors are common to all strikes, but political ones are likely to have an impact which is limited to a small range of strikes.

The limitations of using a simple 'political attitude' variable are readily apparent. Strike activity declined during Republican Administrations but this was largely due to the influence of the 1920's and 1950's, when strike activity was falling and there was a Republican government. It is unlikely that strike activity in these years would have been very different if a Democrat had been in the White House. To be sure, one can point to the 1930's as a contrasting case, when the encouragement of the New Deal Democrats to unionisation and the resultant strikes cannot be denied. But the massive changes that occurred in the Thirties may have a common origin, in that the shift to the Democrats and the growth of working class

militancy cannot be separated.[45] And, in any case, the meaning of the contrast between Democrat and Republican has surely altered; the Democrats of the 1930's were not the same as those of the 1880's.[46] Thus the link between the party of the President and the level of strike activity is far from clear.

Despite the attempts of Shorter and Tilly and Snyder to apply one type of 'political' model to the United States, it is necessary to approach the question of politics from a different angle. Instead of concentrating on a supposed political orientation among the workers (measured by unsatisfactory indices), one should examine the role of the government and its decisions on when to intervene in labour disputes. As we shall see in later chapters, there is very little evidence that, in those strikes which had government involvement, the workers had specific political aims when they began the strike. It is preferable to start with the government itself and its definition of what sort of situation required its intervention. A secondary advantage of this approach is that we shall be able to examine the side of the 'radical' institutionalisation theory which deals with the role of the State in controlling expressions of protest.

7. Conclusions

The above sections have provided a lengthy review of some of the influences on aggregate strike activity. This length has been necessary for the description of various models and their comparison with others; in our present state of knowledge the application of complex ready-made models is to be avoided. I have had to go into the details of the economists' approaches but will now draw together the strands of the argument, as they relate to the institutionalisation theory.

Although economic circumstances strongly influence strike activity, their impact is not consistent; as section three showed, the link between the strike and business cycles is only a very general one. It was necessary to introduce the peak and trough variables to capture, in the regression models, the broad effects of business conditions and even these measures do not exert an effect on strikes that is always in the same direction. Thus the 'weak' institutionalisation theory, arguing that union-management accommodation is contingent on economic conditions, has some foundation. In any given business cycle, a rise in unemployment will have a given effect on strike frequency, but the strength of this relationship need not be the same as that in other cycles.

The findings of chapter three, that strike activity has not been 'withering away', are confirmed here. There is no general tendency for the time variable to have an inverse association with strike activity. Nor is there a tendency for activity to decline in the period since institutionalised relations were established. But there is some suggestion that the determinants of strike activity have been changing. The change is not of the kind envisaged by Snyder, but occurs among the variables which make up the economic model. As I argued in section four, the change in the direction of the influence of the level of wages, combined with the shifts in the coefficients of the peak and trough variables, suggests a movement from an 'early' to a 'modern' form of relationship with strike activity. But, rather than a simple contrast between these extremes, an intervening position was also identified. Thus in the early period an increase in wages encourages strikes, but the experience of a deep recession or a high level

of business activity discourages them. In the intervening period, the effect of wages has become inverse and past booms and recessions both encourage strikes. In the final period, the wage effect is still negative and the effect of recessions positive, but past prosperity now tends to reduce the amount of protest. Thus the arguments for a shift in strike activity as industrialisation advances receive some support, although the findings of the regression analysis will need to be considered against those of the following chapters before any firm conclusions can be reached.

The institutionalisation theory expects unionisation to encourage strikes before the unions have become accommodated in the system and to discourage them subsequently; as I argued in chapter 2, the dating of this shift is not uniform, with some writers suggesting that unions will, from their earliest days, reduce strike activity and others seeing this tendency as coming with the growth of widespread collective bargaining. But the correlational analysis showed no pattern which fits these views and the regression models showed that the influence of union density, compared with that of economic factors, has been slight. Although unions have achieved a 'proprietorship' of the strike, they have not affected the amount of protest. But, as I suggested in relation to Table 4-11, the character of union involvement may have altered, with unions ceasing to be vehicles for the protests of skilled workmen against the impact of industry on their crafts. This is a question which will be taken up again in the next chapter.

Snyder's is the most detailed attempt to test an institutionalisation model within a regression framework, but, as we have seen, this is not wholly satisfactory. His contrast

between the years before and after the Second World War is overdrawn and the meaning of his political measures is unclear. In combination with the findings of the economic model, this suggests that a simple contrast between two ideal typical models, in which bargaining is, and is not, institutionalised is unsatisfactory. It is more likely that the various aspects of an institutionalised state will come into being at different times.

Indeed, we can use Snyder's two ideal types to suggest why a complete shift in the parameters of conflict has not occurred and why (as we saw in chapter 3) there has been a long-run stability of strike activity in America. Snyder suggests that one aspect of institutionalised bargaining is the acceptance of labour as a body with legitimate interests in the political sphere. But a number of writers suggest that, on the contrary, American unions have not achieved the acceptance of their European counterparts and that it is not possible for them to attain their ends through political influence.[47] Thus collective bargaining remains the centre of attention and it is here that many aspects of the employment relationship, which elsewhere are dealt with at the political level, are defined. This, combined with the continuing intransigence of employers and their refusal to grant complete legitimacy to the unions, may well provide the outlines of an explanation of the unique character of American strike activity. I return to these matters in the final chapter, and will merely note here that Snyder's approach, although offering some useful insights, has not provided an explanation of strike activity.

The institutionalisation theory as a whole has not survived the test of the regression models; and the one specific test of the 'radical' approach, through the productivity model, gave negative results. But there is evidence for a shift in

the nature of the links between strikes and economic variables and between strikes and union density. The next three chapters= will consider the more detailed evidence on strike activity in the light of this shift.

NOTES:

1. K. Pearson 'Mathematical contributions to the theory of evolution: on a form of spurious correlation which may arise when indices are used in the measurement of organs' Proc. Roy. Soc., 60, pp. 489-502 (1897). The point has been re-stated with reference to strike statistics by D. Britt and O.R. Galle 'Structural antecedents of the shape of strikes: a comparative analysis' Amer. Sociol. Rev., 39, pp. 642-51 (1974) at p. 646.

2. See E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974) pp. 51-56.

3. This proposition will also be tested on cross-sectional data; see chapter 5.

4. J.R. Commons et.al. History of labour in the United States (Macmillan, N.Y., 1918) Vol. 1 esp. p. 11, also pp. 361-63, 381-89, 456-58; N.J. Ware The industrial worker, 1840-60 (Houghton Mifflin, Boston, 1924) esp. pp. 198-232.

5. For criticism of the view of Commons and others that unions stem solely from economic or industrial causes see R.F. Hoxie Trade unionism in the United States (Russell & Russell, N.Y., 1966; orig. publ. 1923) pp. 62-66. On the question whether union growth depends on economic conditions cf. I. Bernstein 'The growth of American unions' Amer. Econ. Rev., 44, pp. 301-18 (1954) esp. pp. 310-13 and O. Ashenfelter and J.H. Pencavel 'American trade union growth: 1900-60' Quart. J. Econs, 83, pp. 434-48 (1969).

6. A.H. Hansen 'Cycles of strikes' Amer. Econ. Rev., 11, pp. 616-21 (1921); J.I. Griffin Strikes: a study in quantitative economics (Columbia Univ. Press, N.Y., 1939) pp. 47-51, 62-71; A. Rees 'Industrial conflict and business fluctuations' J. Pol. Econ., 60, pp. 371-82 (1952); P.S. O'Brien 'Industrial conflict and business fluctuations: a comment' J. Pol. Econ., 73, pp. 650-54 (1965); A.R. Weintraub'Prosperity versus strikes: an empirical approach' Ind. & Lab. Rels Rev., 19, pp. 231-38 (1966).

7. Griffin op.cit., pp. 50-51; see also V.W. Lanfear Business fluctuations and the American labor movement 1915-22 (Columbia Univ. Press, N.Y., 1924) p. 60 and E.H. and D.B. Jurkat 'Economic function of strikes' Ind. & Lab. Rels Rev., 2, pp. 527-45 (1949). On the incompleteness of Rees' account see O'Brien op.cit.

8. T. Levitt 'Prosperity versus strikes' Ind. & Lab. Rels Rev., 6, pp. 220-26 (1953) at p. 220. On the economic interpretation of strikes in general see M.R. Fisher Measurement of labour disputes and their economic effects (Organisation for Economic Co-operation and Development, Paris, 1973) pp. 43-53; and, for the classic statement of the determinants of labour's bargaining power, A. Marshall Elements of the economics of industry (Macmillan, London, 4th edn 1907) pp. 366-67.

9. H.A. Turner, G. Clack and G. Roberts Labour relations in the motor industry (George Allen & Unwin, London, 1967) pp. 112-13. See also Levitt loc.cit.

10. O. Ashenfelter and G.E. Johnson 'Bargaining theory, trade unions and industrial strike activity' Amer. Econ. Rev., 59, pp. 35-49 (1969). See also J.H. Pencavel 'An investigation into industrial strike activity in Britain' Economica, 37 pp. 239-56 (1970); J. Vanderkamp 'Economic activity and strikes in Canada' Ind. Rels, 9, pp. 215-30 (1970); L.C. Hunter 'The economic determination of strike activity: a reconsideration' Univ. of Glasgow Discussion papers in economics, No. 1 (1973).

11. See especially J.R. Hicks The theory of wages (Macmillan, London, 1932).

12. A.M. Ross Trade union wage policy (Univ. of California Press, Berkeley & Los Angeles, 1948) chaps. 1-3.

13. Ashenfelter and Johnson op.cit., p. 37.

14. Ibid., p. 39.

15. Ashenfelter and Johnson give three arguments for their own. When unemployment is low, the desired wage increase will rise because: workers will be able to move to higher-paid jobs, but the costs of moving will mean that they will first demand more wages from their present employer; part-time job opportunities will reduce the real cost of striking; and union leaders will not fear the effects of their political position of the reduction in employment caused by the wage increase. (Ibid., p. 40).

16. See T.R. Gurr Why men rebel (Princeton Univ. Press, Princeton, N.J., 1970).

17. Cf. B.C. Eaton 'The worker and the profitability of the strike' Ind. & Lab. Rels Rev., 26, pp. 670-79 (1972) where a theory of the willingness to strike is tested against detailed evidence from a survey of 20 strikes.

18. For a criticism of this approach to the problem see Fisher op.cit., pp. 80-84.

19. See Griffin op.cit., pp. 51-56.

20. J.W. Skeels 'Measures of U.S. strike activity' Ind. & Lab. Rels Rev., 24, pp. 515-25 (1971) esp. p. 522.

21. Official data exist for the period since 1900, but it has been possible to estimate a series going back to 1881: see Appendix One.

22. Ashenfelter and Pencavel op.cit., (note 5) p. 437.

23. Cf. D. Yoder 'Economic changes and industrial unrest in the United States' pp. 163-78 in F.S. Doody (ed.) Readings in labor economics (Addison-Wesley Press, Cambridge, Mass., 1950) at p. 175: 'while business conditions are reflected in strikes, there is no simple pattern of covariation. Strikes appear generally to increase when business is expanding rapidly from unusually low levels. They decrease when business is declining or when it holds on somewhat submormal levels'. (Yoder's essay orig. publ. in J. Pol. Econ., 48 (1940)).

24. S. Hill and K. Thurley 'Sociology and industrial relations' Brit. J. Ind. Rels, 12, pp. 147-70 (1974) at pp. 167-69.

25. On this, see Levitt op.cit. (note 8).

26. Autocorrelation means, broadly, that the error terms in successive observations are not independent. Its presence is detected by the use of the Durbin-Watson statistic, which takes the value 2 when no autocorrelation is present. For thirty observations, values between 1.24 and 2.90 are acceptable; for sixty observations the range is 1.44 to 2.63. As Hibbs has recently shown, when positive autocorrelation is present, the effect is to bias upwards the amount of variance explained and to give a false impression of the significance of the independent variables. See D.A. Hibbs 'Problems of statistical estimation and causal inference in time-series regression models' pp. 252-308 in H.L. Costner (ed.) Sociological Methodology 1973-74 (Jassey-Bass Publishers, San Francisco, 1974) esp. p. 257.

27. See, for example, Skeels op.cit. (note 20).

28. W.D. Walsh 'Economic conditions and strike activity in Canada' Ind. Rels, 14, pp. 45-54 (1975) at p. 50.

29. The phrase is Pelling's: see H. Pelling American labor (Univ. of Chicago Press, Chicago, 1960) pp. 128-47.

30. Walsh op.cit., p. 51.

31. Ashenfelter and Pencavel op.cit. (note 5) p. 438. See also R.B. Marcke 'American trade union growth, 1900-60: a comment' Quart. J. Econs, 85, pp. 187-93 (1971) and A.V. Adams and J. Krislov 'New union organizing: a test of the Ashenfelter-Pencavel model of trade union growth' Quart. J. Econs, 88, pp. 304-11 (1974).

32. 1890 is the starting point for the equations using wages as an explanatory variable since satisfactory data are not available before then; to obtain an adequate number of observations, the period up to 1910 is considered.

33. Shorter and Tilly op.cit. (note 2) pp. 100-101.

34. 1967, for example, was said to be a 'heavy' bargaining year. See R.W. Fisher 'Labor in the economy of 1967' Monthly Lab. Rev., 90, no. 12, pp. 1-11 (Dec. 1967); of. B.V. Toth 'Labor in a year of expansion' Monthly Lab. Rev, 92, no. 1, pp. 11-19 (Jan. 1969).

35. Shorter and Tilly op.cit., pp. 93-103.

36. E. Mandel Marxist economic theory (Merlin Press, London, 1968) p. 145.

36a I use labour productivity because of the well-known problems of measuring the amount of capital, let alone how productive it is. See G.C. Harcourt & N.F. Laing (eds) Capital and growth (Penguin, Harmondsworth, 1971) Parts 1 & 5; E.K. Hunt & J.G. Schwartz (eds) A critique of economic theory (Penguin Harmondsworth, 1972) Part 3. Note also that I use only the 'trough' measure as the index of economic conditions; this variable is generally more closely associated with strikes than is 'peak' and the addition of 'peak' adds little to the overall explanatory power of this, and other, models.

37. Rees op.cit. (note 6) p. 371.

38. The minimum of one thousand workers applies only to 1907 and subsequent years; for 1962-66 the minimum is five thousand and the data have been adjusted to be comparable with 1967-72: see Appendix 1.

39. For other results, see Table A-11.

40. The apparently paradoxical result for 1890-1910, where the addition of an explanatory variable reduces the amount of variance explained, is, of course, due to the correction for degrees of freedom.

41. See, for example, V.P. Bharadwaj and R.S. Mathur 'Inter-industry variations in strike proneness in India, 1959-67'; paper given to the Second World Conference of the International Industrial Relations Assoc. (1970), where conclusions are reached solely on the basis of correlational analysis.

41a That is, factors which exert a constant influence on strikes do not co-vary with strike activity and their influence is not reflected by regression techniques. For example, such things as the 'frustrations of work under capitalism' may be necessary for strikes to occur, but will not appear to be significant unless the strength of their impact on strikes varies. In the present case, union density can be significant in regression equations only when its fluctuations are large enough to be associated with the wide fluctuations in strike activity.

42. D. Snyder 'Institutional setting and industrial conflict: comparative analyses of France, Italy and the United States' Amer. Sociol. Rev., 40, pp. 259-78 (1975).

43. Skeels op.cit. (note 20) p. 520.

44. On various aspects of public involvement in labour disputes see E.E. Witte The government in labor disputes (McGraw-Hill N.Y., 1932); H.R. Northrup Compulsory arbitration and government intervention in labor disputes (Labor Policy Assoc., Washington, D.C., 1966); E. Berman Labor disputes and the President of the United States (Columbia Univ. Press, N.Y., 1924); J.L. Blackman Presidential seizure in labor disputes (Harvard Univ. Press, Cambridge, Mass., 1967); I. Bernstein, H.L. Enarson & R.W. Fleming (eds) Emergency disputes and National policy (Harper and Bros., N.Y., 1955).

45. See chapter six.

46. Also, there are clear regional differences in the meaning of voting for one party or the other; see chapter five for a comparison between the strike proneness of the various States using political measures as independent variables.

47. E.M. Kassalow Trade unions and industrial relations: an international comparison (Random House, N.Y., 1969) esp. pp. 132-46; D.C. Bok and J.T. Dunlop Labor and the American Community (Simon & Schuster, N.Y., 1970) pp. 208-14; A. Sturmthal Comparative labor movements (Wadsworth Publishing Co., Belmont, Calif., 1972) pp. 51-52; L.G. Reynolds Labor economics and labor relations (Prentice Hall, Englewood Cliffs, N.J., 6th edn 1974) p. 360.

INTRODUCTION TO PART THREE

Chapters three and four have examined the period 1881-1972 as a whole. Each chapter of part three considers a key period in the development of strikes. Chapter five concentrates on the years 1881-1905; this period was covered by the four reports of the Commissioner of Labor, which give an extremely detailed picture of strike activity, both at the aggregate level and at the level of individual industries. As we saw in chapter one, strike data were not collected between 1906 and 1915, and the information for 1916-27 is sketchy. It is thus impossible to follow the detailed course of strikes between 1906 and 1927; this is particularly unfortunate because the period was marked by the growth of new mass production industries, whose impact on strikes is of great interest. However, 'modern' industries were already in existence by the end of the nineteenth century and, in chapter five, I shall examine the pattern of strikes in these industries, and compare it with activity in more 'traditional' sectors, as well as considering the effects of industrialisation on the aggregate patterns of activity. What we cannot do is examine these developments beyond 1905.

Chapters six and seven examine the 'modern' pattern of strikes. The former concentrates on the years 1933-45, when the system of institutionalised relations was being established, and the latter on the characteristics of the system from 1950 to 1972; the years immediately after the Second World War, although of considerable interest in themselves, are not relevant for present purposes. Since chapter six is concerned with the process whereby institutionalised relations were established,

it is necessary to describe some variants of the process and consider some of its historical determinants. Thus I give more attention than elsewhere to the discussion of secondary material. This is necessary to understand the nature of the process of institutionalisation and the role of various groups in the process; although I cannot add to our historical knowledge about the New Deal, I must consider developments under it because of their central importance to the pattern of relations which grew up subsequently.

Although chapters five to seven concentrate on the particular issues I have mentioned, they have two aims in common. Firstly, they give detailed attention to the aggregate strike trends examined in chapters three and four, in order to increase our understanding of the pattern of activity and how it has changed; as I said in chapter four, the details of the shift in the 'parameters of conflict' need to be examined. Secondly, these chapters analyse the inter-industry distribution of strike activity, to see what factors account for differences between industries and whether the determinants of these differences have changed. Thus each chapter begins with a consideration of the overall pattern of activity and then uses time-series regression analyses, similar in form to those of chapter four, to assess certain possible explanations of the pattern. This is followed by a description of the distribution of activity between industries and an analysis of the most interesting features of this distribution; cross-sectional regression analyses on the inter-industry data are then presented. Finally, the relevant features of the regional pattern of activity are considered.

CHAPTER FIVE

STRIKES AND INDUSTRIALISATION, 1881-1905

In this chapter, the main focus is the process of industrialisation and workers' reactions to it. It will be recalled that several writers expect strikes in the 'early' phase of industrial growth to be spontaneous protests without organisation or planning; the overall rate of activity will be high because of the dislocation caused by the 'strains' of industrialisation. The data presented below cast considerable doubt on this and point, instead, to a complex pattern of protest against, and accommodation to, industry. Industrialisation does not have certain definite effects on protest but imposes only a broad pattern of change, within which considerable variation can occur. In addition, two more detailed accounts of the growth of the strike movement must be considered. One suggests that strikes become more 'sophisticated' as workers learn to deal with the challenge of industry; as unions grow, they learn to use strikes as part of planned campaigns and to suppress spontaneous and undirected protests. The other argues that the power which the division of labour and the rise of mass production methods place in the hands of capitalists is such that strikes are repressed and those protests which do occur defeated.

The evidence to be presented below shows that strike patterns were very complex and that there was no simple trend towards increasing 'sophistication' or 'repression'. In very broad terms, we may explain this by saying that trends in both directions were present and that they often counteracted each

other. For example, the sophistication argument expects an increase in the size of strikes whereas the argument from repression is that strikes will be limited to small-scale protests. The simultaneous operation of the two tendencies meant that no overall trend is apparent. In the following sections, I shall qualify and extend this basic point, and we shall be able to see whether, in a given case, sophistication or repression was the more important. In general, strikes came increasingly to reflect the problems of skilled workers, who faced a challenge to their craft autonomy from technical and organisational changes in industry. Strikes were concentrated in the least advanced sectors, where it was still possible to resist these changes. This suggests that 'repression' was the more important trend; but we shall also see that struggles against changes in working methods were often long and that strikes were well-organised and surprisingly successful. Thus, industrialisation exerted certain broad effects on strike activity, but the precise form of the response varied considerably. The picture of the domination of strikes by craft workers is built up from several pieces of evidence; each fact in itself may be relatively insignificant, but taken together, the data suggest strongly that the problems of skilled men assumed increased importance.

In the following discussion, I shall move from the most general level to the most specific. Section one gives a very brief introduction to the position of labour at the end of the nineteenth century; this is designed merely to provide a general background to the later discussion. In section two, I turn to the aggregate data and suggest that industrialisation

did not exert any strong influence on the overall amount of strike activity and that patterns of activity were consistent with an increase in the importance of skilled men's struggles. Section three shows that, between industries, strike patterns reflected only very generally the effects of technical advance; and section four indicates that, within certain key industries, changes in activity could not be attributed to changes in technical conditions. However, section five shows that, in inter-industry regression analyses, measures of technical advance were inversely associated with strike activity; strikes were concentrated in the least advanced sectors, but the pattern of activity reflected in such things as the size, duration and results of strikes, exhibited considerable complexity. Section six examines the direct evidence on the strike patterns of groups of workers with differing degrees of skill; in general, craft workers seem to have dominated strikes, but the nature of their protests was complex and there was no simple pattern of adaptation to, or defeat by, technical change. Section seven takes the steel industry as an illustrative case and shows that workers put up a lengthy struggle against technical change; it also stresses the role of the employer and his ability to determine the terms on which technical change was introduced; the changes exerted no automatic effects and were influenced by the outcome of the struggle between employers and workers for the control of day-to-day operations of the plant. Section eight shows very briefly that regional, as well as industrial, strike patterns did not reflect the 'inevitable' effects of industrialisation. In section nine, I suggest some reasons for this great diversity of experience.

Although the precise form of the response to industry varied, strikes were concentrated among those groups which had most to lose from the establishment of mass production techniques; and the struggle was greatest where these techniques were still being introduced and where the results of their introduction were still uncertain. That is, skilled workers who retained at least some of their craft autonomy played a central role in strikes.

I. Introduction: industry and labour

Whatever the period under consideration, it is always possible to argue that society was undergoing fundamental changes which powerfully affected industrial conflict. For example, Morris suggests that in the post-Revolutionary years a decline in social mobility led to strikes,[1] and it has also been argued that in the 1820's and 1840's industrialisation encroached on the freedom of the workers and encouraged protests.[2] But the period after the Civil War can be seen as being one of particularly significant change. Although economic growth has been rapid since the early nineteenth century,[3] the quantitative changes of this period meant that the economy was 'transformed'. The railways created a national system of communication and distribution. Urban growth was rapid as men moved from the farms.[4] Industry became increasingly concentrated in large-scale enterprises and in the last two decades of the nineteenth century the corporate form of industry and the 'trust' made their appearance.

By 1904 firms with production valued at over 100,000 dollars employed over 70% of the total number of wage earners

although they had only 11% of the number of establishments in the country. In 1909 firms with a corporate form of ownership had a quarter of the establishments but employed three quarters of the wage earners and accounted for 77% of the total value of industrial production.[5]

Although real wages were rising, this increase was sluggish when set against the rate of growth of production[6] and it has been suggested that such things as the increasing intensity of work and the rise of housing costs tended to depress the workers' real standard of living.[7] Economic development did not progress evenly and there was a particularly marked recession in the 1890's. As one writer puts it,[8]

> 'The severity of the depression, borne by different social and economic groups in varying degree, was a partial measure of the real costs involved in shaping an industrial order'.

It is not surprising that several observers felt that industrial conflict was inevitable. In 1900 the report of the Industrial Commission argued that:[9]

> 'There is little dissent from the opinion that strikes are a necessary weapon of the workingman under existing social conditions'.

For Commons, the growth of corporations and of the division of labour created conditions that were ripe for conflict; in the early stages of industrial growth strikes would be successful, but corporate power in the later stages would defeat strikes and even prevent dissatisfaction from being openly expressed.[10] And in 1885 the Senate Committee on Labor-Capital Relations had argued that the factory system and the division of labour 'have

Table 5-1: Characteristics of manufacturing establishments, 1860-1910.

	Number of wage earners ('000's)	Number of wage earners per establishment	Value added per head (dollars)	Capital employed per head (dollars)
1860	1311	9.34	652	770
1870	2054	8.15	679	825
1880	2733	10.8	722	1021
1890	4252	12.0	990	1535
1900	5306	10.4	1066	1850
1900(1)	4714	22.7	1025	1904
1910(1)	6615	24.6	1290	2786

Notes: (1) 'Factories' only; other figures include 'hand and neighborhood industries'.

Source: Figures from Tenth and Thirteenth Censuses, given in E.L. Bogart & G.M. Thompson Readings in the economic history of the United States (Longman's, Green & Co., N.Y., 1916) pp.740-41, 745.

gradually reduced the once free artisan to a new serfdom'.[11]

The dissatisfactions of the workers have been summarised by Garraty.[12] Despite the general rise in wages, poverty remained and there was considerable insecurity of employment. Progress merely served to increase the desire for greater satisfactions. There were few opportunities for social mobility and, although the growth of corporations did not reduce these further, it seemed to widen the gap between rich and poor.[13] And factory work reduced men's self-confidence and increased their reliance on others, although it did not destroy the need for skilled labour. But, as Garraty and others emphasise,[14] discontent does not necessarily lead to protest. The prevalence of rural values,[15] a pride in the industrial achievements of America, a feeling that the discontents would only be temporary or a belief that protests would be bound to fail could all reduce the workers' willingness to strike. Thus we must examine with care the patterns of protest which emerged.

2. The overall level of strike activity

Chapters three and four have presented data for the period 1881-1905 and a summary of the main points will be in order before more detailed findings are presented. Strike frequency was particularly high, but worker involvement stands out to a lesser extent; a corollary of this is a lower mean size of strikes than in later years. The proportion of strikes ordered by unions was increasing and there was a tendency for the issues in strikes to become less dominated by economic demands. No very strong trend was apparent in the results of strikes, which goes against the view of Commons mentioned above that the rate of success will decline as industrialisation advances.

It would be possible, of course, to argue that increased organisation in the planning of strikes counteracted the power of the corporations, but Commons' argument stresses only the challenge to workers and not their success meeting it. And cross-sectional data, presented later, suggest that union involvement had little effect on the rate of success of strikes.

The most direct way to investigate the impact of industrialisation on strike activity is to use a measure of it in a regression model. Table 5-2 reports the results of using the proportion of the total work force industrialised as an independent variable for the period 1881-1910; any effect of industrialisation should be most apparent here, when the shift away from agriculture was particularly rapid.[16] But although a positive influence was exerted on strike frequency, the coefficient is not significant and therefore we cannot conclude with confidence that industrialisation affected strike frequency. We may also note that union organisation had a direct and significant effect on strike activity; at least in this early period, unionisation and strikes went together.

The final equation reported in Table 5-2 uses the number of immigrants as an independent variable. Immigration reached its peak in these years and it was often cited as a factor which weakened the power of labour because it provided the employers with a body of men who were prepared to break strikes.[17] Although there is evidence that the immigrants were often good strikers and refused to take on jobs when they knew a strike was in existence,[18] the role of immigration in increasing the labour supply and in splitting the work force into competing

Table 5-2: Regression results, industrialisation and immigration models, 1881-1910: dependent variable N/E.

	Independent variables					R^2	D-W
U/E	Trough	Peak	T	Ind./C	Immig.		
Neg			Pos	Pos		0.47	0.91
1%			NS	NS			
	Neg	Neg	Pos	Pos		0.52	1.66
	1%	NS	5%	NS			
	Neg		Pos		Neg	0.56	1.76
	1%		1%		NS		

Note: Ind_e is number of workers in industrial establishments; C is total civilian employment; i.e. Ind./C is the proportion of the total work force industrialised.

Immig. is the number of immigrants.

racial groups might be expected to exert a depressing influence on strike frequency. The coefficient of the immigration variable is negative but not significant. Table 5-3 reports the results of disaggregating the immigration total. Since most immigrants from Britain were skilled men, in contrast to the influx of unskilled workers from the East and South of Europe, we can take British immigration as a rough proxy for the number of skilled men entering the country. Similarly, those from Russia and Italy were very largely unskilled. The Table shows that immigration from Britain was significantly related to strike frequency, whereas that from the other two countries was not; similar results emerge when a direct measure of unskilled immigration, the number of men who said they were 'laborers' or had 'no occupation', is used.

The significant association of strikes with British immigration remains even when the time variable and the level of real wages are added to the model. This strengthens the view that the link is more than a casual one, particularly when we contrast the results for union membership. The trend in the number of members has a significant effect on strike frequency only in the model in which the time variable is included; when it is excluded, and when the wage level is added, it loses significance. Thus we can tentatively conclude that the influx of skilled men tended to reduce strike frequency whereas unskilled immigration did not; in other words, if skilled immigration is the important influence on strikes, we can see the decision to strike as a function of the grievances of the skilled workers already in America. It was not the great mass of immigration which influenced strike activity but only that

Table 5-3: Regression results, origin of immigration model, 1881-1910.

Dependent Variable		Independent Variables						R^2	D-W
		Trough	T	Time	Brit. immig	Ital. & Rus. immig	H/P		
1881-1910	N/E	Neg	Pos		Neg	Pos		0.59	1.74
		1%	NS		5%	NS			
	% won	Pos	Neg		Neg	Pos		0.57	1.71
		5%	5%		NS	NS			
	N/E	Neg	Pos	Neg	Neg			0.61	1.87
		1%	1%	NS	5%				
1890-1910	N/E	Neg	Pos	Neg	Neg		Pos	0.59	1.72
		5%	NS	5%	5%		1%		

Note: Brit. immig is immigration from England, Scotland and Wales

Ital.& Rus. immig is immigration from Italy and Russia

which affected the position of skilled men.

Table 5-3 also reports the result of an attempt to preduct the proportion of strikes won, rather than strike frequency. It will be seen that union membership had a negative effect on the success rate; this is contrary to all assertions that unionisation will make strikes more successful. The sign of the coefficient of the variable measuring business cycle troughs also changes; while a deep depression reduces subsequent strike frequency, it increases the likelihood that strikes will be successful. Thus workers are more sparing in their use of the strike and are more successful in their striking after a deep recession, but this cannot be explained by an increased union control of strikes.

A key question here is the extent to which strike patterns changed with industrialisation. Stearns has recently suggested several ways to distinguish between pre-industrial and modern protests.[19] The former are not formally organised and are backward-looking while the latter are forward-looking, involve the demand for new rights rather than the preservation of old ones and are large-scale activities which are timed to occur in booms rather than recessions. Other measures of 'sophistication' include the number of companies affected by strikes (since striking is more than one company shows organisational ability and the grasping of abstract issues), the regional spread of activity and the level of worker involvement. As workers learn to concentrate on well-planned efforts, strike frequency will fall, but, says Stearns, frequent striking is more sophisticated than not striking at all. He is less certain about the value of success rate, duration and violence of strikes as indices

because they depend in part on the employer and because violence is hard to measure. However, as I suggested in chapter two, the strike necessarily depends on the employer as well as the workers; and all the other indices of activity are as likely as these three to be affected by the employer. Thus there is no reason to ignore these three. And elsewhere Stearns uses success as an index of sophistication: in four European countries in 1890-1914 disputes over job conditions[20]

> 'were comparatively unsophisticated; and relatedly such strikes tended to decrease with time' whereas strikes 'for a reduction of hours were consistently among the most highly sophisticated, as measured by their large average size and their generally good success rate'.

Stearns does not make systematic use of all the measures he derives in his theoretical discussion, possibly because the data do not exist for his four countries. But we can use most of his indices in relation to the American data. We have already seen, in chapter three, that there was a marked rise in the proportion of strikes ordered by unions between 1881 and 1905 and, in chapter four, that there was a significant link between economic activity and strike frequency. On two dimensions, strikes were already 'sophisticated'. But the failure of union density to be consistently related to strike activity suggests the need for caution when using the level of organisation as an index of sophistication. Furthermore, organisation in strikes did not necessarily depend on the union. As Gutman has convincingly shown,[21] the new corporations were not totally dominant in society; in a number of cases they were effectively resisted by the more traditional entrepreneurs

Table 5-4: Indices of 'strike sophistication', 1881-1905.

	No. of estabs per strike	Strikers as % employees before strike	Workers involved as % employees before strike	% estabs closed by strike	Mean size struck estabs.
1881	6.16	60.0	76.5	55.8	57.9
1882	4.51	64.4	82.0	54.1	90.4
1883	5.68	73.0	86.7	63.4	68.2
1884	5.61	68.2	83.3	61.2	72.8
1885	3.55	55.1	81.6	72.2	128
1886	7.35	65.8	79.9	59.5	66.0
1887	5.24	50.3	66.7	61.8	83.6
1888	3.90	32.2	44.9	53.5	98.5
1889	3.53	46.7	56.2	61.8	118
1890	5.14	48.4	59.3	56.5	64.6
1891	4.85	48.8	62.1	57.2	61.3
1892	4.61	35.4	43.9	65.6	87.1
1893	3.53	37.5	51.9	64.1	114
1894	6.46	49.9	64.5	69.1	118
1895	5.85	52.7	71.8	86.0	77.2
1896	5.17	48.0	63.5	83.3	71.1
1897	7.80	60.9	74.3	83.4	64.6
1898	3.62	49.0	66.8	76.7	99.2
1899	6.33	39.1	52.3	66.7	71.0
1900	6.27	44.7	56.9	63.1	86.7
1901	3.77	37.8	51.6	42.1	96.2
1902	4.80	44.8	53.1	54.3	83.9
1903	6.45	42.4	51.8	56.9	64.6
1904	5.17	44.6	60.8	58.0	75.4
1905	4.37	37.5	46.5	49.3	68.1

and the commercial classes, who were prepared to assist the workers in their fight against the giant corporations. The victory of these firms came only slowly and against opposition which was often severe. A corollary of this is that the workers could rely to some extent on 'unorganised' assistance from the community, so that they did not need union help; union involvement is an ambiguous measure of 'sophistication'.

Table 5-4 shows the trends for five measures of the strike movement. No data are available for the whole of the period 1881-1905 on the number of companies or establishments affected by individual strikes, but it is possible to calculate the mean number of establishments per strike; this is given in the first column. The Commissioner of Labor's tables include data on the number of employees of struck plants and they also distinguish between strikers and those 'thrown out of work' by the strike. We can thus calculate the ratio of strikers to employees before the strike (which I shall call, following Shorter and Tilly,[22] the plant participation ratio) and compare it with the ratio of workers involved to employees before the strike. If strikes were being repressed, we would expect the plant participation ratio to decline because workers would fear the employer's reprisals if they joined the strike. The 'workers involved to number of employees' ratio shows the trend of the effectiveness of strikes: the greater the proportion of workers in a plant who are affected by a strike, the greater will be the power of strikers over the employer. The fourth column of the Table shows the proportion of establishments having strikes which were forced to cease operations during the strike; it is another index of strike effectiveness. Finally, the mean size

of struck plants is calculated by dividing the number of employees in them by the number of establishments affected.

There was no overall trend in the number of establishments per strike, but there was a fall in the plant participation ratio, matched by a decline in worker involvement as a percentage of employment in the struck plants. The latter two indices moved very closely together, which indicates that there was no change in the extent to which strikers caused other men to be laid off. For every hundred strikers there were typically between twenty and thirty other workers laid off. The proportion of plants closed by strikes rose until the end of the 1890's and then fell to levels similar to those of the early 1880's. Finally, the mean size of struck establishments fluctuated considerably but showed no clear trend. As a comparison with Table 5-1 shows, plants which had strikes were much larger than the average; there were about ten workers per plant overall and about twenty per 'factory' whereas the mean size of struck plants varied between 58 and 118 workers. In view of the large number of small workshops, this difference is not very surprising, but the concentration of strikes in the large plants is still notable. Even if the very small establishments were to be left out, the difference between the strike-affected plants and the rest would remain.

Thus no clear trend towards 'sophistication' emerges. The fall in the plant participation ratio suggests that strikes were becoming <u>less</u> solidaristic and there is no evidence for an increased effectiveness of stoppages, in terms of the number of establishments involved per strike or the proportion of struck plants which had to be closed. The stress on the

sophistication of strikes and the transformation from 'pre-industrial' forms of protest covers only one side of the picture. As Stearns himself argues, strikes in the years before the First World War were transitional between the pre-modern and modern types. And, as Shorter and Tilly suggest, strikes will reflect the protests of the skilled men against the changes forced on them by industrialisation as well as the secular movement to 'modern' forms;[23] we can expect 'backward looking' strikes when traditional patterns of work are threatened. Further, Commons has argued that the repressive power of the corporations was such that, although there were structural reasons for discontent, overt expression of dissatisfaction could be prevented.[24] Thus there are two classes of reason why a growth in the sophistication of strikes need not occur.

The decline in the plant participation ratio is consistent with the exercise of power by the corporations, but it also fits the argument that the strike was being taken over by skilled man. If the strike is appropriated by the skilled, the size of stoppages and the participation rate will fall as disputes become concentrated on the demands of a limited part of the work force. Section six will show that the strike <u>patterns</u> of skilled men were different from those of the unskilled, but the lack of suitable employment data makes it impossible to assess directly whether the relative strike proneness of different occupational groups was changing. However, the indirect evidence presented so far is consistent with the view that strike activity was concentrated among the skilled.[25] And such an interpretation does not really conflict with a stress on the role of repression by the employers; the skilled were in the strongest

position to fight back and they also had most to lose by giving way to the employers. The unskilled could be cowed into submission more easily. Even if the view that the skilled struck most frequently is rejected, it can still be suggested that they were the leaders of those strikes in which skilled and unskilled participated; in other words, it was the dissatisfactions of the skilled men which were the rallying point for the strikes of other workers.[26]

In section six, I shall consider in detail the arguments of Shorter and Tilly about the differences between the strikes of the skilled and the unskilled, but we may note here the importance of work conditions and job control to the skilled men. Table 5-5 shows the aggregate movement of strike issues, using more detailed categories than those of chapter three. The category 'other' is of particular interest since it includes such issues as the method and time of payment, work discipline and work rules and conditions. The rise and subsequent decline of strikes on these issues is consistent with the view that the skilled men were protesting in the 1880's and early Nineties against changes in job conditions but that, by the turn of the century, they realised the hopelessness of this. The fall in wage strikes and the concomitant increase in stoppages in union recognition strikes also fits this interpretation; union strikes include not only 'aggressive' demands for recognition but also 'defensive' strikes against employer attempts to remove the union or alter its rules and practices and hiring policies.

Stearns suggests that the lowest sophistication is in strikes against wage cuts, followed by disputes over personal matters and defensive strikes over conditions; strikes for wage

Table 5-5: Issues in strikes, 1881-1905.

	1881-85	1886-90	1891-95	1896-1900	1901-05
	a. % of strikes with given issue				
Wage increase	42.6	30.4	27.8	30.1	25.4
Against wage decrease	21.2	11.8	16.5	9.9	4.0
Other wage	5.6	6.7	5.9	9.8	9.9
Hours	2.2	7.7	4.0	2.9	5.2
Hours, and other(1)	1.4	3.6	2.7	5.5	5.7
Union recognition and rules, and other(1)	7.8	14.0	15.4	19.3	29.1
Employment of certain persons, and other(1)	6.5	8.5	8.5	8.8	8.3
Other	12.7	17.3	19.1	13.7	12.4
Total	100.0	99.9	99.9	100.0	100.0
	b. % of workers involved in strikes with given issue				
Wage increase	42.1	28.0	33.6	20.5	14.9
Against wage decrease	20.2	11.3	16.5	6.6	3.8
Other wage	12.5	12.9	8.3	18.1	19.1
Hours	3.5	10.5	3.5	1.5	5.7
Hours, and other(1)	5.7	9.8	6.6	7.4	13.1
Union recognition and rules, and other(1)	4.5	8.5	9.6	16.5	24.0
Employment of certain persons, and other(1)	2.9	5.7	4.5	4.3	6.5
Other	8.5	13.3	17.4	25.0	12.9
Total	99.9	100.0	100.0	99.9	100.0

Note: (1) 'and other' means that the principal issue was combined with other issues.

increases and cuts in hours are genuinely aggressive.[27] He gives no means of differentiating between offensive and defensive types of stoppages on work conditions, but the other categories are clear enough. Strikes against wage cuts show a marked fall in importance, but those over the employment of certain persons constitute a more or less constant proportion of the total, while 'wage increase' strikes also fall. Thus, again, there is no unambiguous tendency for strikes to become more or less sophisticated.

The issue is illuminated further by Table 5-6, where the size and results of strikes on different issues are indicated. The whole list of 28 categories is used since, in constructing the table from which the data are taken, the Commissioner included a strike due to two or more causes under each category for which it was relevant; thus a strike for a wage increase and hours decrease appears under the headings 'wage increase and other' and 'hours decrease and other'. The discrepancy in the figures between 'pure' wage or hours strikes and those in which these issues are combined with others is thus due to the inclusion of a great many additional strikes in the categories with more than one issue. It will be recalled that Stearns argues that hours strikes in Europe were among the most sophisticated, in terms of their size and result, and work conditions stoppages among the least sophisticated. In America, hours strikes are among the largest but their rate of success is only a little greater than average. Strikes over work conditions are of about average 'sophistication' when all stoppages involving this issue are considered, but disputes solely over job

Table 5-6: Size and results of strikes by detailed cause, 1881-1905.

Cause	Total no. estabs affected	Mean size	% estabs where strike was Won	Lost
For wage increase	60359	187	50.0	31.4
Wage increase and other	44700	427	46.9	30.0
Against wage reduction	10536	211	34.9	52.3
Wage reduction and other	2884	324	67.4	26.4
All hours	53408	345	52.0	30.4
For hours reduction	17747	217	50.7	39.2
Hours reduction and other	33721	473	52.4	25.7
Against hours increase	817	331	50.1	37.1
Hours increase and other	1123	396	61.5	32.3
Union recognition & rules	18614	88.1	55.5	42.9
Recog. & rules and other	20000	480	38.7	36.8
Employment of certain persons	4139	107	24.8	73.5
Certain persons and other	1037	330	29.0	52.6
Employees out of regular occupation	559	92.4	50.1	47.8
Out of regular occup. & oth other	191	156	33.0	7.3
Overtime work and pay	574	96.1	50.7	41.8
Overtime work etc & other	3605	297	60.3	17.9

/Table continued over page.

Table 5-6: (continued).

Cause	Total nc. estabs affected	Mean size	% estabs where strike was Won	Lost
Method & time of pay	953	202	39.6	57.2
Method & time of pay & other	2170	1200	55.4	17.0
Saturday part holiday	266	75.0	43.6	54.9
Saturday holiday & other	4774	419	52.2	24.4
Docking, fines & charges	449	137	48.6	43.0
Docking etc. & other	725	2140	22.1	18.5
All work conditions & rules	7626	179	47.2	38.7
Work conditions & rules	3089	122	41.6	54.4
Work conditions etc & other	4537	370	51.0	27.9
Sympathy	6361	193	20.7	76.5
Sympathy and other	521	594	11.1	83.3
Other not elsewhere included	3391	120	60.8	32.7
other n.e.i. & other	1922	390	43.9	29.9
All strikes	199982	183	46.5	38.7

Note: '& other' means given issue was combined with other issues; i.e. there were strikes in6361 establishments where sympathy was the sole issue and strikes in 521 establishments where sympathy was one of several issues.

conditions are smaller, and rather less successful, than average. As Table A-15 shows, there is no strong evidence to support the view that strikes over conditions will decline, in absolute or relative terms.

It is doubtful whether the size of strikes is a very useful index of sophistication. We would naturally expect strikes over such matters of general appeal as a wage increase to be larger than those over more limited types of demand. And, as Table 5-6 shows, strikes restricted to a specific issue were smaller than those in which many issues are involved. In many cases the difference is extremely marked. However, it does not follow that the bringing together of many issues in a strike makes it more sophisticated, but it certainly increases the mass appeal of the strike. If we compare strikes limited to specific issues, we can see that the differences in size between them were not very great. Much the largest were those against an increase in hours; and the success rate here was quite high, in contrast to Stearns' view that defensive hours strikes are among the least sophisticated. In other words, one dimension of sophistication, the issue in dispute, was unrelated to two other dimensions, the size of the strike and its result. Other strikes limited to a specific issue were of a remarkably similar size although, in line with the view that strikes over work conditions and discipline will be restricted to craft groups, such stoppages were among the smallest. Union recognition disputes were even smaller, strengthening the view that at this time recognition demands were largely limited to the skilled men.

The data on results indicate, in line with the findings of chapter three, that sympathy strikes had a very low success

rate; and when other issues are added to 'sympathy' the success rate was even lower. But in many other cases 'pure' strikes were less successful than those in which numerous issues were involved. This ia particularly notable with strikes against wage reductions, where the addition of other issues raised the proportion of successful strikes from 35% to 67%. Since a similar, though less marked, pattern occurred with strikes against increases in hours, it seems that purely defensive strikes tended to be defeated whereas those which were not limited to one key battle against employer attempts to alter wages or hours were more likely to succeed.

Stearns suggests that in Europe[28]

> 'The strike movement as a whole confirms the notion of an increasingly instrumental view of work, in which <u>full pleasure</u> in work was abandoned as unobtainable ... and better conditions off the job were sought in compensation'.

What 'full pleasure' might be is not made clear; nor does Stearns show that pre-industrial workers were able to obtain such total satisfaction in their work. More directly, the American evidence does not support his contentions; wage strikes declined in importance and disputes related to work conditions remained significant. Strikes did not become shorter or less frequent, suggesting that workers did not resign themselves to industrial conditions and concentrate on other things. And there was no marked move from being 'backward-looking' to being 'forward-looking'.

We may conclude that the various measures of strike sophistication were often not closely related and that small strikes over matters of work conditions and discipline were not

necessarily 'unsophisticated'. We saw earlier that no strong link existed between industrialisation and the amount of strike activity; we have now seen that the sophistication of strikes cannot be related to industrial growth. This section has also suggested that patterns of activity reflected the concerns of skilled men; small strikes concentrating on matters relating to the work place were a response to attempts by employers to destroy the craft method of production. In other words, industrialisation exerted broad effects on the pattern of strikes and may have encouraged large strikes for wage demands; but, at the same time, struggles for job control were going on at plant level. With these two tendencies co-existing, the overall pattern of strikes showed no clear trend towards increasing or decreasing sophistication.

3. The industrial distribution of activity

In this section, I shall argue that the findings relating to trends of activity are confirmed by the cross-sectional analysis. If industrialisation affects the form of worker protests, differences should emerge between the 'advanced' and the more traditional industries. However, only very broad differences emerge; in some sectors, the attitudes of employers and the government were independent influences, and in others strikes reflected craft workers' protests. Thus, the effects of industrial advance were counteracted by several other factors.

There are, of course, difficulties with comparing whole industries since some parts of an industry may be much more advanced than others. But the broad differences between whole sectors should be clear enough for any effect of technical

advance to be apparent in the strike figures. Apart from these general problems with the definition of an 'industry', there is the difficulty that the Commissioner of Labor worked with one industrial classification in his first three reports but then felt the need to adopt a revised scheme![29]

> 'In making a new classification the object has been to bring together in groups of classes, as nearly as practicable, those establishments and industries in which the employees and employers, respectively, have a common interest and consequently are likely to act together'.

In general, it has proved possible to allow for changes in definition between the Commissioner's reports, but in some cases comparable data are not available and therefore information will be presented only for 1881-1900. The classification adopted in 1906 was much more detailed than the earlier ones and this will generally be used; the data for 1881-1900 as a whole were given for the new categories, but they were not broken down into sub-periods. Thus, in the next section, when we are considering changes over time within industries the broader categories employed up to 1900 will have to be used.

Table 5-7 gives, for the major industries, the proportions of the total number of strikes, strikers and establishments accounted for by each. The industrial classification I have used here is designed for two purposes: to be comparable with the information in chapters six and seven, and to illuminate important parts of the strike movement for 1881-1905. The 'stone, clay and glass' category is included with the former aim in mind, and 'copperage' with the latter. More detailed information on significant industries is given later in the present section and in section 4. Table 5-7 shows the absolute

Table 5-7: Proportion of all stoppages and of total employment accounted for by each industry, 1881-1905.

Industry	Percent of: Strikes	Strikers	Estabs	Employment as % total
Boot and shoe	3.0	1.3	0.9	1.2
Brewing	0.5	0.2	0.5	0.3
Building	26.0	13.6	38.5	11.7
Clothing	7.2	9.9	12.6	3.5
Coal	9.7	30.8	9.7	4.5
Cooperage	0.9	0.4	0.6	0.2
Food	1.9	2.2	4.2	1.8
Machinery	4.9	3.4	2.7	3.1
Metals: Tin and steel	2.9	4.1	1.3	2.0
Stove and furnace	0.9	0.3	0.3	n.a
Other	2.6	1.2	2.5	1.3
Printing and publishing	2.9	0.7	1.7	1.3
Stone, clay and glass	4.7	3.1	3.2	1.9
Textiles	4.3	4.4	1.3	3.6
Tobacco	4.9	3.6	4.1	1.0
Transport: railroad	1.4	1.8	0.4	7.3
other	2.0	2.3	1.4	7.5
Transport equipment	2.5	2.1	1.5	2.6
All above industries	83.2	86.7	87.2	54.7
All industries	100	100	100	100

Note: Employment figures are for 1900. The revised industrial categories of 1906 are used; these will be referred to as the '1906' classification in contrast to the earlier one, called the '1886' classification.

importance of each industry in the total,[30] that is it shows where the 'strike problem' is concentrated; similar tables in the next two chapters will indicate how the distribution of strikes has changed.

It is notable that the building industry has already achieved a dominant position, accounting for a quarter of all strikes and over a third of all establishments which were affected by strikes; thus the number of establishments per strike is greater than the average, whereas the mean size of stoppages is less than average. The other major contributors to strike activity are coal and clothing. The former accounts for 30% of all strikers and has stoppages which are about three times larger than average. The industries in the Table, together with other manufacturing sectors not specifically mentioned, account for virtually all the strike activity recorded; strikes in agriculture are rare and stoppages in administrative and governmental occupations have not yet made an appearance.

With this as background, we may proceed to investigate the dimensions of 'strike sophistication' by industry. Table 5-8 gives the issues in strikes; Table 5-9 reports seven measures of strike activity; and Table 5-10 shows the level of union involvement and the effect of the presence of a union on the rate of success. The only measures in Table 5-9 which we have not encountered at the aggregate level are 'establishment involvement' and 'mean duration'. The former gives the total number of struck plants as a percentage of the number of plants in the industry in 1900; the lack of annual data on the number of establishments prevent the use of this index in time-series analysis, but it gives a useful indication of the differences

Table 5-8: Strike issues by industry: % of establishments in which strikes were for given issue, 1881-1900.

Industry	Wage increase	Wage decrease	Other wage[1]	Hours	Other
Boot and shoe	34.4	12.1	7.7	0.4	45.4
Brewing	7.7	0.5	36.5	18.1	37.1
Building	25.5	2.2	23.2	15.8	33.3
Clothing	17.9	4.9	44.9	8.7	23.6
Coal	41.0	22.6	4.6	0.3	31.4
Cooperage	73.5	13.5	2.8	0.2	10.0
Food	7.3	1.6	14.0	43.3	33.8
Machinery	17.6	5.9	30.8	21.6	24.1
Metals (all)	35.7	11.5	11.2	15.8	25.9
Printing & publishing	37.2	4.6	10.0	10.8	37.2
Stone, clay & glass	28.5	5.8	13.3	17.8	34.7
Textiles	42.2	19.5	4.1	1.8	32.4
Tobacco	38.1	9.6	4.0	28.5	19.8
Transport (all)	54.4	5.2	6.7	2.1	31.7
Transport equipment	22.0	10.8	2.2	48.5	16.4
All industries	28.7	7.2	20.2	14.4	29.6

Note: (1) includes wages combined with other issues

Table based on 1886 classification.

Table 5-9: Strike indices, by industry, 1881-1905.

Industry	Estabs per strike	Estab. involvement	Mean duration	Mean size
Boot and shoe	1.62	82.9	35.6	110
Brewing	5.83	36.2	110	130
Building	8.15	n.a.	201	116
Clothing	9.05	51.9	140	272
Coal	4.97	n.a.	262	588
Cooperage	3.28	51.7	74.9	79.3
Food	10.8	16.2	130	235
Machinery	2.64	47.5	118	131
Metals: Tin and steel	2.10	17.7	71.6	259
Stove and furnace	1.49	n.a.	29.0	72.8
Other	5.24	10.6	244	93.5
Printing & publishing	3.23	15.5	104	47.4
Stone, clay & glass	3.72	39.9	128	136
Textiles	1.48	16.7	42.0	209
Tobacco	3.98	51.2	112	148
Transport: railroad	1.34	n.a.	10.8	243
other	5.74	n.a.	140	222
Transport equipment	3.16	26.6	112	157
All industries	5.19	38.8	161	195

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Table 5-9: (continued).

Industry	ST./B	ST./W	% Won	% Lost
Boot and shoe	32.0	63.8	39.8	49.7
Brewing	32.6	93.4	32.2	41.7
Building	75.2	85.7	49.6	34.6
Clothing	60.8	80.6	71.7	21.0
Coal	76.0	81.3	22.0	49.3
Cooperage	58.3	93.4	61.8	30.9
Food	27.3	83.5	55.7	39.3
Machinery	22.8	75.5	37.0	47.2
Metals: Tin and steel	31.1	58.8	36.4	48.5
Stove and furnace	32.4	56.9	36.5	53.3
Other	30.2	74.5	54.3	38.0
Printing & publishing	22.8	71.5	40.9	48.0
Stone, clay & glass	49.6	68.3	41.0	40.8
Textiles	30.6	64.2	21.6	66.1
Tobacco	65.2	83.6	50.9	43.0
Transport: railroad	13.0	56.5	22.2	66.7
other	54.1	80.9	29.9	52.8
Transport equipment	20.1	74.9	26.6	45.6
All industries	46.9	78.5	46.5	38.6

Notes: ST. is number of strikers
B is number of employees before strike
Estab. involvement gives number of establishments affected by strikes as a % of the total number of establishments in the industry in 1900.

Table 5-10: Union involvement in strikes, by industry, 1881-1905.

Industry	% of strikes ordered by union	% of strikes ordered by union which were		% of strikes not ordered by union which were	
		Won	Lost	Won	Lost
Boot and shoe	71.4	39.7	49.2	30.9	62.6
Brewing	90.4	32.2	34.9	44.4	55.6
Building	92.4	52.5	29.9	50.9	40.0
Clothing	85.2	72.8	19.9	47.1	46.5
Coal	54.8	20.2	48.2	31.8	57.4
Cooperage	71.2	62.4	28.7	63.3	34.1
Food	81.3	56.5	39.3	61.0	36.2
Machinery	69.0	38.8	44.3	27.0	62.8
Metals: Tin and steel	38.1	40.3	42.6	29.0	60.5
Stove & furnace	77.6	39.0	49.8	27.7	60.2
Other	88.8	70.0	20.7	24.5	67.4
Printing & publishing	86.7	45.1	45.1	23.6	73.6
Stone, clay and glass	66.0	41.7	48.9	15.5	77.0
Textiles	24.5	18.0	68.9	24.9	63.7
Tobacco	74.5	50.0	44.5	57.4	32.2
Transport: railroad	39.1	13.7	75.8	30.1	58.0
other	54.8	47.4	25.1	23.2	67.0
Transport equipment	58.7	28.5	45.5	29.1	60.0
All industries	69.0	49.5	34.6	33.9	56.4

between industries in the spread of strikes. Shorter and Tilly remark that the proportion of all establishments on strike has been ignored in North American writings;[31] the use of the 'establishment involvement' index helps to remedy this. 'Mean duration' represents simply the Commissioner's figures on 'aggregate duration' divided by the number of strikes; this does not measure the actual length of stoppages because the Commissioner's data refer to establishments, but it is useful in comparing industries. In the later discussion, 'duration per establishment' is used to supplement this index.

There are some strike patterns which can clearly be related to the 'advanced-traditional' scale. Thus in the 'traditional' cooperage industry strikes were small and short and fought mainly over economic demands; they were more successful than average and the ratio of strikers to workers involved is high. This pattern fits the case of craft workers who do not need to strike over matters of job control and who are well organised; indeed, their strength was such that the presence of a union does not increase the rate of success of strikes. The high 'strikers to workers involved' ratio (ST./W) shows that the strikes were solidaristic, in that nearly all the workers who were affected by the strike were actively supporting the stoppage; but the plant participation ratio (ST./B) was only slightly greater than average, showing that the dispute was restricted to a limited part of the work force. At the other end of the scale, strikes in machinery are relatively large and long, are less concerned with wages and less successful; and the presence of a union makes a difference to the rate of success. The low plant participation ratio indicates the lack of solidarity between workers in the same plant.

The interpretation of the plant participation ratio is not simple, for it relates, of course, only to those plants where a strike occurs. However, the data fit the stress in the previous section on the role of the skilled workers. In traditional industries where craft workers were a high proportion of the total, the ratio should be high; the cases of cooperage and building bear this out. But where the division of labour has reduced the importance of craft skills, the ratio should be low; machinery and the metals and boot and shoe industries fit this pattern. It may seem that tobacco and clothing, both with high ratios, do not fit this explanation, since the former has been seen as a case where craft skills were being eroded and the latter as a centre for unskilled immigrant workers. But the tobacco case can be explained: if, as I will suggest below, strikes here reflected the protests of skilled men against the machine, disputes would be concentrated in those shops where craft methods were still employed. Although the unskilled were important in the industry as a whole, the plants where strikes occurred were dominated by the skilled and thus the plant participation ratio was high. The apparent anomaly of clothing is removed when it is remembered that workers here were not unskilled in the sense that labourers in heavy industry were unskilled; they may not have served formal apprenticeships but they had a set of skills which had to be learnt.[31a] Thus two hypotheses receive support: that skilled men dominated strikes and that plant solidarity was affected by how 'advanced' the industry was, although in a manner different from standard expectations.

The effect of technical advance is shown further in the

comparison between 'tin and steel' and 'other metals'. The latter sector included industries such as cutlery, hardware and the blacksmith craft and was thus more 'traditional' than the tin and steel industry; as Table 5-11 shows, the mean size of plant in other metals was one-sixth that in tin and steel. Strikes in other metals were smaller and longer than those in steel and the rate of success was greater and, although the plant participation ratio was about the same, the number of strikers, in relation to the number of workers involved, was greater. The differences in union involvement are particularly notable. The proportion of strikes ordered by a union was much higher in other metals than in tin and steel and the effect of the union on the rate of success more marked. In tin and steel, twice as many non-union strikes were lost as were won, and the presence of a union brought the proportions to near equality; but in other metals a ratio of lost to won strikes when no union is involved of three to one was reversed when a union is present, with successful strikes outnumbering the unsuccessful by 3½ to one. Thus, striking in the more 'advanced' sector of the metals industry was less 'sophisticated' than is that in the more traditional sectors.

However, some reservations are called for. In comparisons of the size of strikes, the size of establishments must be taken into account. I argued in chapter three that it is preferable to use the size of strikes uncorrected for employment when an index of spread of industrial conflict is required, on the grounds that size measures how many men are prepared to strike together and that this is an absolute and not a relative measure. But some account must be taken of the size of plants in an

Table 5-11: Size of all plants and size of strike-affected plants, manufacturing industry.

Industry	Wage earners per estab. 1900	Employees per struck plant, 1901-05	Size struck plants to size all plants (1)
Boot and shoe	6.84	321	46.9
" " " excl. custom and repair shops	73.2	321	4.4
Brewing	15.6	96.4	6.2
Clothing	7.08	111	15.7
Cooperage	10.7	80.2	7.5
Food	5.29	127	24.0
Machinery	39.3	214	5.4
Metals: Tin and steel	20.4	357	17.5
Other	3.50	57.9	16.5
Printing & publishing	7.83	66.9	8.5
Stone, clay & glass	15.4	101	6.6
Tobacco	9.31	54.3	5.8
Transport equipment	32.4	219	6.8
All industries	10.4	75.9	7.3

Note: (†) i.e. no. employees per struck plant divided by number of wage earners per establishment.

industry when cross-sectional comparisons are being made; other things equal, large plants will enable large strikes to occur. Strikes in tin and steel were larger than those in 'other metals' by a factor of 2.8 but the mean plant was six times bigger; size differences were thus less impressive. But while the correction for establishment size weakens one account of the effect of being 'advanced' it strengthens another. The view that protests will be large and brief in the advanced sectors, because the division of labour reduced the power of the workers while at the same time making them more discontented, is weakened; but an explanation stressing the role of the skilled workers is strengthened. If their protests are central to the strike movement, the size of strikes in the advanced sectors will not match the size of establishments in them because the strikes will be limited to the skilled men, who form a relatively small part of the total work force.

A second reservation concerns the data on establishment involvement. No clear pattern emerges here, with machinery and cooperage having a high proportion of their plants affected by strikes and all the metals industries and printing and publishing having low proportions affected. Inter-plant solidarity (as distinct from intra-plant solidarity reflected in the plant participation ratio) is very variable; it would be interesting to be able to compare non-manufacturing industries, but data on the number of establishments are not available here. The number of establishments per strike also measures the spread of strikes between plants and here a clearer picture emerges. Industries dominated by factory production, such as tin and steel, machinery, textiles and boots and shoes, had a low spread

of stoppages between plants; building, clothing and food had high levels. But the meaning of this is far from obvious since in cases where there were many small establishments close to each other strikes could easily spread beyond one workshop or site; a dispute in clothing more easily spreads to neighbouring shops than does one in a factory to another separate, and distant, establishment.

The third and most important reservation concerns the data on levels of strike activity. These are given in Table 5-12; as far as possible, they have been calculated on a standard basis, but differences in the definition of employment and a lack of complete consistency between the industrial classifications used in the strike statistics and those used in the employment data make the figures less than totally reliable. But broad comparison between industry groups are possible. The figures of the number of strikers per thousand employees do not show a clear association with the state of technical advance between industries. Apart from coal, the highest levels were recorded by the tobacco and clothing industries and the lowest by printing and publishing; and more 'advanced' industries similarly had very different records. Although the data in earlier tables are consistent with the view that workers in such sectors as tin and steel restricted their striking because of the loss of their power, the number of strikers per employee was greater here than it is in 'other metals'.

When strike frequency is considered, only a slightly clearer pattern emerges. Frequency was lower in such industries as tin and steel and machinery than in 'other metals' and was also low in transportation equipment and textiles. But the low

Table 5-12: Number of strikes and strikers per employee, 1881-1905.

Industry	Number of strikes per million employees	Number of strikers per thousand employees
Boot and shoe	323	35.5
Brewing	184	24.0
Building	295	34.2
Clothing	278	75.7
Coal	333	196
Cooperage	566	44.9
Food	143	33.7
Machinery	264	34.6
Metals: Tin and steel	200	51.6
Other	298	27.9
Printing & publishing	347	16.5
Stone, clay & glass	402	54.8
Textiles	153	32.1
Tobacco	678	100
Transport equipment	159	24.9
All industries	383	74.7

Note: Figures calculated on basis of employment at four base years (1880, 1886, 1893, 1900) corresponding to years at the start of each of the four periods covered by the Commissioner of Labor. Writing E for employment, with a suffix for each base year, the sum used in the denominator of the indices is:

$$(6 \times E_{1880}) + (7.5 \times E_{1886}) + (6.5 \times E_{1893}) + (5 \times E_{1900})$$

The figures are thus comparable to those in later tables relating to each of the sub-periods of 6, $7\frac{1}{2}$, $6\frac{1}{2}$ and 5 years.

level in the food industry, which had a small mean plant size and which was similar to the traditional sectors in such things as the number of establishments per strike, indicates that there is no simple tendency for frequency to decline the more advanced an industry was. As we shall see in section five, plant size is not a good predictor of strike frequency. But there was a tendency for the more advanced industries to cluster around the low frequency pole, which suggests that the skilled men may have been restricting their use of the strike here. The lack of any such relationship for the number of strikers per employee suggests that, when a strike occurred, it was a large stoppage involving many workers. This may seem to be inconsistent with the low plant participation ratio in the advanced sectors, but the strikes had a large <u>absolute</u> size, while involving only a small <u>proportion</u> of the workers in any one plant. They were large protests but not 'mass' ones since few workers in each plant were engaged and their spread across plants low.

We must now consider the strike patterns in individual industries to see how far the interpretation of strikes given above fits particular cases. Table 5-12 reveals that strike activity was high in sectors not usually associated with labour militancy; the tobacco industry was second only to coal in the number of strikers per employee and had the highest level of strike frequency. Tables 5-8 to 5-10 show that tobacco had a high proportion of strikes for wage increases and high ratios for plant participation and 'establishment involvement'. Strikes were large, when the low mean size of plants in the industry is taken into consideration, and the length of disputes quite high. But the most notable feature of the industry's

strike pattern was the greater rate of success for non-union than for union-led strikes. 57% of non-union stoppages, and only 50% of union-led ones, were won, in contrast to the position in all industries, where the figures are, respectively, 34% and 50%.

As I mentioned in discussing tobacco in chapter three, the industry was undergoing technical and organisational change at the end of the nineteenth century. Its strike pattern fits the model of an attempt by the skilled craftsmen to resist these encroachments. Their union was one of the first to be re-organised on 'business' principles, under the guidance of Strasser and Gompers.[32] The low rate of success of union-led strikes is consistent with an attempt by the organised men to use their union to defend themselves against mechanisation, while economic strikes could still be waged successfully.[32a] Gompers' attitudes to strikes illustrates this experience. In 1894 he argued that strikes were a result of the existing social and industrial system and in his early years was consistently militant and acknowledged the importance of the Marxist analysis of the class struggle. But he came to believe that striking against the machine was futile and that unions should seek to accommodate themselves with the employers; thus he did not feel that the growth of the corporation was a threat to the unions and refused to see legislation as a means to curb corporate power.[33] Despite the success of the Cigar Makers' Union in gaining control over strikes, the evidence of Table 5-10 shows that the usual arguments about the influence of the union on strikes need not hold. Spontaneous striking was criticised for leading to defeats and the loss of members and union control

was said to increase the success rate; Gompers argued that it was not necessarily wise to strike even against a wage cut, suggesting instead that the organisation of the union should be maintained and that lost ground could be made up later.[34] But in his own industry union control did not lead to the results claimed for it, even though the union was particularly strong in the claims it made for itself.[35]

The stove and furnace industry is included here so that the importance of technical advance can be explored further. Like the steel industry, which will be discussed in more detail in section seven, this industry had a strong national union relatively early and it was one of the first in which a system of trade agreements was established. But during the latter part of the nineteenth century, the position of the skilled men was eroded and finally destroyed. Although the standardisation of production was one reason for this, the industry was noted for the organisation of its employers and their determination to defeat the union.[36] Thus the comparison with the strike patterns of the rest of the metals industries will bring out the role of employer policy in determining the character of the strike movement. Strikes were even shorter than in tin and steel and the number of establishments per strike was very low. Despite a higher rate of union involvement in strikes, the overall rate of success was very similar to that in tin and steel; and, as Table 5-10 shows, the effect of union involvement was virtually identical. The lack of separate data for employment or the number of establishments in the stove industry prevents us from considering establishment involvement or the overall level of activity, but the data we have point to a marked

similarity with tin and steel. Thus the activity of employers may be an important independent factor in the strike movement.

This emphasis is confirmed when we examine the two non-manufacturing industries of coal and railroads. In neither of these were the technical conditions of operations being altered very significantly, but in both there are suggestions that the power of the employers was considerable. The miners engaged in large and long, although not particularly frequent, battles in which the plant participation rate was high. But the overall success rate was very low and union-led strikes were less successful than non-union ones. The proportion of 'defensive' strikes against wage cuts was higher than elsewhere. Again, we seem to have a case in which the union was being used to protect the position of the workers against the employers' attacks, although here the focus was on wage cuts rather than changes in work arrangements. This can be explained, of course, by the economic structure of the industry. Coal, as a primary product, has always faced an unstable level of market demand and has had constant problems of over-production; since labour cost was a large part of the total, pressure on the wage rate was the only way in which the employer could hope to maintain his profits. Hence strikes over wage cuts were a regular feature of depressions.[37] Although competition was intense in the product market, parts of the industry were coming under the control of cartels. This was particularly the case in the important anthracite fields of Pennsylvania, where the railroads were gaining control of large parts of the reserves to supplement their domination of the transportation of coal to consumers in the Eastern cities. The power of the corporations can reasonably be used

to explain the lack of success of the miners' strikes, despite the size and length of their stoppages.[38]

Railroad strikes were notable for their extreme brevity and the very low plant participation ratio and rate of success. Despite the long history of unions in the industry, the level of union involvement in strikes was low and, as in coal, union-led strikes were less successful than non-union ones. This pattern can be explained by the established position which the skilled men's unions (the 'operating Brotherhoods') held in the industry. As we shall see in section six, these unions struck rarely and most strikes were accounted for by the less skilled men; these disputes fit the pattern of brief, large and unorganised protests, but they were not 'mass' protests since the plant participation ratio and number of establishments per strike are low. However, there were also very large outbreaks of protest, such as the 'Gould strikes' of 1886 and the Pullman strike of 1894, and before them the great upheavals of 1877.[39] These strikes typically involved a union and were lost; hence the lower rate of success for union-led than for non-union strikes.

Railroad managements often operated closely together and, particularly in the Pullman strike, individual companies left the running of their side of affairs to the General Managers' Association, based on Chicago. This strike is also notable for the involvement of the Government in labour affairs. Although such involvement was not new and although the weapon of the court injunction against the strikers had been employed before, direct intervention by the government on the side of the companies was a novel feature of the strike.[40] The government does not seem to have had any clear policy of labour relations

which it wished to pursue; rather, it reacted to a situation which was defined as a threat to the social order as a whole. The strikers do not seem to have had any overtly 'political' aims; as I argued at the end of the previous chapter, government involvement in strikes should be explained in terms of the aims of the government itself. Here, a militant union, the American Railway Union, was seen as threatening the country's welfare by blocking the only long-distance form of transport available. The prevention of the passage of the Federal mails was seized on by the companies as a cause for governmental involvement; when this came, the combined power of companies and courts proved far too great for the union.

I have argued, then, that the state of technical advance of an industry helps to explain its strike record. However, the patterning revealed in Tables 5-8 to 5-12 is far from being totally consistent with the view that technical advance will determine the nature of workers' response. Aspects of particular industries' patterns do not fit this view and there were inter-industry differences which cannot be explained by it. I have suggested that the power of the employers and the government may have been important independent factors. The detailed investigation of the patterns of certain industries indicates that several factors apart from industrial advance were important; of these, the power of the employers and government seems to have been particularly important. But equally significant in other industries were the attempts of skilled men to use their unions to defend themselves against technical change; the failure of unions to counteract forces tending to make strikes unsuccessful suggests that men were using their unions for

support in their most bitter struggles.

4. Changes in industrial strike patterns

We have seen that, over time and between industries, the state of industrial advance does not determine the pattern of strike activity. The previous section showed that strikes in several sectors reflect the attempts by skilled men to defend their position in the face of technical change. In the present section, I consider changes of strike patterns within particular industries to test at a more detailed level the view that patterns will change as industries become more advanced. Again, no clear effect of industrialisation is apparent, nor is there strong evidence to suggest that increasing corporate power in certain sectors led to the repression of protests.

Since we are concerned with detailed comparisons of industries where technical or other changes occurred, the building and transport equipment sectors are dropped and the glass industry, where particularly significant changes occurred, considered by itself. 'Public ways and works' is added so that we may compare an industry where unskilled work was predominant with those in which craftsmen were important. It is unfortunate that data on the sub-sectors of the metals and transport industries are not available for the first three sub-periods considered (1881-86, 1887-94 and 1894-1900); comparison will be limited to the periods before and after 1900 (see Table 5-14). Table 5-13 gives strike indices by industry for each of the four sub-periods (the above three plus 1901-05).

I begin with the 'traditional' industry of cooperage. Establishment involvement fell, as did the solidarity of strikes, as measured by the plant participation ratio and the

Table 5-13: Strike indices, by industry, for sub-periods* 1881-1905.

Industry	No. estabs per strike		Establishment involvement				Duration per strike		Duration per establishment			
	(2)*	(4)*	(1)*	(2)*	(3)*	(4)*	(2)*	(4)*	(1)*	(2)*	(3)*	(4)*
Boot and shoe	1.51	1.36	4.30	3.67	1.77	2.90	34.5	21.7	34.5	22.8	22.1	16.0
Clothing	3.23	3.60	2.79	1.42	5.50	1.37	80.8	95.1	19.6	25.0	12.9	26.4
Coal	8.25	3.32	n.a.	n.a.	n.a.	n.a.	422	180	46.2	51.2	51.1	54.3
Cooperage	3.16	2.24	2.50	1.24	0.81	1.82	110	69.0	9.8	34.7	31.3	30.8
Glass	2.01	2.39	9.54	7.28	5.98	11.1	100	113	85.8	49.8	26.4	47.5
Machinery	1.60	2.97	0.59	0.46	1.43	5.37	67.1	136	29.9	41.9	33.3	45.7
Metals: all	2.33	4.84	0.69	0.61	0.40	1.08	53.1	339	28.9	22.8	28.7	70.0
Printing & publishing	1.95	5.36	1.05	0.75	0.79	1.60	56.3	104	27.3	28.9	20.3	19.3
Textiles	1.27	1.95	1.03	1.82	1.48	1.14	26.5	81.9	25.1	20.9	25.3	42.1
Tobacco	3.75	4.01	8.30	3.39	0.91	1.79	97.4	229	15.7	25.9	37.9	57.0
Transport: all	2.20	8.68	n.a.	n.a.	n.a.	n.a.	30.7	71.4	19.0	14.0	15.9	26.6
Public ways & works	1.85	1.90	n.a.	n.a.	n.a.	n.a.	19.2	38.0	5.2	10.4	8.4	20.0
All industries	4.64	5.00	1.61	2.15	1.96	2.83	134	166	23.6	28.9	33.4	33.2

*sub-periods are: (1) 1881-86 (2) 1887-94 (3) 1894-1900 (4) 1901-05.

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Table 5-13: (continued).

Industry	% establishments where strikes won (1)*	(2)*	(3)*	(4)*	% establishments where strikes lost (1)*	(2)*	(3)*	(4)*	Plant participation ratio (ST./B) (1)*	(2)*	(3)*	(4)*
Boot and shoe	52.7	36.1	29.0	38.1	35.7	54.5	63.2	47.7	33.0	34.2	29.9	18.3
Clothing	39.3	61.6	81.9	61.3	34.5	31.3	13.0	34.8	57.8	52.9	70.2	54.6
Coal	29.1	17.3	22.7	24.1	69.2	57.6	36.7	44.1	81.9	81.9	75.5	69.0
Cooperage	7211.	54.4	51.9	53.8	15.6	44.2	43.5	40.0	85.3	78.7	57.8	39.1
Glass	37.2	34.1	43.5	37.7	58.7	59.4	48.8	57.1	40.9	36.7	31.6	35.4
Machinery	38.6	31.3	61.1	31.4	48.8	58.6	28.9	48.2	60.3	18.2	22.2	22.2
Metals: all	52.8	43.3	35.3	31.2	37.8	48.1	52.7	61.0	43.7	28.9	22.2	26.8
Printing & publishing	44.8	32.3	49.8	40.4	52.6	58.4	40.3	46.4	44.8	28.2	26.0	28.3
Textiles	33.7	25.5	17.4	17.2	58.9	63.3	63.9	73.0	61.8	22.1	30.6	36.6
Tobacco	35.9	53.8	52.9	79.8	57.7	39.5	38.8	16.4	63.9	65.6	59.8	62.4
Transport: all	70.8	23.1	34.2	18.0	25.6	60.9	49.4	41.4	74.8	18.1	33.3	35.8
Public ways & works	29.7	43.4	43.1	18.5	46.4	42.8	47.5	73.8	62.1	56.3	54.5	47.8
All industries	44.9	41.3	60.4	40.0	42.0	46.5	24.7	40.9	64.3	43.7	49.5	41.9

*sub-periods: (1) 1881-86 (2) 1887-94 (3) 1894-1900 (4) 1901-05

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Table 5-13: (Continued).

Industry	Strikers per strike (ST./N)		Strikers as % total workers involved (ST./W)				Strikes per million employees (N/E)		Strikers per thousand employees (ST./E)			
	(2)*	(4)*	(1)*	(2)*	(3)*	(4)*	(2)*	(4)*	(1)*	(2)*	(3)*	(4)*
Boot and shoe	97.1	77.0	61.9	65.5	59.9	69.4	466	292	60.3	45.3	25.5	22.5
Clothing	83.9	225	78.5	79.0	83.2	78.9	380	371	56.0	31.9	122	83.4
Coal	937	532	85.3	84.2	82.8	74.6	257	293	134	241	215	208
Cooperage	63.4	70.1	99.2	93.7	84.8	89.7	520	760	90.8	33.0	19.0	53.3
Glass	156	141	50.4	44.6	47.8	47.1	344	620	81.4	53.5	41.1	87.3
Machinery	87.5	142	83.1	78.2	62.5	77.0	88	439	30.6	7.7	16.5	62.1
Metals: all	146	152	62.9	68.4	60.6	67.6	351	327	88.8	51.2	37.0	49.6
Printing & publishing	38.3	72.9	96.3	73.6	75.4	76.7	391	380	9.7	15.0	13.4	27.7
Textiles	130	310	47.7	52.3	59.5	82.1	186	162	20.6	24.1	37.5	50.2
Tobacco	125	147	84.5	86.7	73.3	88.7	831	480	251	104	56.1	70.7
Transport: all	272	116	92.1	64.6	91.5	62.2	n.a	n.a	n.a.	n.a.	n.a.	n.a.
Public ways & works	144	260	91.7	84.9	86.2	85.2	n.a	n.a	n.a.	n.a.	n.a.	n.a.
Allindustries	184	159	85.3	77.2	75.0	79.5	400	547	72.0	73.3	66.4	86.9

*sub-periods: (1) 1881-86 (2) 1887-94 (3) 1894-1900 (4) 1901-05

Table 5-14: Strike indices, metals and transport industries, 1881-1905.

Industry	No. estabs per strike (1)-(3)*	(4)*	Estab. involvement (1)-(3)*	(4)*	Duration per strike (1)-(3)*	(4)*	Duration per estab. (1)-(3)*	(4)*	% estabs where strikes won (1)-(3)*	(4)*
Tin and steel	1.88	2.66	0.86	1.24	63.8	92.0	34.0	34.6	38.4	32.6
Stove and furnace	1.53	1.39	n.a.	n.a.	26.1	36.2	17.1	26.0	37.6	43.6
Other metal	3.88	7.82	0.34	0.99	31.2	649	10.1	83.0	65.7	33.6
Railroad	1.35	1.31	n.a.	n.a.	4.8	10.8	3.5	8.2	23.6	16.4
Other transport	3.73	3.04	n.a.	n.a.	153	87.3	41.1	28.7	67.9	18.2

Industry	% estabs where strikes lost (1)-(3)*	(4)*	Plant participation (ST/B) (1)-(3)*	(4)*	Strikers per strike (ST/N) (1)-(3)*	(4)*	Strikes per million (N/E) (1)-(3)*	(4)*	Strikers per thousand (ST/E) (1)-(3)*	(4)*
Tin and steel	44.8	55.3	33.3	26.2	265	243	195	217	51.7	52.6
Stove and furnace	53.2	47.0	39.8	16.5	85.6	41.0	n.a.	n.a.	n.a.	n.a.
Other metal	28.5	53.4	30.3	30.0	88.4	103	266	387	23.5	40.0
Railroad	64.0	77.6	11.8	46.6	266	149	n.a.	n.a.	n.a.	n.a.
Other transport	25.6	37.3	58.6	33.0	304	107	n.a.	n.a.	n.a.	n.a.

*sub-periods: (1)-(3) 1881-1900 (4) 1901-05

number of plants per strike. Although strikes became longer, worker involvement and the rate of success fell. If these trends were observed in an industry undergoing technical change or 'trustification', it would no doubt be argued that they were due to these technical and organisational changes. Their occurrence in cooperage is a reminder that other forces were at work.

In the metals industry as a whole the number of strikers per employee fell at the end of the nineteenth century and then increased; the data on its sub-sectors suggest that this rise was concentrated in the 'other' section, but there is no evidence for a decline in the strike rate in tin and steel. Even after the defeats of the previous twenty years, steel workers at the start of the twentieth century maintained their strike activity at the levels of the earlier struggles. Although establishment involvement and the number of establishments per strike rose in the industry as a whole and in its constituent parts, the plant participation ratio fell, as did the rate of success of strikes. The fall in the participation rate was most marked in the stove and furnace sector, while the success rate fell most in 'other metals'. If technical change were the dominant force, the changes would be greatest in tin and steel, but Table 5-14 shows that there was no very great shift in the strike pattern here. Not only was the level of activity maintained, but the success rate did not fall very sharply and there was even an increase in the duration of strikes.

It will be recalled that in 1906 Commons argued that the corporations in the trustified industries were able to repress overt protest in their plants,[41] but the steel industry, which

is the prime example of such a case, does not bear this out. To be sure, strikes were defeated and the union weakened and, as I shall argue later, corporate power was a factor in this. But strikes were still held and their characteristics did not change a great deal. There are dangers, of course, in the limite comparisons available to us and it is possible that strikes after 1905 exhibited a changed pattern. Qualitative evidence for the period certainly suggests that the workers were repressed and that the occasional protests were short and spontaneous and generally unsuccessful.[42] But such evidence is clearly weighted towards the well-known struggles and need not be representative of the period as a whole; and we have seen above that some views derived from the qualitative data, such as that business unionism in industries like tobacco helped to increase the rate of success of strikes, are unwarranted. More importantly, the quantitative data for 1881-1905 indicate that any process of corporate domination was a lengthy one in which the workers did not give way easily.[43]

In tobacco, strike activity fell from the very high levels of the early 1880's, but increased in the twentieth century. The duration and size of stoppages rose, but the most notable change was the marked rise in the rate of success; in the first of our four periods 36% of strikes are won and in the fourth the proportion is 79%. It is this rise which the proponents of business unionism would use to support their case, particularly since in the 1880's the Knights of Labor had a considerable hold on the industry, but it is possible that the type of strike being undertaken was changing. After the defeats of the 1870's and 1880's on the issue of mechanisation, strikes may

have been fought over economic matters, so that an increased rate of success was to be expected. Of course, the business unionists could argue that they were instrumental in the shift of strike issues, but this does not cope with the problem that the move to these issues was based on acceptance of a basic defeat over job control. This defeat may have been inevitable and the resistance to machinery futile, but it is rather odd to argue that business unions improved the material conditions of their members when they were based on a refusal to challenge management on some central issues; a rise in the rate of success of strikes cannot simply be equated with a rise in worker power. Nevertheless, the tobacco industry illustrates one means of coming to terms with mechanisation after the initial battle against the machine was over.

The battle was lost in tobacco, but this was not universal. Thus in his classic study of the reaction of workers to the machine Barnett argued that the printers were able to come to terms successfully because machinery in their industry did not abolish the need for craft skills.[44] The low level of strike activity in printing and publishing suggests that there was little need for the men to strike to defend themselves, but the data on strike issues (Table 5-8) do not show the concentration on economic matters which would be expected if there was no need to strike over matters of job control. In an industry of small plants, the mean size of stoppages is naturally low, but both the plant participation ratio and the ratio of strikers to workers involved fall, suggesting a decline in the craft solidarity of the industry; and plant participation is not at a particularly high level, indicating that the amount of solid-

arity may be less than is often thought. Similarly, the rate of success is no greater than average; overall, the view of printing as an industry where the workers were uniquely successful in defending their position is in need of considerable modification.

Trends within the remaining manufacturing industries considered in Table 5-13 are of interest in themselves, but they add little that is relevant for present purposes; I therefore turn to the three non-manufacturing sectors. In the coal industry, there was a rise in the success rate of strikes, but no other strong trends which would support the view that strike sophistication was increasing. Similarly, there is no evidence for a rise in corporate repression, and, indeed, the years between 1897 and 1902 were notable for the rise of the United Mine Workers and the establishment of collective bargaining.[45] In the non-railroad part of the transport industry, on the other hand, strikes became shorter, smaller, less solidaristic and even less successful; this fall in sophistication is consistent with a rise in the power of employers. On the railroads, the large and very short protests of 1881-1900 gave way, at the start of the twentieth century, to rather longer and more solidaristic disputes. After the defeats at the end of the nineteenth century, workers altered the pattern of their strikes, but remained unable to increase the rate of their success. Despite the rise in the duration of transport strikes, stoppages remained very short compared with those in other industries. In later years, transport strikes have been settled very rapidly because of their immediate impact on consumers;[46] the ability of employers and the government, backed

by the public, to prevent long stoppages has had a long history.

In public ways and works construction, strikes were even shorter than in transport. Since stoppages were also large and unsuccessful, this industry fits the argument that early industrialisation will lead to brief and unorganised strikes. But it is notable that this pattern was limited to an industry dominated by unskilled work. Such a response was not common in other industries.

The limitation of the 'classic' response to industry to sectors where unskilled work was paramount is not surprising. Industry did not arrive suddenly or create a work force which was totally unaccustomed to such things as the rational planning of work. Although workers were used to industry, this did not mean that they accepted it unquestioningly. Not only did they strike to protect their conditions but they often engaged in lengthy struggles; strikes represented a movement of protest and not the spontaneous outburst of discontents. We have seen in this section that strike activity in certain key industries did not decline despite technical and organisational changes; strikes did not 'wither away' in the face of repression from employers. Intra-industry trends reflected several influences, such as employer attitudes and the rise of business unions, as well as the effect of structural changes within each industry.

5. Inter-industry regression equations

I have suggested in previous sections that an industry's position on the 'advanced-traditional' scale exerted only a general effect on strike patterns in that industry. We must now examine the strength of any relationship between technical

advance and strike activity, when one industry is compared with another. Several indices of technical advance may be suggested, including the size of plants in an industry, the amount of capital employed per head and the rate of change of these two variables. I begin with establishment size and capital per head, considering a sample of 57 industries (Table 5-15). I also use the level of wages in an industry, as an index of the economic well-being of workers; one would expect a high wage level to permit strikes, although it might also be suggested that prosperity will reduce discontent.

As Table 5-15 shows, these three variables have no linear association with strike frequency, the number of strikers per employee or the size of strikes. For strike frequency, the wage level exerts a direct effect and capital per head an inverse one; thus strikes are, if anything, concentrated in the 'traditional' rather than the 'advanced' sectors. It will be seen from the fourth equation that the addition of variables measuring the rate of change of establishment size and capital per head does not improve the solution. The rate at which an industry was becoming 'modern' does not seem to affect its strike-proneness. In the fifth equation the 'hand/machine cost' ratio is used. This is derived from the Commissioner or Labor's report on 'hand and machine labor'.[47] In this, data are given on the cost of producing standard items by hand methods and the best available machine technique; it has been possible to calculate averages for 34 of our 57 industries. Thus we have another rough index of how economically advanced an industry is. It will be seen that the use of this index increases the R^2 somewhat, but more important is the negative sign of its coefficient. A high state of technical advance, like a high

Table 5-15: Regression results, 57 industries, 1881-1905.

Dependent variable	Independent variables						R^2	F
	Estab. size	H	Cap.	Hand:machine	Ch. estab. size	Ch. cap.		
N/E	Neg	Pos	Neg				0.11	3.39
	NS	1%	1%					5%
ST./E	Pos	Pos	Neg				0.03	1.60
	NS	NS	5%					NS
ST./N	Pos	Neg	Pos				0.03	1.60
	5%	NS	NS					NS
N/E	Neg	Pos	Neg		Neg	Pos	0.09	2.05
	NS	1%	1%		NS	NS		NS
N/E (34 inds)	Neg	Pos	Neg	Neg			0.17	2.70
	NS	1%	1%	1%				5%

/Table continued over page.

Table 5-15: (continued)

Dependent variable	Independent variables			R^2	F
	Log.(Estab. size)	Log. H	Log. Cap.		
Log.(N/E)	Pos 5%	Pos 1%	Neg 1%	0.27	7.75 1%

Notes: ST is number of strikers

H is wage level

Cap. is capital employed per head

Hand:machine is ratio of hand to machine cost of production; for explanation, see text.

Ch. is proportionate change in variable between 1880 and 1900.

level of capital per head, reduces strike activity.

Finally in Table 5-15, I report the results of a double-log transformation.[47a] Since the linear association between the variables is not strong, it might be suggested that a non-linear association exists; thus in the case of the wage level there are arguments to suggest that it will increase and decrease strike activity, so that a curvilinear link with strikes may exist. The double-log transformation enables us to take account of some forms of non-linear association. The R^2 is improved, although not to very high levels, and the wage level and capital per head variables continue to exert, respectively, positive and inverse effects on strike frequency; establishment size now has a direct association.

By grouping our 57 industries into ten categories, we can examine the impact on strikes of another 'technical' variable measuring the horse-power employed per worker. As Table 5-16 shows, this variable, operating alone, explains 53% of the variance of strike frequency and 35% of that of the number of strikers per employee. The negative sign of the coefficient is in line with the other findings that technical advance tends to reduce strike activity. The Table also reports to coefficients of correlation between the horse-power variable and measures of strike activity. As one would expect, the coefficient is significantly negative for strike frequency and strikers per employee; these is a slight tendency for strikes to be shorter and less successful the greater the horse-power for head. Although we must treat the results from such a small sample of industries with caution, the explanatory power of this measure of mechanisation is impressive and suggests a strong tendency for strikes to be concentrated in the least

Table 5-16: Regression and correlation results, 10 industries, 1901-05.

a. Regression results

Dependent variable	Independent variables		R^2	F
	Power	T		
N/E	Neg		0.53	8.90
	1%			1%
N/E	Neg	Pos	0.65	6.58
	1%	NS		5%
ST./E	Neg		0.35	4.27
	5%			NS
ST./E	Neg	Pos	0.44	2.70
	NS	NS		NS

b. Correlation results

Zero order correlation coefficients between 'Power' and strike indices

	N/E	ST./E	% Won	% Lost	Size	Duration	% called by union
Power	-0.73	-0.59	-0.19	0.22	0.15	-0.26	0.21

Note: 'Power' is horse-power employed per worker.

advanced sectors.

Table 5-16 also reports the results of using union membership as an independent variable in our limited sample of industries. The addition of union membership increases the amount of variance explained, but the variable does not achieve significant levels of association with strike activity. The weak influence of union membership is also apparent in Table 5-17, which reports results for a slightly larger group of eleven industries. Although union membership has a direct and significant impact on strike frequency when operating alone, the amount of variance explained (as shown by the 'F' statistic) is not significant. When membership is considered with other variables, it loses significance.

Table 5-18 permits us further to consider union involvement in strikes; it reports, for the original sample of 57 industries, the coefficients of correlation between several aspects of strikes. It might be felt that the proportion of strikes ordered by a union could have been used in the regression analysis of Table 5-15, but it is not completely independent since the ordering of a strike by a union is, in part, contingent on the fact of a strike occurring; the variable does not indicate union strength prior to a strike. We are thus restricted to correlational analysis. One might expect the proportion of strikes ordered by a union to be associated with large strikes or with a high level of worker involvement, but this is not the case. There are slight links with the number of strikers per employee and with strike frequency, but the strongest association is with the number of establishments per strike. The presence of a union encourages strikes which

Table 5-17: Regression results, 11 industries, 1901-05.

Dependent variable	Independent variables			R^2	F
	Estab. size	H	T		
N/E			Pos	0.30	3.94
			5%		NS
N/E	Neg		Pos	0.33	1.99
	NS		NS		NS
N/E	Neg	Pos	Pos	0.33	1.17
	NS	NS	NS		NS
ST./E			Pos	0.06	0.62
			NS		NS
ST./E	Neg		Pos	0.14	0.65
	NS		NS		NS

Table 5-18: Correlation matrix, 57 industries, 1881-1905.

	N/E	ST./E	% strikes ordered by union	W/E	Estabs per strike
ST./E	0.69				
% strikes ordered by union	0.30	0.24			
W/E	0.67	0.92	0.07		
Estabs per strike	-0.03	0.12	0.43	0.02	
ST./N	-0.16	0.53	-0.01	0.46	0.13

Note: Signif. levels: 5% 1%

2 tailed test 0.256 0.328

1 tailed test 0.217 0.302

spread between several plants; that is, union-led strikes are the most likely to involve solidarity between workers in different plants, but there is no tendency for these strikes to be particularly large. This finding, together with the fact that, in industries where many workers strike, stoppages are 'sophisticated' in that they are large, but unsophisticated in being limited to one plant, shows that indices of sophistication are not closely correlated.

The findings of this section suggest, then, that technical advance consistently operated to reduce strike activity, while the wage level and degree of union organisation had weaker effects in the opposite direction. But, as Table 5-16 shows, the effects of technical advance were strongest on indices of strike frequency and worker involvement, and much weaker on the other aspects of activity. This confirms the argument of sections three and four that the influence of mechanisation on patterns of activity in particular industries was far from clear and consistent.

6. Distribution of strikes by occupation

Having examined the aggregate and inter-industry distributions of strikes, I turn in this section to the direct evidence relating to differences in the strike patterns of skilled and unskilled men. The data come from the first two of the Commissioner of Labor's strike reports, which included detailed data on every 'cessation' that was recorded. I have used the information on the occupation of the strikers to build up tables of the strike patterns of particular crafts in eight key industries; as far as possible, I have made these consistent with those presented in earlier sections, but the

lack of information on employment by occupation and industry makes comparisons of the overall rate of strike activity impossible.

The focus here is the view of Shorter and Tilly that three forms of reaction to industry can be identified.[48] First, there will be the craft groups which have met the challenge successfully. Their strikes will concentrate on economic demands because the workers do not need to fight over matters of job control; they will be organised by a union and this will enable the workers to hold out in long battles. In other words, strikes will be long. Secondly, there are the craft workers who have failed to meet the challenge of industry. Their strikes, too, are long and highly organised, but will be bitter fights over job control rather than straightforward economic disputes. Finally, workers in the newer industries will have strikes which are poorly-organised and short, for the solidarity on which they are based will be short-lived; since these workers experience no loss of traditional rights, the strikes will focus on economic demands rather than matters of job control.

It is surprising that Shorter and Tilly use only three indices (organisation, issues and duration) to distinguish between their three patterns. A fuller set of indices will be used here. Table 5-19 gives the relevant information for the metals industries; the data for the other industries are collected in Table A-16. The indices used in these tables are familiar, but a preliminary point must be made about the classification of strike issues. Since the present interest is in economic as against other issues I have used a very

Table 5-19: 'Cessations' by industry, metals and metal goods industry, 1881-94.

a. 1881-86

	Number	% with given issue			% ordered by union	% won[1]	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
Molders & puddlers	268	76.1	11.2	12.7	48.3	44.1	34.3	71.6	22.3
Smiths	87	86.2	6.9	6.9	81.4	71.8	9.4	26.9	34.4
Screwmakers, nailers etc.	69	78.3	14.5	7.2	39.1	43.8	45.0	48.9	18.2
Helpers & laborers	47	91.5	8.5	0	21.7	37.2	10.6	60.9	11.2
Others	22	81.8	18.2	0	18.2	61.9	9.1	200	32.0
Employees	262	83.2	9.9	6.9	67.6	36.1	34.3	295	74.6
All	755	81.1	10.6	8.3	55.3	44.8	30.2	145	43.0

/Table continued over page.

Table 5-19: (continued).

b. 1887-94

	Number	% with given issue			% ordered by union	% won[1]	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
Molders	225	48.0	27.6	24.4	80.0	23.3	29.4	63.8	10.4
Puddlers	63	60.3	17.5	22.2	47.6	15.0	50.2	84.6	12.1
Smiths	45	73.3	15.6	11.1	73.3	47.4	3.8	81.3	41.2
Screwmakers etc.	56	62.5	25.0	12.5	48.2	35.3	29.1	56.5	18.7
Helpers & laborers	24	70.8	29.2	0	4.2	8.7	4.9	50.5	5.2
Tin & sheet workers	25	48.0	8.0	44.0	92.0	60.9	20.6	28.0	12.1
Others	79	72.2	25.3	2.5	32.9	13.7	24.0	73.3	11.9
Employees	163	52.1	19.6	28.2	54.6	30.3	40.7	416	77.9
All	680	56.6	22.8	20.6	60.0	26.4	30.5	150	27.5

Note: (†) Number of strikes won as % total won and lost.

broad division into three types. The 'wage and hour' group includes disputes over the method of payment and demands for more holidays. 'Conditions' includes all matters of job control, work conditions, discipline and the like; and 'union' covers such things as sympathy strikes and expressions of solidarity with workers elsewhere as well as such things as demands for union recognition and protests against the sacking of non-union men.

At the beginning of Table A-16, I give the total figures for all eight industry groups, to provide a basis for comparison in discussing particular cases. Between 1881-86 and 1887-94 there was a notable overall shift in strike patterns, with a decline in economic disputes and a rise in strikes over conditions and union matters; and strikes became less successful, less solidaristic and rather shorter. Thus in the occupations and industries considered here there was a general fall in the 'sophistication' of striking.

As Table 5-19 shows, a similar pattern emerged in the metals industry as a whole. The shift is particularly clear among the 'molders and puddlers', who were the craft workers central to the industry. The molders had long had a strong union and had achieved a considerable degree of job control, but they were weakened by the changing organisation of the industry and the growth of the employers' power. The evidence here clearly indicates that the pattern of their striking altered; and it is reasonable to attribute this to changes in the power of the occupation over the work place. But the comparison with other industries is instructive. The printing trades, as we saw above, are usually seen as having coped

successfully with the machine, but Table A-16 (part 'a') shows that the compositors were less successful in their strikes between 1881-86 and 1887-94 and that the issues in dispute moved away from economic matters. Part 'b' of the Table indicates that the molders in machinery did not follow their counterparts in metals; although their strikes became less successful, the issues involved changed little and the mean length of strikes increased.

Thus there is no simple link between the threat to the position of an occupation and its pattern of protest. Not only were the changes between the two periods similar for molders and compositors, but the levels of the various indices were alike; thus in 1887-94 the ratio of successes to failures for compositors was 27% and for moulders in the metals industries it was 23%. Differences between craft groups are brought out further in comparisons within the glass industry (Table A-16, part c). Until the 1890's, the window glass workers held a dominant position in their section of the industry; the crafts in the green glass section held a somewhat less powerful position; and the flint and pressed glass workers were in much the weakest position and were not recognised as skilled men by the labour aristocracy of the rest of the industry.[49] The strikes of the window glass workers completely fit the pattern of the successful reaction to industry; they are long, successful and concentrated on economic demands. Similarly, the flint glass blowers represent the unsuccessful response. But, while bottle glass blowers fit the 'successful' pattern, green glass blowers, who should also fit this pattern, in fact matched the flint glass workers in terms of the issues in their strikes and their

rate of success; and a low mean duration of stoppages placed them nearer to the 'unskilled' pattern of brief protests. Thus again the tripartite model does not wholly describe the situation. The need to distinguish between the green and bottle sections of the industry exemplifies the problems of dealing with an industry as a whole and the great complexity of responses to industry by apparently similar groups.

The following part of Table A-16 gives data for the boot and shoe industry. This is particularly important because the 'mechanical revolution' occurred relatively early here and we shall be able to compare the strike patterns of workers in a mechanised industry with those of men in industries like glass where traditional methods were still important.[49a] In fact, the differences were not very great. There was the contrast between 1881-86 and 1887-94 (in terms of the issues, success and duration of strikes) which I have noted for other industries; and there was no great difference in the levels of the various indicators. The most notable feature of strikes in the boot and shoe industry was the marked decline in their mean duration from 35 to 16 days. It is impossible to say whether this represents a secular change towards 'modern' forms of protest, but the association between a mechanised industry and short strikes is important.

This association is also shown in section 'e' of the Table, relating to the textile industries, in which the growth of factory methods preceded that in boots and shoes. Here, strikes were consistently shorter than in the metals, machinery and glass industries and they were also much larger. The size of strikes may have been due, in part, to the size of plants

in the industry, but the plant participation ratio was (at least for 1881-86) quite low; this thus counters the effect of plant size. The other very marked feature of strikes in textiles was the very low proportion with union involvement. In view of the constant difficulties unions have experienced here, this is not surprising and there may be an association between the lack of unions and the brevity of the strikes. This, combined with their size, suggests that strikes here may have been typical of 'early' factory protests (unorganised, short and large), but we must also note that the rate of success was not very different from that in other industries and that the plant participation ratio does not show a tendency for strikes to have been plant-wide protests.[50] And the strikes were heavily concentrated among the weavers, whereas mass protests would involve more groups of workers; in other words, strikes of 'employees' would be particularly significant.

According to Lahne, the spinners in particular were suffering the effects of technical change in the 1880's and we might expect them to follow the 'unsuccessful response' pattern.[51] However, their strikes were more concentrated on economic demands than those of other groups in the industry and were no less successful; and since they were shorter than average they cannot be seen as long and bitter struggles. The smallness and apparent infrequency of spinners' strikes, together with the low plant participation ratio, suggest that the spinners could not mount an effective challenge to the employers either through their own strength or through the support of other workers. Their response was to strike rarely and on issues where they had some chance of success. Thus one response to technical

change is withdrawal from a battle which cannot be won. While some craft groups may engage in the bitter fights for job control described by Shorter and Tilly, others realise that such action is not possible for them and give way relatively passively. The 'unsuccessful craft response' has two forms; that described by Shorter and Tilly and a passive acceptance of the inevitable.

In the final two parts of Table A-16, we turn to two non-manufacturing industries. As I mentioned above, the unions of engineers and firemen on the railroads attained a powerful position in the industry. Consistent with the position of skilled men, their strikes are even shorter than those in the rest of the industry, and the plant participation ratio is lower; union organisation is high and the rate of success greater than elsewhere. This evidence, combined with the apparent infrequency of engineers' strikes, suggests that these men needed only short and rare strikes to achieve their ends and that they acted independently of other workers in the industry. But the issues in their strikes were not, as one would expect, heavily concentrated on economic demands; indeed, the proportion of 'wage and hours' strikes was rather lower than elsewhere. And although the success rate is greater than in the rest of the industry, its absolute level is not very high. It may be that, for these workers, the strike was a last resort and that they were able to defend themselves by other means, but there is no evidence that, when they did use industrial action, they were particularly successful.

As I mentioned above, the Pullman strike of 1894 was among the most important labour disputes at the end of the nineteenth

century. In Table A-16, I have separated this strike from others in the transport industries. Fifty separate 'cessations' connected with the strike were recorded and, since the stated aim of the strike was support for the employees of the Pullman company, they have all been placed in the 'union' category which includes, it will be recalled, sympathy strikes. Although the Pullman cessations were longer and larger than other transport strikes, the plant participation ratio was low. This may have been one reason for their failure: although the strike is often seen as a mass battle between a militant union, on one side, and the employers and government, on the other, only 13% of the employees in establishments in which strikes were called responded to the appeal.

Finally in Table A-16, data are presented for the public ways and works industry. These are of interest in showing in extreme form the characteristics of the strikes of unskilled men in an industry with no craft tradition. Disputes were very heavily concentrated on economic demands and had little union involvement; and they are large and short, with a high participation ratio. Thus they fit the 'mass protest' model for all their aspects except for the rate of success, which is not very different from that for other industries; indeed, we have see that the success rate is a very poor discriminator between types of strike within as well as between industries. This may be due in part to the technical weaknesses of the index mentioned in chapter one, but the lack of any clear differences between occupational groups is still remarkable. 'Laborers' in public works construction were about as successful in their striking as a number of skilled groups in other industries.

For 1887-94, it is possible to separate the strikes of street pavers from the 'other' category. These stoppages were similar to those of the 'unsuccessful craft response' despite the lack of anything in this industry which could be described as a craft tradition. This pattern of protest need not stem from the disruption of long-established craft practices and seems to occur among a number of different groups. We must also note the nature of teamsters' strikes. Although a strong union had not emerged by the 1880's and 1890's, and the proportion of strikes 'ordered' was low, drivers of teams had already established themselves; their strikes were very brief and highly successful and were largely of an economic nature. The sources of power of these workers are clear: the control of a key part of the distribution system and the fragmentation of the ownership of teams. The notable thing is the use of this power before the arrival of a strong union.[52]

Having examined the parts of Table A-16, we must consider some more general points. Nearly all industries include data on strikes by 'employees'. The main interest in them concerns their position as strikes in which 'class consciousness' is most likely to have been apparent; that is, workers of different trades united in their striking. As one would expect, these strikes were larger than those limited to individual trades and the plant participation ratio was generally much higher. But there was little difference from other stoppages on the other dimensions. There was no tendency for strikes by 'employees' to be concentrated on non-economic demands; or, to put this the other way round, disputes over work conditions were not particularly likely to lead to strikes in which different trades

united. This goes against the view that workers were particularly likely to strike together with 'fundamental' issues of job control are involved. There was only a slight tendency for strikes by 'employees' to have a greater duration and degree of union involvement than other stoppages.

In all industries and strikes of 'laborers', 'helpers and laborers' and the like were similar, with a low level of union involvement, a concentration on economic matters and a low mean duration. There was also a tendency, in the industries where these workers were employed together with skilled men, for the plant participation ratio to be low. This suggests that the protests of the unskilled men occurred in isolation from the struggles of other workers. But, in cases where the unskilled dominated operations, the participation rate was high; this is shown by the figures for public works construction but even more notably in the data for longshoremen given in part 'f' of Table A-16. The participation ratio was 98% in 1881-86 and 75% in 1887-94, giving an average of 91%. Thus, like miners, dockers had established a high level of solidarity at least as early as the 1880's.

In addition to these two main patterns of 'unskilled' strikes, we have seen that a number of types of action by the skilled men can be identified. Although difference have been noted, for example, in the mean duration of strikes by various occupations, the similarities are more important. The shift in strike patterns between 1881-86 and 1887-94 was common to all sectors, the rate of success of strikes varied little and there was a general focus on economic demands. Thus it has not proved possible to apply the simple dichotomy between types of craft

reaction to industrialisation; occupations with different degress of success in defending their position had similar strike patterns. And there is evidence that at least two types of the 'unsuccessful response' exist: fighting against the changes or accepting them passively. Similarly, a group which coped successfully with the challenge did not necessarily have a strike pattern reflecting this; the fact of having to engage in a strike may have meant that the group had been unable to defend some aspect of its position, whereas in general it could meet the challenge without a strike. And, of course, there was no guarantee that a position which had been established could be maintained intact. In 1890 the position of the window glass workers seemed secure but in a few years technical changes had been introduced and the power of their union destroyed. In the first two decades of the twentieth century similar changes occurred in the rest of the glass industry and a mass production system replaced a craft one.[53]

Although I have criticised Shorter and Tilly's model of craft adaptation, I would agree with them that strike activity is concentrated among the skilled workers; as they put it, the contemporary expectation that strikes would be concentrated in the modern industries, where the division of labour had been taken furthest, is not correct. The craft workers showed the greatest solidarity, they had the most to lose and they were the group best organised to engage in a struggle with the employers. In earlier sections I suggested that patterns of strike activity were consistent with a domination of skilled men over the strike movement. The present section has shown that in most industries strikes were conducted by the skilled

men. Although we have no employment data to assess to what extent the skilled were more strike-prone than other workers, it is clear that in absolute terms they dominated the strike movement; and they cannot have formed such a large proportion of the work force that they were less prone to go on strike than the unskilled men. Craft workers had the leadership and resources to conduct strikes and they were under the greatest pressure from the employers. Not only were their work conditions under threat, but their unions were also being challenged since, to the employers, they represented a source of resistance to their own domination.

In the following section, I take the steel industry as an illustration of this general point.

7. The case of the steel industry

The history of labour in steel is well known and only a brief outline concentrating on the current issues of interest is required here.[54] In the 1860's and 1870's the Iron Molders' Union was one of the strongest in the country and by exerting control over the skilled crafts was able to make itself an important force. But it and its successor, the Amalgamated Association of Iron, Steel and Tin Workers (formed by a merger of the iron unions in 1876) faced the growing challenge of the employers of the industry. Initially, competition was intense and cost cutting the order of the day; hence pressure was put on wages and efficienty. The new steel plants were large and complex and the Amalgamated was faced with a struggle to maintain the practices it had used in the older and more traditional iron foundries. Table 5-20 shows the growth of capital employed and of plant size in the industry.[55]

Table 5-20: Capital employed and mean plant size in the steel industry, 1869-99.

	Total capital employed (thousand dollars)		Number of wage earners per establishment	
	Blast furnaces	Steelworks and rolling mills	Blast furnaces	Steelworks and rolling mills
1869	145	156	71	119
1879	262	267	122	220
1889	426	661	110	332
1899	643	967	176	412

Source: P.Temin Iron and steel in nineteenth century America (M.I.T. Press, Cambridge, Mass., 1964) p.166.

The union had been of use to the iron industry in reducing competition, but, as Brody argues, only total submission would have suited the steel companies. The union was a barrier to full cost reduction and it was tolerated in the 1880's because it could not easily be removed. But in 1892 the Carnegie company destroyed it in the famous Homestead strike. In 1889 the Amalgamated had reached agreement with the company on a new sliding scale and the union was to be recognised, but in 1892 the company demanded a reduction in the scale, which was refused. It then declared that the plant would henceforth operate on a non-union basis; in winning the strike (or lockout) it succeeded in this aim. The Amalgamated retained its strength in a number of areas, particularly the tin-making section of the industry, but a number of defeats in the early twentieth century, particularly in the strikes of 1901 and 1909, effectively destroyed its remaining power.[56]

It is notable that the crucial early defeats came <u>before</u> the establishment of the United States Steel Corporation in 1901. The employers' interest in defeating the union was greatest when competition was the most severe and when cost-cutting was most essential for survival. Thus, the defeat of the union was not simply a result of the 'trustification' of the industry. And even when U.S. Steel was established it did not dominate the industry to the extent that might be imagined.[57] It still had to tread carefully in its anti-union campaign and it adopted a number of welfare schemes to forestall unionisation. On the product market front, the Steel Corporation failed to stabilise the industry and, in the first twenty years of its operations, actually lost some of its share of the market to

competitors. The famous 'Gary dinners' failed to achieve any covert price-fixing in the industry.[58]

Nevertheless, says Brody, it was the power of the corporation, rather than technical change, which defeated the Amalgamated. But the power was not at first absolute and did not stem from the corporation's domination of the product market. The power was used to split the workers by means of such things as pension and stock-ownership schemes which were designed to appeal mainly to the skilled men. Care was needed even in dealing with the demoralised Amalgamated with its out-dated policy of craft exclusiveness.[59] The argument for the importance of corporate power has been given a 'radical' twice by Stone.[60] She starts with the view that:

> 'In the nineteenth century, work in the steel industry was controlled by the skilled workers. Skilled workers decided how the work was done and how much was produced'.

She goes on to argue that technical developments in the period after 1860 did not replace men with machines; to do this, the owners needed unilateral control of operations. The Homestead victory gave them this and in the 1890's unprecedented changes were undertaken in which the need for skilled men was reduced and they were replaced by semi-skilled machine operators who lacked any general craft knowledge of steelmaking.

This argument has been taken a step further by Wachtel.[61] He argues that this early homogenisation of the working class was superseded by a renewed differentiation as the competitive phase of capitalism gave way to the monopoly form. The destruction of job control in steel in the 1890's led to a system of stratification within the working class which has existed

unaltered to the present. As Palmer notes,[62] there is the danger in this approach of exaggerating the extent to which skill dilution flowed direct from the wishes of the capitalists rather than from technical advances. There is also the difficulty of obtaining adequate evidence to support the contentions made; for example, it is hard to show convincingly that the wishes of the capitalists were the dominant factor.

However, it has been shown that capitalists had an interest in destroying the craft system and that the <u>effect</u> of the changes at the end of the nineteenth century was to increase their power. Technical changes were clearly necessary before the new system of domination could be imposed, but they did not in themselves determine the re-organisation of the social division of labour which they permitted. One need not accept the whole of the radical case, that production could be effectively arranged by the men themselves and that the capitalist could have been rendered redundant, to accept that re-division of labour was carried out. Rational planning methods were introduced and labour came increasingly to be treated as a 'factor of production' rather than as an integral partner in the production process. But there is the danger of romanticising the past in stressing the role of the independent skilled man before the changes of the 1890's: the changes <u>were</u> made despite the opposition of the workers and the capitalists clearly <u>already</u> had a considerable amount of power, and were prepared to use it. Emphasis must be placed on structural conditions rather than on the wishes of particular capitalists like Carnegie. The workers had retained a craft system based on the iron industry in the new conditions of steel and were naturally unclear about how to

alter it to meet new needs and yet defend their power over the work place. Technical change gave the employers the chance to use the power over their plants which had remained latent when craft methods were important. Thus it is not surprising that they were able to move the division of labour in the direction they wanted; they did not simply impose their desires since they had no clear aim in mind, as far as any final position is concerned. They reacted to conditions, but had a clearer idea than did the workers of how to react to, and control, technical developments.

Thus technical changes and employer power were both important for the changes in the division of labour that occurred. If we return to Table 5-19 we can understand more fully the strike patterns it reveals. For example, in 1887-94 tin and sheet metal workers remained relatively successful in their strikes whereas other skilled groups were already moving towards a pattern of 'unsuccessful response'. The Amalgamated Association managed to retain control of the tin and sheet mills later than the rest of the industry, but the defeat here came in 1901. The Table gives a snap-shot view of part of the process whereby the skilled trades were destroyed and replaced by semi-skilled workers.

We must note briefly the strike pattern that followed the victory of the corporation. Not surprisingly, the main feature of the first three decades of the twentieth century was the prevention of protest, partly through welfare schemes and partly through direct repression. In this period there were only two strikes involving 10,000 or more workers, in 1901 and the 'great strike' of 1919, compared with eight in the period

1933-41 and 25 in 1946-60.[63] The strikes generally took the form of mass protests, which were rapidly quelled and which did not generally achieve permanent gains.[64] The exception was the 1919 stoppage, which involved 365,000 workers and lasted 3½ months. It occurred after an organising drive of the A.F.L. unions with an interest in the steel industry, but can be seen as a mass protest since many workers who were not union members responded to the strike call and many of these were unskilled men in whom the A.F.L. unions showed little interest. The strike was defeated and the open shop system maintained.[65]

We have seen in this section that in one key industry there was a long process of the destruction of craft skills; there was no sudden confrontation with technical change in all trades at once. And the challenge faced by successive groups of workers was not that of 'industrialisation' since the iron industry had employed the factory system and a complex division of labour since at least 1860.[66] The challenge was the development of new forms of capitalist production; this was met with varying degrees of success but with ultimate defeat by the skilled craft groups of the industry. The legacy of this will be considered in the next two chapters.

8. The regional distribution of activity

We have now seen the effects of industrialisation on strike patterns in the aggregate, between industries, within certain key industries and between occupational groups. We must now consider very briefly the regional distribution of activity to see if there were any differences between areas 'new to industry' and those in which industry had been long established.

As we would expect from the findings of previous sections, no clear differences emerge, although the most urbanised regions seem to be the most strike-prone.

In tables 5-21 and 5-22, I give on a regional basis the various strike indices which have already been presented for industries. As will be seen, the data do not relate to the identical span of years, but they are reasonably comparable; it has been possible to use some estimates of non-agricultural employment by region to obtain indices of the number of strikes and strikers per wage-earner to supplement the analysis in chapter three on the basis of population. In line with the findings there, the Mountain region had a very high level of strike activity. Strikes were also long, involved a large number of plants each and had a high plant participation ratio. Thus the region fits the characterisation of an area where class conflict was significant and widespread. Remarkably for an area new to industry, the rate of success was high. By contrast, the Pacific region had quite low levels of activity and strikes were smaller and less successful.[67] And the presence of a union lowered the rate of success, whereas in the Mountain region it significantly increased it. Thus the experiences of two areas 'new to industry' were significantly different and the view that industrialisation had certain definite effects further weakened.

The similarity of the regions in the rate of union involvement in strikes is notable in view of the concentration of industry in certain areas and the well-known weakness of unions in others. Thus little of the variation between <u>industries</u> in union involvement can be attributed to regional differences.

Table 5-21: Strike indices, by region, 1888-1905.

Region	No. estabs per strike	Mean duration	Mean size	ST./B	Size struck plants to size all plants[1]	% estabs where strikes Won	% estabs where strikes Lost	N/E[2]	W/E[2]
New England	3.21	88.4	108	28.6	5.62	41.0	44.3	280	32.3
Mid Atlantic	5.28	109	209	44.3	6.99	54.7	29.9	532	114
East North Central	5.59	142	193	33.2	9.09	45.5	38.7	513	76.3
West " "	5.02	132	150	42.0	9.01	42.3	42.7	548	58.0
South Atlantic	3.63	108	186	43.5	9.43	36.2	43.0	259	38.9
East South Central	2.88	92.4	161	50.9	12.5	32.7	52.4	456	61.5
West " "	5.81	129	199	48.5	9.90	24.8	64.8	446	48.2
Mountain	6.31	306	183	59.6	4.63	54.5	35.6	1310	203
Pacific	5.35	393	131	54.8	5.32	30.9	56.0	531	74.0
All regions	4.95	129	183	39.7	8.05	48.0	36.7	457	76.4

Notes: (1)i.e. number of employees per struck plant divided by number of wage earners per establishment

(2)annual averages for period 1896-1905, divided by employment in 1899; i.e. figures are not comparable to those for industries.

Table 5-22: Results of strikes, by region and union involvement, 1881-1905.

Region	Strikes called by union as % Of total	% of estabs in which strikes called by union had given result		% of estabs in which strikes not called by union had given result	
		Won	Lost	Won	Lost
New England	84.2	43.2	41.0	29.1	62.1
Mid Atlantic	91.7	56.6	27.6	34.0	55.9
East North Central	91.1	46.6	37.0	34.1	55.7
West " "	89.7	43.1	40.9	35.0	57.9
South Atlantic	79.7	33.6	42.8	46.3	44.0
East South Central	84.8	34.4	49.8	23.2	67.1
West " "	91.7	25.0	64.8	22.1	64.5
Mountain	92.5	56.5	34.2	29.2	52.4
Pacific	94.0	30.4	56.0	38.2	55.4
All regions	90.3	49.5	34.6	33.9	56.3

Note: For definition of regions, see note to Table 3-9.

To be sure, in cases such as textiles, an industry could have had a low level of union involvement and have been concentrated in areas (New England and the South) which also had low involvement rates; but no general association of this kind seems to exist and it is in any case difficult here to distinguish between an 'industrial' and a 'regional' effect. As one would expect, the presence of a union generally raised the rate of success of strikes, but this did not hold in the South Atlantic and Pacific regions. A contrast between the latter and the Mountain region is again observed; in the Mountain area, the rate of success of union-led strikes was second only to the Mid-Atlantic region and the <u>difference</u> between union and non-union strikes more marked than it was elsewhere.

In the same way that the contrast between the newly-industrialising regions in the West weakens the view that industrial developments would have certain definite effects, a comparison between the New England and Mid-Atlantic areas indicates considerable differences in the rate of strike activity. New England had remarkably low overall levels of activity, being even less strike-prone than the States comprising the South, and it was also low on the indices of solidarity (plant participation and the number of establishments per strike). The Mid-Atlantic area was higher on all these indices and also had a higher rate of success. These regional differences might well have been due to differences in the 'industry mix' of particular areas, but the lack of employment data by region and industry prevents us from making any direct comparisons between regions when the 'industry effect' is controlled for; this question will be taken up again in the following chapter. But many of

the arguments considered in chapter two relate to the inevitable effects of industrialisation, independent of the particular structure of industry which is being created. These strong arguments receive little support from the data in Tables 5-21 and 5-22.

Table 5-23 reports the results of a regression model applied to 45 States. Four independent variables are used, two of which, the mean wage rate and the mean size of plants have already been used in the equations relating to industries. The 'percent Democrat' measure is used to see if Snyder's views on the political causes of strikes considered in chapter four receive support in cross-sectional analysis. Instead of using the composition of Congress as the index, the popular vote for the President in the elections of 1900 and 1904 has been employed as a rough measure of the political allegiance of particular States. The 'percent urban' measure is used to assess the views of Shorter and Tilly and others that strikes will be concentrated in urban areas; more direct evidence on this point is presented in the next chapter.

The model of Table 5-23 is fairly successful for strike frequency, but explains the number of strikers per head less well and fails to account for the proportion of strikes called by a union. As we found in relation to inter-industry differences, the level of wages exerts a direct influence on strike activity and the establishment size variable again fails to attain a significant association. As one would expect from Snyder's arguments, the coefficient of the 'percent Democrat' variable is positive, since a high Democratic vote is equated with a favourable attitude to labour. The 'percent urban'

Table 5-23: Regression results, 45 States, 1901-05.

Dependent variable	Independent variables				R^2	F
	H	Estab. size	% Dem.	% urban		
N/E	Pos 1%	Pos NS	Pos 1%	Pos 1%	0.54	11.8 1%
ST./E	Pos 1%	Neg NS	Pos 1%	Pos NS	0.27	3.70 5%
% strikes called by union	Neg NS	Neg NS	Neg NS	Pos NS	0.06	0.65 NS

Note: '% Dem.' is mean percent. of the total Democrat and Republican vote in the Presidential elections of 1900 and 1904 going to the Democrats.

'% urban' is a dummy variable representing urbanisation; see Appendix 1.

variable exerts a slight positive effect on strikes, but its failure to achieve significant levels of association suggests that the bringing together of workers in cities does not affect strike activity. This finding when combined with the significant effect of plant size between industries and States, shows that a dense concentration of workers does not influence strike activity. The contrast with France is very marked, for, according to Shorter and Tilly, the conglomeration of workers in large cities and factories was a critical factor here in the development of the strike movement.[68] Further data on this are presented in the following chapter.

9. Conclusion: the sources of diversity

I have argued in this chapter that industrialisation exerted certain broad effects on the strike movement. At the national level there was a decline in the effectiveness of strikes and, between industries, differences appeared which could be related to the position of an industry on the 'traditional-advanced' scale. But this scale is only a very rough one and the use of regression analysis did not lead to generally impressive results. Although measures of technical advance were consistently inversely related to strike activity, the relationship was not particularly strong. Trends within industries over time did not point to any clear developments in the direction of 'sophistication' or 'repression'. The occupational differences discussed in section six revealed a pattern far more complex than that suggested by Shorter and Tilly's tripartite model. In section seven we saw that in one industry there was a close interaction between technical changes and developments in the ownership of the means of production; the most notable fact

was the length of time which the destruction of craft unionism took and the need for the corporations to tread carefully. Section eight showed that regions which had been industrialised for similar lengths of time had very different strike records; we were not able to say if this was due to differences of industrial structure, but could reject the strong arguments that industrialisation had certain definite effects.

Using more detailed and qualitative evidence, Gutman and other writers have shown that the picture of inevitable corporate domination was misleading; in several cases, strikes were won against all the odds.[69] In the language of the writers considered in chapter two (section two), pre-existing social structures were able to exert a considerable influence against 'industrialisation'; or, more precisely, existing capitalist and middle-class groups were able to resist the corporate form of capitalism which they found to be as opposed to their interests as the workers found it to be opposed to theirs.[70] Nationally, the Populist movement was at the peak of its success with its campaign against 'monopoly'; as Pollack has shown, this was not a 'backward-looking' attempt to restore some golden age but a self-consciously reformist and 'forward-looking' movement.[71] These local and national movements reflected popular uncertainty about economic developments. In some cases they gave direct aid to workers in their struggles, but they also point to a more general antipathy to the corporations. In this environment, it is not surprising that the strike movement did not reveal a monolithic pattern of response by the workers.

A second source of diversity external to industry was the different rate at which industrialisation and urbanisation pro-

ceeded. These gross changes naturally occurred at different times and in different ways. Their precise impact varied according to a wide range of factors which we cannot go into here, but, as far as the workers were concerned, different areas represented very different environments.[72] In a country as large as the United States, such diversity was to be expected; we may tentatively suggest that the complexity of strike patterns here, compared to the clearer changes observed by Stearns and Shorter and Tilly, is due to the size of America when compared with the smaller and more homogeneous European countries. As well as internal developments, America was affected by the wave of immigration from Europe. As I showed in section two, immigration as a whole was not related to the strike movement, although there was a suggestion that the influx of skilled men was important. But clearly the effects on different industries were very different, although the lack of sufficient data on the number of immigrants, and their skill level, in individual industries means that we cannot quantify this. However, the contrast between the unskilled labourers used in heavy industry and the more skilled workers who entered the clothing trades is clear enough to suggest that the differences were important.

Within particular industries, there were important technical and managerial differences. Thus, as we saw when considering printing, the linotype machine did not destroy the workers' power because its successful operation was found to depend on skills which only the printers could provide. Elsewhere, inventions which were similar breakthroughs in the technical sense had a much more profound effect on skill requirements. 'Technical advance' was far from being a homogeneous

category. Managerial attitudes varied from outright hostility to the unions, through paternalism to reluctant acceptance of the workers' right to organisation. Although not too much weight should be placed on the pious pronouncements of men like Carnegie, who declared that in principle men had the right to organise but who in practice did everything they could to prevent the exercise of this right,[73] differences of approach were clear. These were reflected in the formation of the National Association of Manufacturers in 1895 and the National Civic Federation in 1900. The former took a 'hard line' and argued on traditional 'laisser-faire' lines that the owner of a business had the right to decide how it should be run, without any outside interference.[74] The latter was far more conciliatory and attempted to help the more conservative unions, as long as they kept to a moderate course.[75] As we saw in discussing the 'radical' institutionalisation theory in chapter two, it has been suggested that the N.C.F.'s policy was the more effective in disarming the labour movement.[76] This may well be true, but differences in the frequency and bitterness of strikes against employers adopting one or other of the two approaches would be expected.

Finally we come to divisions within the labour movement. As we saw in considering tobacco and coal, the A.F.L. form of business unionism was being firmly established after 1890, but important areas of opposition remained. Apart from the legacy of the Knights of Labor, there was a powerful Socialist presence in several unions. As well as operating within the A.F.L., radical unionism was present outside. I have mentioned the American Railway Union, but other movements were also important

and these culminated in the establishment of the Industrial Workers of the World in 1905. Even unions with similar ideological stances were often different in approach; thus the U.M.W. was able to integrate immigrant Slave Workers into its organisation much more successfully than were more craft-dominated unions. But perhaps more important were differences among the workers themselves. Splits between nationality groups have long been seen as crucial in preventing the growth of a homogeneous working class; temporary unity in a strike would soon evaporate. Skill differences to some extent cross-cut national ones but, since native whites and immigrants from northern Europe held most of the skilled jobs, also reinforced them. As we have seen in the case of steel, employers attempted to exploit these differences through such things as welfare plans which benefited mainly the skilled men.

Clearly, much more could be said on all these sources of diversity; but merely mentioning them indicates the great range of conditions through which the experience of industrialisation was mediated. Since the experience occurred at different times for different groups, as industry advanced into new areas and new immigrants entered industry in the long-industrialised regions, a very diverse pattern of response is to be expected.

We must now draw out the implications of the findings of this chapter for the institutionalisation theory. The 'breakdown' and 'deprivation' theories of the impact of industry receive no support; reactions are far more complex and reflect the existing position of groups of workers. Like France, America had a long commercial history and industry did not arrive out of the blue; hence it is not surprising that an approach through the 'interests' of the various groups faced

with the challenge of industry has been more fruitful. This also has implications for the wider aspects of the 'conventional' approach. Despite the 'pre-institutionalised' state of labour relations in most industries, striking was not always spontaneous and unsuccessful. As we have seen, the workers were able to call on several sources of aid in their strikes and in some cases craft groups remained powerful. The failure of union-led strikes to be more successful than non-union ones indicates that the workers here could rely on their own strength. To be sure, strikes were not part of an established and formalised round of collective bargaining. But in some industries trade agreement systems were set up which had quite long histories. And, in general, strikes were not unplanned outbursts, but had rational purposes. The struggle to maintain craft autonomy may have been ultimately unsuccessful, but it was not necessarily 'backward-looking' or hopeless.

The consistent tendency for technical advance to depress strike activity fits the radical argument that, as capitalism develops, it is able to enmesh workers in a system of its own creation. At this relatively early stage workers were not being bought off or the unions 'accepted' into the system, although movements such as the N.C.F. and welfare plans indicated that such an approach was already being developed. The aim was to destroy craft autonomy and replace it with a system of directing the labour force that was more under the control of capitalists themselves. The powerful reaction to radical movements indicates that the employers were uncertain of their position and had to take every precaution to defend it. As we have seen, this included the use of direct government influ-

ence when matters threatened to get out of hand.

However, we are not yet in a position to make a clear choice between the two versions of the institutionalisation theory or to make a comprehensive evaluation. Both stress the bitterness and violence of disputes in the nineteenth and early twentieth centuries and the presence of conflicting trends in the labour movement. Similarly, both argue that the employers were unwilling to accept any form of union and that the government and courts generally took a hostile approach to attempts by the unions to establish themselves. Nevertheless, the radical approach has the advantage of showing in more detail why the employers were so hostile; it was not because they clung to abstract ideas of individualism or because they had not yet learnt how to be 'responsible' in their labour relations, but because they had crucial interests in destroying any challenges to their authority in the plant. This sort of argument has been made by 'liberal' as well as by 'radical' writers; the differences between them will be brought out more fully in the following chapter. But the 'conventional' emphasis on the maturity of labour relations cannot explain why trade agreement systems were abolished or why employers did not learn to act 'responsibly'.

It is unfortunate that the strike data do not allow us to continue a detailed examination of responses to industry after 1905. It would be very useful to know how strike patterns changed in the years up to the First World War when, as we saw in chapter three, activity was at extremely high levels. I identified 1920 as the only possible watershed between 'early' and 'modern' protests and this interpretation would be strengthened if it were possible to show that, between 1905

and 1920, strikes became more 'sophisticated'. It is possible that the decline in immigration, the final defeat of craft-based struggles and the growth of unions during the War contributed to the development of more 'modern' forms of protest. But this is only speculation. We know, however, that there was no immediate breakthrough after 1920 and that the domination of the corporations continued until the Thirties. In the following chapter, I consider the character of the breakthrough when it finally came with the New Deal.

Notes:

1. R.B. Morris Government and labor in early America (Columbia Univ. Press, N.Y. 1946) p.200.

2. On the 1820's see G.N. Grob Workers and Utopia (Northwestern Univ. Press, Evanston, Ill., 1961) p. 4; on the 1840's, N.J. Ware The Industrial worker, 1840-1860 (Houghton Mifflin, Boston, 1924) p. xviii. See also T.R. Brooks Toil and trouble: a history of American labor (Delacorte Press, N.Y.,1964) p. 14.

3. P. Temin Causal factors in American economic growth in the nineteenth century (Macmillan, London, 1975) p. 64; R. Higgs The transformation of the American economy, 1865-1914 (Wiley, N.Y., 1971) p.50.

4. Higgs op.cit.; J.G. Williamson Late nineteenth century American development (Cambridge Univ. Press, Cambridge, 1974); E.C. Kirkland Industry comes of age (Holt, Rinehart & Winston, N.Y., 1961). A.R. Pred The spatial dynamics of U.S. urban-industrial growth, 1800-1914 (M.I.T. Press, Cambridge, Mass, 1966) pp.16-18.

5. H.A. Millis and R.E. Montgomery Labor's progress and some basic labor problems (McGraw-Hill, N.Y., 1938) pp. 9, 14. On corporate growth see R.L. Nelson The merger movement in American industry, 1895-1956 (Princeton Univ. Press, Princeton, N.J., 1959); W. Miller 'American historians and the business elite' J.Econ.Hist., 9, pp. 184-208 (1949); P.A. Baran and P.M. Sweezy Monopoly capital (Penguin, Harmondsworth, 1968) pp.215-30.

6. C.D. Long Wages and earnings in the United States, 1860-90 (Princeton Univ. Press, Princeton, N.J., 1960) pp.109,118.

7. J. Kuczynski A short history of labour conditions under industrial capitalism in the United States of America, 1789-1946 (Frederick Muller, London, 3rd edn 1973) pp. 81-113.

8. C. Hoffman The depression of the nineties (Greenwood Publishing Corp., Westport, Conn., 1970) p.283.

9. Quoted in E.L. Bogart and G.M. Thompson (eds) Readings in the economic history of the United States (Longman's, Green and Co.,N.Y., 1916) p.796. This and other official reports noted the rise of the corporations and argued that the necessity of unions should be admitted. See M. Derber The American idea of industrial democracy, 1865-1965 (Univ. of Illinois Press, Urbana, Ill.,1970) pp.88-90, 118-21; W.L.McNaughton & J.Lazar Industrial relations and the government (McGraw-Hill, N.Y., 1954) pp.346-48.

10. J.R.Commons 'Class conflict', paper given in 1906, reprinted in Commons Labor and administration (Macmillan, N.Y., 1913) chap.6; see esp. pp.71-75.

11. Quoted in C.K. Yearley Britons in American labor (John Hopkins Univ.Press, Baltimore, Md.,1957)p.16.

12. J.A. Garraty The New Commonwealth, 1877-90 (Harper & Row, N.Y.,1968) pp.136-41.

13. The work of Thernstrom casts severe doubt on the view that social mobility was particularly restricted in the nineteenth century and on the view that mobility declined with the coming of industry, the closing of the frontier etc. See S. Thernstrom Poverty and progress: social mobility in a nineteenth century city (Harvard Univ.Press, Cambridge, Mass.,1964); and The Other Bostonians: poverty and progress in the American metropolis, 1881-1970 (Harvard Univ.Press, Cambridge, Mass.,1973). But the belief that mobility was declining may have been important.

14. Garraty op.cit., p.156; S. Aronowitz False promises (McGraw-Hill, N.Y.,1973)pp.52-53; P.N.Stearns Lives of labour (Croom Helm, London, 1975) pp.300-01.

15. When large numbers of workers were new to industry, such values would be very important. See R.M. Williams American society: a sociological interpretation (A.A. Knopf, N.Y., 1951) p.186; H.G. Gutman 'Work, culture and society in industrializing America, 1815-1919 'Amer.Hist.Rev., 78, pp.531-88 (1973) esp. pp.561,577.

16. According to Williamson, whose estimates are used here, the industrial work force was 52% of the total in 1881 and 69% in 1910; see Williamson op.cit. (note 4) p.295.

17. See G. Rosenblum Immigrant workers: their impact on American labor radicalism (Basic Books, N.Y., 1973) p.131; G. Korman Industrialization, immigration and Americanizers (State Historical Soc. of Wisconsin, Madison, Wisc., 1967) p.51; J. Higham Strangers in the land (Rutgers Univ.Press, New Brunswick, N.J.,1955) pp.45-46.

18. C. Erickson American industry and the European immigrant, 1860-85 (Harvard Univ.Press, Cambridge, Mass., 1957) pp.49-50, 118-20; V.R.Greene The Slavic community on strike (Univ. of Notre Dame Press, Notre Dame, Indiana, 1968).

19. P.N. Steans 'Measuring the evolution of strike movements' Internat.Rev. of Soc.Hist., 19, pp.1-27 (1974).

20. Stearns Lives of labour, op.cit., pp.304,310. The four countries are Britain, France, Belgium and Germany.

21. H.G. Gutman 'Class, status and community power in nineteenth century American cities: Paterson, N.J., a case study' pp.263-87 in F.C. Jaher(ed). The age of industrialism in America (Free Press, N.Y.,1968); 'An ironworkers' strike in the Ohio Valley, 1873-74' Ohio Hist.Quart., 68, pp. 353-70 (1959); 'Two lockouts in Pennsylvania, 1873-74' Pennsylvania Mag. of Hist. & Biography, 83, pp.307-26 (1959); 'Reconstruction in Ohio: Negroes in the Hocking Valley coal mines in 1873 and 1874' Labor Hist., 3, pp.243-64 (1962).

22. E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ.Press, London, 1974) p.59.

23. Stearns 'Measuring the evolution of strike movements' op.cit., p7; Shorter and Tilly op.cit., pp.196-235.

24. Commons 'Class conflict' op.cit.

25. A constant mean size of strikes despite the growth of industrial plants, a fall in the plant participation ratio, a rise in union involvement and the continued importance of strikes on job control issues all support this contention. See below.

26. On the Homestead steel strike of 1892, Aronowitz writes: 'Although supported by many of the East European immigrants occupying the least skilled jobs, the strike was essentially a protest by the skilled workers against the employers' assault upon their privileged position in the mills'. (Aronowitz op.cit., p.148).

27. Stearns 'Measuring the evolution of strike movements' op.cit., p.24.

28. Stearns Lives of labour op.cit., p.310, emphasis added.

29. U.S. Commissioner of Labor Twenty-first annual report, 1906 (G.P.O., Washington, D.C., 1907) p.111.

30. Cf. R. Goetz-Girey Le mouvement des greves en France, 1919-62 (Sirey, Paris, 1965) p.110 where this is called the 'power' (pouvoir) of strikes in a particular industry.

31. Shorter and Tilly op.cit., p.59.

31a. See, for example, W. Herberg 'Jewish labor movement in the United States: early years to World War I' Ind. & Lab. Rels Rev., 5, pp.501-23 (1952) at pp.504-06.

32. J.R. Commons et.al. History of labour in the United States (Macmillan, N.Y., 1918) Vol. 2, pp.307-09.

32a. On the policy of the Cigar Makers and other unions regarding technical change see H.Ober Trade-union policy and technological change (Works Progress Admin., National Resources Project, Report no. L-8, Philadelphia, 1940).

33. B. Mandel Samuel Gompers (Antioch Press, Yellow Springs, Ohio, 1963) pp.68, 215, 223-25; P. Taft 'Organized labor and technical change: a backward look' pp.27-43 in G.G. Somers, E.L. Cushman & N. Weinberg (eds) Adjusting to technological change (Harper & Row, N.Y., 1963) at p.31. See also L.Ulman The rise of the national trade union (Harvard Univ.Press, Cambridge, Mass., 1955) pp.441-46.

34. Mandel op.cit., pp.22-40. See also S. Gompers Seventy years of life and labour (Hurst & Blackett Ltd., London, 1925) vol. 1, chaps 6 & 8.

35. Note that union strikes were also less successful than non-union ones in the brewing industry. Since strike frequency and worker involvement were lower than in tobacco, the lack of success in union strikes in tobacco cannot be related to the high rate of conflict in that industry. Similarly, the Brewery Workers' union had an industrial structure, so that the craft structure of the Cigar Makers cannot be used to explain the low rate of success of union-led strikes. See J.H.M. Laslett Labor and the Left: a study of Socialist and radical influences in the American labor movement, 1881-1924 (Basic Books, N.Y., 1970), pp.9-45.

36. Commons et.al. op.cit., Vol.2, pp.5-7, 48-53, 480-81; C.A. Madison American labor leaders (Frederick Ungar Co., N.Y., 2nd edn 1962) pp.23-32; C.E. Bonnett Employers' associations in the United States (Macmillan, N.Y.,1922) chaps 2-4.

37. On economic conditions in the industry, see W.H. Hamilton & H.R. Wright The case of bituminous coal (George Allen & Unwin, London, 1925). On the miners' struggles to 1905 see A.E. Suffern The American coal miners' struggle for industrial status (George Allen & Unwin, London, 1926) pp.11-90; M. Coleman Men and coal (Farrar & Rinehart, N.Y.,1943) pp.31-74; W.G. Broehl The Molly Maguires (Harvard Univ.Press, Cambridge, Mass.,1964); R.J. Cornell The anthracite coal strike of 1902 (Catholic Univ. of America Press, Washington, D.C., 1957).

38. Note that Kolko has argued that corporations were less powerful around the turn of the century than has often been supposed. It is true that the railroad, steel and oil trusts did not totally dominate the economy, but my concern here is with their power in relation to their workers, which was very great, and not with other aspects of their power. See G. Kolko The triumph of conservatism: a re-interpretation of American history, 1900-1916 (Quadrangle Paperbacks edn., Chicago, 1967) esp. pp.2-54.

39. See, respectively, R.A. Allen The great Southwest strike (Univ. of Texas Press, Austin, Texas, 1942); A.Lindsey The Pullman strike (Univ. of Chicago Press, Chicago, 1942); R.V. Bruce 1877: year of violence (Bobbs-Merrill, Indianapolis, Ind., 1959).

40. D.L. McMurry 'The legal ancestry of the Pullman strike injunctions' Ind. & Lab. Rels Rev., 14, pp.235-56 (1961). See also E. Berman Labor disputes and the President of the United States (Columbia Univ.Press, N.Y.,1924) pp.13-35; S. Yellen American labor struggles (S.A. Russell, N.Y., 1956; orig. publ. 1936) pp.101-35.

41. See note 10.

42. J.A. Fitch The steel workers (Russell Sage Foundation, N.Y., 1910) pp.139-46, 207-20; D. Brody Steelworkers in America: the non-union era (Harvard Univ.Press, Cambridge, Mass., 1960) pp.127-79; R. Hessen 'The Bethlehem steel strike of 1910' Labor Hist., 15, pp.3-18 (1974); J.A. Garraty 'The U.S. Steel Corporation versus labor: the early years' Labor Hist., I,pp.3-38 (1960).

43. Similarly, in machinery corporate power based on technical change has been as significant, but changes in strike patterns do not support the inferences which may be drawn from this. See, for example, D. Nelson ' The new factory system and the unions: the National Cash Register Company dispute of 1901' Labor Hist., 15, pp.163-78 (1974).

44. G.E. Barnett Chapters on machinery and labor (Harvard Univ. Press, Cambridge, Mass., 1926)pp.3-29; see also Barnett The printers: a study in American trade unionism (Princeton Univ.Press, Princeton, N.J., 1909).

45. See K.A. Kerr 'Labor-management co-operation: an 1897 case' Pennsylvania Magazine of Hist. & Biog., pp.45-71 (1975); R.H. Wiebe 'The anthracite strike of 1902: a record of confusion' Mississippi Valley Hist. Rev., 48, pp. 229-51 (1961); W.E. Fisher 'Bituminous coal' and 'Anthracite' pp.229-79 & 280-317 in Twentieth Century Fund How collective bargaining works (T.C.F., N.Y., 1942).

46. J.J. McGinley Labor relations in the New York rapid transit systems, 1904-44 (King's Crown Press, Columbia Univ., N.Y., 1949) esp pp.331-62; N.W. Chamberlain and J.M. Schilling The impact of strikes (Harper & Bros., N.Y., 1954) pp.142-86; cf. J.J. Kaufman Collective bargaining in the railroad industry (King's Crown Press, N.Y., 1954).

47. U.S. Commissioner of Labor Thirteenth annual report, 1898 (G.P.O., Washington, D.C., 1899).

47a. Logging only the dependent variable (the semi-log transformation) can cope with some forms of non-linear relationships, but the double-log transformation can handle a greater range; but neither can deal with cases where there is a direct relationship between two variables over parts of the range of the independent variable and an inverse link over other parts of the range. See, for example, K.A. Yeomans Statistics for the social scientist (Penguin, Harmondsworth, 1968) Vol. 2, pp.167-77.

48. Shorter and Tilly op.cit., pp.217-19.

49. P. Davis The development of the American glass industry (Harvard Univ.Press, Cambridge, Mass., 1949) pp. 126-65; M. Derber 'Glass' pp. 682-743 in Twentieth Century Fund op.cit., at pp. 694-95.

49a. See B. Stern 'Labor productivity in the boot and shoe industry' Monthly Lab. Rev., 48, pp. 271-92 (1939) esp. pp. 271-74; by 1900 all operations except lasting were wholly or partly mechanised, but the nature of the raw material (leather) means that the further stage of full automation of operation was hard to attain. On strikes in the 1880's and the role of the Knights of Labor see N.J. Ware The labor movement in the United States, 1860-95 (D. Appleton & Co., N.Y., 1929) pp.200-09.

50. See also the data relating to textiles as a whole in Tables 5-8 to 5-13.

51. H.J. Lahne The cotton mill worker in the twentieth century (Farrar & Rinehart, N.Y., 1944) pp.175-79; see also M.A. McLaurin Paternalism and protest: Southern cotton mill workers and organized labor, 1875-1905 (Greenwood Publishing Corp., Westport, Conn., 1971) pp.13-14.

52. On early teamster power see R.D. Leiter The teamsters' union (Bookman Associates, N.Y., 1957) pp.22-25.

53. Davis op. cit., pp.173-240; Barnett Chapters on machinery and labor pp.67-115; 'The passing of the National Window Glass Workers' Monthly Lab. Rev., 29, pp.773-88 (1929).

54. See in particular Brody op.cit. and H.B. Davis Labor and steel (Martin Lawrence, London, 1933).

55. See also K. Warren The American steel industry, 1850-1970 (Clarendon Press, Oxford, 1973) pp.121-42.

56. Brody op.cit., pp.50-75; L. Wolff Lockout: the story of the Homestead strike of 1892 (Harper & Row, N.Y., 1965). Cf. A. Benhamou-Hirtz les relations collectives dans la Siderurgie Americaine (Armand Colin, Paris, 1966) pp.1-18.

57. Kolko op.cit., pp.30-38; A. Berglund The United States Steel Corporation (Columbia Univ. Press, N.Y., 1907) esp. pp.95-96.

58. W. Adams 'The steel industry' pp.145-96 in Adams (ed.) The structure of American industry (Macmillan, N.Y., 1950).

59. Brody op.cit., pp. 73, 78-95; see also refs in note 42.

60. K. Stone 'The origins of job structures in the steel industry' Radical America, 7, no. 6, pp.19-64 (1973); quotation from p.19. See also S.A. Marglin 'What do bosses do? The origins and functions of hierarchy in capitalist production' pp.13-54 in A.Gorz (ed.) The division of labour: the labour process and class struggle in modern capitalism (The Harvester Press, Brighton, 1976).

61. H.M. Wachtel 'Class consciousness and stratification in the labor process' Rev. of Radical Pol.Econs, 6, No. 1, pp. 1-31 (1974) esp. p.11.

62. B. Palmer 'Class, conception and conflict: the thrust for efficiency, managerial views of labor and the working class rebellion, 1903-22' Rev. of Radical Pol. Econs, 7, No. 2, pp.31-49 (1975) at pp.31-32.

63. Work stoppages: basic steel industry, 1901-60 (U.S. Bureau of Labor Statistics Report no. 206, 1961).

64. There was several more significant disputes, notable the strikes at McKee's Rock in 1909 and the Bethlehem steel works in 1916, These were long and embittered struggles, so that we cannot assume that the protests of unorganised workers are necessarily short and ineffective; some writers even see these disputes as forerunners of the break-through to unionisation of the Thirties. Hence it is the infrequency of these strikes and not their brevity which is of key importance; they were temporary eruptions within the general pattern of corporate domination. See Davis Labor and steel pp.139-92, 238-41; Benhamou-Hirtz op.cit., pp.27-45; M. Dubofsky We shall be all: A history of the Industrial Workers of the World (Quadrangle Books, Chicago, 1969) pp.199-209.

65. D. Brody Labor in crisis: the steel strike of 1919 (J.B. Lippincott Co., Philadelphia, 1965); M.H. Vorse Men and steel (The Labour Publishing Co., London, 1922): The Interchurch World Movement Report on the steel strike of 1919 (Harcourt, Brace & Howe, N.Y., 1920).

66. See D.J. Walkowitz 'Statistics and the writing of working-class culture: a statistical portrait of iron workers in Troy, N.Y., 1860-80' Labor Hist., 15, pp.416-60 (1974).

67. For studies of the Mountain region, see Dubofsky op.cit. and refs 51-53 in chapter three. For the Pacific region see I.B. Cross A history of the labor movement in California (Univ. of California Press, Berkeley, 1935); N.L. Shumsky 'San Francisco's workingmen respond to the industrial city' Calif.Hist.Quart., 55, pp.46-57 (1976).

68. Shorter and Tilly op.cit., pp.283,305.

69. See Gutman's papers cited in note 21; B.K. Shelton 'The grain shovellers' strike of 1899', Labor Hist., 9, pp. 210-38 (1968); I.M. Marcus 'Labor discontent in Tioga County, Pa., 1865-1905: the Gutman thesis, a test case' Labor Hist., 14, pp.414-22 (1973).

70. As Thompson points out in another context, there is the danger of seeing early forms of social structure as simply 'pre-industrial' and of ignoring the many variations on the theme of transition to industrialism; and the shift in society was not to an abstract industrialism but to a particular form of industrial capitalism. E.P. Thompson 'Time, work-discipline and industrial capitalism' Past and Present, 38, pp.56-97 (1967) at p.80.

71. N. Pollack The Populist response to industrial America (Harvard Univ. Press, Cambridge, Mass., 1962).

72. For a study of one area see Korman op.cit. (note 17).

73. See Wolff op.cit. (note 56) esp. pp.62, 180; Derber op.cit. (note 9) pp.62-68; and two statements by the chairman of U.S. Steel in 1919, E.H. Gary, reprinted in part in C.E. Warne (ed.) The steel strike of 1919 (D.C. Heath & Co., Boston, 1963) pp.27-40.

74. A.K. Steigerwalt The National Association of Manufacturers, 1895-1914; a study in business leadership (Bureau of Business Research, Univ. of Michigan, Ann Arbor, Mich., 1964).

75. M. Green The National Civic Federation and the American labor movement, 1900-1925 (Catholic Univ. of America Press, Washington, D.C, 1956); cf. J. Zerzan 'Understanding the anti-radicalism of the National Civic Federation' Internat.Rev. of Social Hist., 19, pp.194-210 (1974).

76. J. Weinstein The corporate ideal in the liberal State, 1900-1918 (Beacon Press, Boston, 1968).

CHAPTER SIX

THE YEARS OF INSTITUTIONALISATION, 1933-45.

By the phrase 'the years of institutionalisation' I do not mean to imply that a fully-developed system had appeared by 1945. The post-war strike wave indicated that industrial relations had not yet become 'harmonious' and the legacy of the conflicts of the Thirties continued to colour the thinking of unions and management and academic analysts. But between 1933 and 1945 the direction of future labour relations was laid down. Events during these years did not occur in isolation from the past; for example, the form of unionism which emerged was naturally strongly influenced by the character of the labour movement in earlier years. But it was during the New Deal and war periods that a stable set of formal institutions for the governing of industrial relations was established. As I argued in chapter two, institutionalisation is a process which does not occur in a historical vacuum. In section three, I shall describe briefly two of the important variants of the process.

Between 1930 and 1941, union density rose from 11% to 23%; by 1945, it had reached 30%.[1] During these years, collective bargaining was established in most important industries and was given legal recognition. In 1933 the National Recovery Administration (N.R.A.) included in the National Industrial Recovery Act the provision that workers should be free to organise and to select representatives of their own choosing.

This legislation lacked sufficient force to be effective and, when the N.I.R.A. was declared unconstitutional in 1935, stronger measures, requiring the employer to bargain 'in good faith' and setting out certain 'unfair labor practices', were enacted.[2] This legislation was found to be constitutional in 1937 and the unions subsequently greatly strengthened their position, up to and during the war. My concern here is to examine how the strike movement developed during this crucial period; for purposes of comparison, data will be presented for the years from 1927, covering the periods of prosperity and depression which preceded the New Deal. The war years are included because they have been seen as important in the institutionalisation of the unions; Dubofsky, for example, argues that the war helped the unions to grow and strengthen their position and that these gains meant that they were prepared to co-operate in the war effort.[3]

Since I am concerned with the details of the process of institutionalisation, I shall give more attention in this chapter than elsewhere to the discussion of secondary literature. Clearly, I cannot contribute to our historical understanding of events under the New Deal, but the discussion of strike patterns would be very incomplete without a consideration of the general developments of which they were part; and to understand the working of the institutionalised system, which I consider in chapter seven, requires an analysis of its origins. My account of events will necessarily be highly selective and directed towards revealing the sources and

direction of institutionalisation. The approach adopted derives from two broad interpretations of events, which must be briefly reviewed. The standard 'liberal' view of the New Deal in general is that the government was favourably disposed to the workers and that genuine aid to union organisation was given;[4] although in several respects the Administration was ambivalent towards unions, and although in the N.R.A. period little real help was forthcoming, in general government encouragement was crucial for the unions' success.[5] It is true that workers had to fight for their new rights, which were not granted by an enlightened government or employers, but the political atmosphere was crucially important. This approach stresses the importance of the C.I.O. in building on the workers' discontents and in establishing stable organisations which could not only make concrete gains from the employers but also defend these gains against later attacks.[7]

According to the 'radicals', this approach underplays the importance of rank and file militancy and sees the strikes of the early New Deal merely as mass eruptions which paved the way for the bureaucratic unionism of the C.I.O.[8] It was this militancy which explains the resurgence of a dormant union movement and which has to be given central importance. But the rank and file movement did not continue to grow. Two reasons are given for this. The 'class collaboration' view is that the C.I.O. leaders held a 'corporate ideology' and were, in practice, not very different from the leaders of the A.F.L.; they sought to use the militancy to gain union contracts and

establish themselves in power and channelled it into 'safe' forms of expression.[9] The 'hegemony' line is that the workers were unable, because of the domination exerted by the system, to understand the extent of their own power or to develop programmes to put their vague demands for job control into practice.[10]

In order to choose between these interpretations, much detailed research is required. We cannot as yet say whether the collective bargaining contract was a burden for the workers or whether it was, as Brody claims, the aim of most strikes.[11] But the approaches have a great deal in common. They agree that there was a strike wave in 1933-34 and that this was more dominated by the rank and file than was that of 1937.[12] They both stress the need of the workers to fight for recognition and the lack of real support during the early New Deal. The liberals do not deny the significance of the sit-down strikes of 1936-37 or the control of the workers by the union leaders; indeed, Brody has suggested that in stressing this control the radicals are merely stating the obvious.[13] And, more generally, it would be agreed that the reform impetus of the government was strictly limited and that the Administration was acting in the liberal tradition of its predecessors.[14]

In particular, there is a broad agreement on the <u>effects</u> of developments under the New Deal. Whatever the causes of the pattern of accommodation which began to be established at the end of the Thirties, its effect was to control the more 'spontaneous' protests of the rank and file and to strengthen the position of the union leaders. These tendencies were further encouraged by the events of the Second World War. In analysing the strike movement, we can accept that rank and file discontents

were at the roots of the militancy which was characteristic of the period and examine the differences between 1933-34 and 1937, and such things as the sit-down strikes of 1936-37, in this light. Similarly, the process of institutionalisation may be seen in terms of the effects of a growing control of the rank and file by the union leadership.

Thus sections one and two examine the strike data at the aggregate level. Sections three and four, on the industrial distribution of activity, compare the present period with 1881-1905, as well as indicating the sectors in which the growth of militancy was most marked. A preliminary point which must be made here is that in many ways one is not comparing like with like. Thus between 1905 and 1927 many of the last traces of craft production methods were destroyed. For example, in 'Middletown' the glass and foundry industries were mechanised and the craft system of the 1890's eliminated. In several industries there were rapid increases in productive efficiency.[15] But comparison with the findings of chapter five can show if the overall distribution of strike activity changed with the 'modernisation' of industry and if the inter-industry parameters altered; for example, we can see if mechanical advance is still an important predictor of strike activity.[16] Section five presents data on the effects of urbanisation on strikes and section six gives some concluding comments.

1. Overall levels of strike activity

To assess the movement of strike activity as closely as possible, I shall use data on an annual basis in this section, beginning with 1927 rather than 1933 so that activity during

the New Deal period can be compared with earlier trends. It is clear from the above discussion that there are two key questions about strike activity. The first concerns the effects of the government's policy of encouraging collective bargaining; and the second relates to the relative importance of union leaderships and the rank and file in the strike movement, and to the process of interaction between leaders and led.

As Table 6-I shows, there was a great increase in strike activity, measured by frequency, workers involved and volume, after 1933. And, as we saw in chapter three (Table 3-4), matters of union organisation and recognition became increasingly important. These developments could, of course, be related to government policy; one might suggest, for example, that the change in attitudes was a pre-condition for the growth of the labour movement, which in turn affected strike activity. But, in a case such as this, it is impossible to establish the necessity of governmental encouragement. The shift to a policy of encouraging union organisation was a once-for-all change whose effects are hard to disentangle from other developments. But some conclusions are possible. After 1937, the legislative climate was more favourable to the unions than it had been before, since the constitutionality of the Wagner Act was now established; although the government had formally endorsed the policy of encouraging collective bargaining since 1933, it was not until 1937 that effective protection was given to the unions. But strike activity was not markedly higher after 1937 than it was before; an increase in governmental aid did not lead to an increase in strikes.

Table 6-1: Annual strike indices, 1927-46.

	W/N	D/W	N/E	W/E	D/E	Mean duration	Estabs per strike
1927	467	79.5	23.8	11.1	0.88	26.5	4.14
1928	520	40.2	20.3	10.6	0.43	27.6	4.49
1929	313	18.5	29.7	9.3	0.17	22.6	4.13
1930	287	18.1	21.9	6.3	0.11	22.3	4.06
1931	422	20.2	30.7	13.0	0.26	18.8	3.75
1932	385	32.4	35.9	13.8	0.45	19.6	3.77
1933	689	14.4	72.1	49.7	0.72	16.9	3.92
1934	790	13.4	72.2	57.1	0.76	19.5	4.00
1935	555	13.8	75.1	41.7	0.58	23.8	3.74
1936	363	17.6	75.4	27.4	0.48	23.3	3.42
1937	393	15.3	154	60.7	0.93	20.3	3.40
1938	248	13.3	95.9	23.8	0.32	23.6	3.32
1939	448	15.2	86.2	38.6	0.59	23:4	3.32
1940	230	11.6	78.1	18.0	0.21	20.9	2.64
1941	551	9.8	119	65.3	0.64	18.3	2.76
1942	283	5.0	74.6	21.1	0.11	11.7	2.63
1943	528	6.8	89.1	47.1	0.32	5.0	1.76
1944	427	4.1	119	51.0	0.21	5.6	1.82
1945	730	11.0	119	86.7	0.95	9.9	2.01
1946	923	25.2	121	111	2.81	24.2	2.99

For notes, see over page.

Table 6-1: (continued).

Notes: W/N, D/W, and D/E are all simple numbers; i.e. they are, respectively, the number of workers involved per strike, the number of days lost per worker involved and the number of days lost per employee.

N/E is the number of strikes per million employees.

W/E is the number of workers involved per thousand employees.

Mean duration is in days.

'Estabs per strike' is estimated from data on the frequency distribution of strikes by number of establishments affected. It is assumed that the mid-point of the 'eleven and over' category of establishments per strike is 20. The effect of different estimates of the mid-point is shown below, for 1940:

Mid-point	15	20	30
Estimated estabs per strike	2.37	2.64	3.18

Since the effect is not great, we can assume that the series in the Table indicates trends adequately i.e. that any change in the position of the mid-point will not affect the data very much.

As we saw in chapter three, the stated aim of the Wagner Act was to reduce strike activity, but this was clearly not achieved in the short term. The marked decline at the end of the period under consideration was associated, of course, with America's entry into the Second World War and not with the operation of the Act. But the War is important for the light it throws on government policy. The Administration had a clear interest in maintaining production and thus sought to achieve the unions' support for the war effort. It did this by bringing union leaders into the planning of the war; for example, in 1940 the National Defense Advisory Commission was set up with Sidney Hillman as its labour director and labour members were included on the National War Labor Board.[17] As well as seeking union co-operation, the government used direct pressure against strikes which were seen as threats to the war and in several cases struck plants were seized;[18] in some, troops were used to prevent strikes. As Table 6-I shows this 'carrot and stick' policy had a considerable degree of success; although the Administration was defeated by the miners in 1943, in general it secured a high degree of compliance with its demands for no strikes and rigid wage control.

To turn to the second question, the role of unions and their members, there was, of course, a positive association between union membership and strike activity during the Thirties, but the causal importance of the former for the latter is less clear. Strike activity began to rise rapidly from 1930 and this seems to have preceded the rise in union density. A common pattern in the early Thirties was for strikes to break

out among unorganised groups, with a union taking this as a cue for an organising drive. Table 6-2 shows that, until 1933, a high proportion of strikes had no union involvement. Peterson suggests that many strikers[19]

> 'had once belonged to trade-unions but the locals had disintegrated during the depression. The workers, however, were accustomed to collective action and the strike weapon'.

Nevertheless, a willingness to strike even without the support of a union indicates the extent of the workers' discontents. And many workers in the mass-production industries, who lacked a union tradition, began to strike. Their willingness to strike preceded their unionisation and they were often dissatisfied with their leaders.[20]

The decline in 'no organisation' strikes from 1934 suggests that the unions re-established their control over stoppages. But we must remember that a rise in union density was almost bound to increase recorded union involvement because B.L.S. data report not whether a strike was ordered by a union but whether the strikers were union members. And, even if the strikers were not members at the start of a stoppage, subsequent union involvement would qualify the strike for inclusion under the 'union' category. Thus we cannot reject the hypothesis that rank and file militancy was important until late in the New Deal period.

A spectacular expression of rank and file protest came in the sit-down strikes of 1936-37. Since these stoppages were often short and did not result in the workers leaving the plant, they are particularly likely to have escaped

Table 6-2: Strikes by union involvement, 1927-46.

	% of strikes with:		% of workers involved in strikes with:	
	union involvement	no org-anisation	union involvement	no org-anisation
1927	90.3	9.7	97.1	2.9
1928	89.8	10.2	97.1	2.9
1929	84.3	15.7	86.8	13.1
1930	85.8	14.3	91.6	8.5
1931	82.5	17.5	93.2	6.8
1932	84.7	15.3	91.6	8.5
1933	79.1	20.9	92.9	7.1
1934	93.5	6.5	98.2	1.8
1935	92.0	8.0	97.1	2.9
1936	91.5	8.5	95.4	4.6
1937	93.7	6.3	97.8	2.1
1938	97.3	2.7	98.4	1.6
1939	98.1	1.9	99.1	1.0
1940	98.1	1.8	98.9	1.1
1941	96.9	3.0	99.0	0.9
1942	95.3	4.7	98.1	1.9
1943	92.8	7.2	98.4	1.6
1944	95.8	4.2	98.8	1.3
1945	97.2	2.8	99.6	0.4
1946	98.1	1.9	99.7	0.3

inclusion in the official figures. But the B.L.S. was able to produce data on them, counting as a sit-down a strike in which the workers stayed in the plant for at least a day after stopping work; that is, the rule that a stoppage must last at least one day to be counted was maintained.[21] Table 6-3 gives the incidence of sit-downs for 1936-39. In 1936 and 1937 recorded sit-downs accounted for large numbers of strikers and many others were not counted. It is notable that sit-downs accounted for a greater proportion of workers involved than of strikes; thus, they were larger than average. This is surprising in view of the difficulties of organising plant occupations and indicates their 'mass' nature.

Although union organisation was the main issue in the sit-downs of 1936, in 1937 and 1938 organisation matters were less important than they were in other strikes; specific grievances over work conditions came to have a relatively high significance. The rate of success was not very different from that of strikes in general.[22] The proportion of sit-downs without union involvement was slightly higher than average, but very few seem to have had formal authorisation from the union hierarchy.[23] The sit-down movement as a whole was short-lived and represents the end of the 'spontaneous' actions of the rank and file which had been going on since the early Thirties. In several cases, notably in rubber and autos, it was a sit-down which led the way for union recognition, but such stoppages were not popular with the union leaders or the government and measures were soon introduced to control them.[24] The fact that they were large plant-based actions which were quite successful indicates that the sit-downs were not minor exceptions to the growth of bureaucratic unionism but were important in a continuing rank and file movement.

Table 6-3: Sit-down strikes, 1936-39.

	Number	% of all strikes	Number of workers involved ('000's)	% of all workers involved
1936	48	2.2	88	11.2
1937	477	10.1	398	21.4
1938	52	1.9	29	4.2
1939	6	0.2	3	0.3

Source: Monthly Lab. Rev.,48, p.1130 (1939); 50, p.1105 (1940).

Shop-floor protests achieved renewed significance during the Second World War. Although wartime strikes were very short, worker involvement did not decline despite the 'no-strike' policy of the unions. Both this index and strike volume fell in 1942, the first full year of the war, but subsequently increased. The strike wave of 1946 was less of a sudden explosion than the culmination of trends which had been apparent during the war. Table 6-2 shows that union involvement in strikes fell, despite a rise in union density. This evidence, combined with more qualitative findings, suggests that the war years were noted for a considerable amount of rank and file protest.[25] Union leaders and the government were able to ensure that strikes were short and their economic impact minimised, but they could not prevent disputes from developing into stoppages. However, the wartime conditions meant that the rank and file movement was limited to the shop level. As the final column of Table 6-I shows, the mean number of establishments affected by strikes continued the fall which had begun about 1934.

We have seen that rank and file action was important throughout the Thirties but that a continuing movement was not established. 1934 was a turning point of many strike indices and also seems to have been central in the development of rank and file protests. Several impottant strikes were defeated and threats of stoppages elsewhere de-fused. The upsurge of discontent was met with determined employer resistance and government assistance proved to be of a less concrete kind than had been hoped. The optimism of the early Thirties disappeared and a reaction set in against the N.R.A.[26] On the other side of the picture, there was a growth of union

control of strikes. The foundation of national C.I.O. unions took power away from the rank and file. The policy of seeking formal recognition from employers through the channel of collective bargaining fitted into the new national policy of giving the employer a duty to bargain with representatives of their employees' 'own choosing'.

The C.I.O. did not represent a departure from the model of business unionism and was led by men who believed in this model.[27] It grew up only after government labour policy had been formulated and could probably have done little to alter the fundamentals of the policy, even if it had wanted to.[28] Thus it is not surprising that collective bargaining under government supervision became the accepted approach. Given the advantages in terms of wages and security which the C.I.O. could offer, the memory of failures in the early Thirties and the lack of a clear alternative, even workers who had doubts about unionisation 'from the top down' were prepared to go along with the C.I.O.[29] The control of strikes which the C.I.O. unions developed did not come easily or immediately. In the unions of auto and rubber workers, the rank and file retained an important voice, but elsewhere, as in meat packing, bureaucratic unionism was established with relative ease.

During the Defense and war periods, bureaucratic tendencies were strengthened. I have mentioned that the government sought the unions' co-operation. This was largely granted and the unions found themselves involved in a large number of boards whose activities they were unable to control.[30] Increasing governmental involvement in disputes is shown in the data on the methods of settlement of strikes, given in Table A-17.

During the Defense period, the proportion of strikes settled by direct agreement between employers and unions fell and the number settled by government officials and boards increased. During America's active involvement in the war, these trends continued further; at its peak in 1943 the proportion of strikes settled by governmental intervention was 70% and these strikes included 82% of all workers involved.[31] Unions were similarly constrained in other matters. On wages the famous 'Little Steel' formula strictly limited the gains available. And on union security 'maintenance-of-membership' agreements prevented unions from strengthening their position. Under these agreements a worker who had become a union member was obliged to remain in membership during the life of the labour-management contracts of which they were part. This protected unions from hostile employers but limited their ability to expand their influence and increased the separation between leaders and led.[32]

As Weir puts it, the way in which collective bargaining was institutionalised at the start of the war meant that the process was conducted on the worst possible terms for labour.[33] The decline in the militancy of the union leaders was cemented through an alliance between government, business and labour which in fact gave labour little power:

> 'Only when the employers recognized that they no longer had the needed legitimacy to act as the full disciplinarians of the people in their employ, and that the union leadership could be used as a substitute disciplinary force, were they willing to join in building the institution of collective bargaining.'

Although the unions were able to establish themselves during the war, collective bargaining was carried out largely on the terms of the government and employers.

The broadest contribution of New Deal developments to the strike movement came in the establishment of formal procedures for dealing with industrial conflict. As we shall see below, strike activity had been very low in several industries in the 1920's; this is usually associated with the amount of power in the hands of employers. The New Deal policy prevented such a situation from arising again[34] and helped to determine the form which the institutionalisation of conflict would take. For example, formal government involvement has been a feature of industrial relations since the Thirties. Institutionalisation was not the result of a growth of 'reason' or the immediate recognition by employers of the advantages they could gain from working with business unions. 'Liberals' as well as 'radicals' stress that the initial impetus to a change in governmental policy came from the strikes of the early Thirties, in which rank and file discontent was an important element.[35] And they remind us that:

> 'power and interest can be issues of deadly conflict even in a system in which men agree on fundamentals'.

Although the C.I.O. accepted the business union model, this did not prevent it from being engaged in serious conflicts with employers. But the basis of these conflicts was the discontent of the rank and file.

We have seen, then, how strikes developed in this crucial period. Government policy, although important, reflected the pressures of rank and file unrest. Employers took time to be

convinced of the value of recognising unions. And unions did not necessarily set out to frustrate rank and file desires. But the interaction of government, employers and unions created a formalised bargaining system in which 'spontaneous' expressions of discontent were channelled. The war years were crucial in this development.

2. Time-series regression equations

In this section, I examine the extent to which strike frequency and duration are predictable from general economic conditions and the prosperity of employers. On the former, it might be felt that the 'mass upheaval' nature of strikes in the Thirties means that economic changes will be unable to explain their fluctuations; or one might argue that strikes were part of a more general movement of protest. If this is true, one would expect economicchanges to be less closely related to strikes than had been the case in previous periods. On the role of the employer, we need to investigate the strength and direction of the influence of employer prosperity on strike activity; the availability of profits data enables us to do this for the years from 1927.

Table 6-4 shows that, for one simple model, strike activity can be explained by economic changes, whereas the model does not work for two earlier periods. The Thirties were 'different' from other periods, but in a way which is directly opposed to the usual accounts. Although strikes had an important element of rank and file protest, and were not predictable bargaining encounters, the expression of dis-

Table 6-4: Regression results, 1900-41.

Dependent variable	Independent variables				R^2	D-W
	Trough	Peak	H/P	N_{t-1}		
N/E (1900-16)	Neg	Neg	Pos		0.05	1.84
	NS	NS	NS			
N/E (1919-29)	Neg	Pos	Neg		0.24	1.29
	NS	NS	NS			
N/E (1930-41)	Pos	Pos	Pos		0.67	2.08
	5%	NS	NS			
N_t (1916-41)	Pos		Pos	Pos	0.57	2.26
	NS		NS	1%		
N_t (1930-41)	Pos		Pos	Neg	0.65	1.94
	NS		1%	NS		

content was related to economic conditions. As one would expect, a deep recession, measured by the business cycle 'troughs' variable, exerted a direct effect on strike activity. The coefficient of the real wage variable (H/P) was also positive, in contrast with the negative coefficient for the whole of the period 1900-39, reported in Table 4-5. In the recovery from the Depression, rising wages encouraged workers to strike, although the effect was not significantly different from zero.[36]

The last two equations of Table 6-4 consider further the predictability of strikes. In a model similar to that of Table 4-6, the level of strike activity in the current year, N_t, is predicted from the level the previous year. In the Thirties this previous level, N_{t-1}, does not exert a significant effect on N_t and only the wage level is significant; but for 1916-41 as a whole only N_{t-1} is significant. This indicates how the Thirties were 'different'. The movement of strikes from one year to the next was unpredictable, in the sense that knowing the level of activity in one year does not enable us to predict the level the following year. But activity still reflected economic conditions, in particular the general prosperity of workers, as measured by the level of real wages. The results of this model suggest that the legacy of the Depression, reflected in the 'trough' variable, did not totally dominate strike activity throughout the Thirties.

Galenson suggests that 1937 was a turning point for labour.[37] Elsewhere,[38] he argues that, for 1936-41,

'The average duration of strikes tended to be inverse to their number'.

Correlational analysis gives some support to this, although the shortness of the period means that the inverse link between duration and frequency is not statistically significant.[39] When we compare this with the inverse link in 1940-72 (see Table 4-1) and the lack of association between duration and frequency in earlier years, it appears that the late New Deal marked a statistical turning point for strike activity. As We saw in section one, it was also a more qualitative turning point, with the peak of the sit-down movement and the effective start of more bureaucratic methods, exemplified by the recognition of the Steel Workers by U.S. Steel, The New Deal period was not only different from others in the nature of the link between economic conditions and strikes, but also appears to have been a time of transition towards the post-war institutionalised system.

In section one, I did not give systematic attention to the role of the employer, but we may now turn to this aspect via the 'employer well-being' model of Table 6-5. The productivity variable reflects the rate at which economic efficiency is increasing; we would expect a slow rate of increase to be associated with a firm line by employers. The productivity measure should, therefore, be inversely associated with strike activity.[40] Similarly, with the profit rate, a low rate will lead to employer militancy and there will be an indirect association between profits and strike activity. The third independent variable is the rate of change of wholesale prices; we would expect a rapid rate of increase

Table 6-5: Regression results, employer well-being model, 1927-41.

Dependent variable	Independent variables					R^2	D-W
	Prod.	Profits	Ch.P	Peak	Trough		
N/E	Pos	Neg	Pos			0.63	1.67
	1%	NS	5%				
D/E	Neg	Neg	Pos			0.19	1.62
	NS	NS	5%				
D/W	Neg	Pos	Neg			0.30	1.23
	5%	NS	NS				
Mean duration	Neg	Pos	Neg			0.32	1.79
	NS	1%	NS				
N/E	Neg	Pos	Pos	Pos	Pos	0.82	1.97
	NS	NS	NS	1%	5%		
D/E	Neg	Pos	Pos	Pos	Pos	0.18	1.79

/Table continued over page.

Table 6-5: (continued)

Dependent variable	Independent variables					R^2	D-W
	Prod.	Profits	Ch.P	Peak	Trough		
D/W	Neg	Pos	Neg	Neg	Neg	0.15	1.21
	NS	NS	NS	NS	NS		
Mean duration	Neg	Pos	Neg	Neg	Neg	0.16	1.77
	NS	NS	NS	NS	NS		

Notes: 'Prod.' is an index of labour productivity

'Profits' is the rate of return (book values) after tax

'Ch.P' is the proportionate change in the Wholesale Price Index.

to raise employer prosperity and reduce strike activity. Four dependent variables are used. It might be argued that employers have little influence over the initial decision to call a strike but that they can affect the duration and severity of disputes by making concessions or holding firm. Thus they influence the 'impact' rather than the 'decisional' aspects of strikes. Thus, as well as strike frequency, I use the number of days lost per employee (D/E) and two measures of strike duration (D/W and mean duration) as dependent variables.[41]

The first part of Table 6-5 reports the results of predicting strike activity from the three independent variables. Strike frequency is explained most satisfactorily and there are moderate levels of association with the measures of duration. For frequency, only the sign of the profits variable is as predicted and the coefficient is not significant. The significant positive coefficients of the other variables suggest that factors other than employer prosperity are at work. The higher the level of productivity and the rate of change of prices, the more strikes there are. In other words, strikes, as we know from chapter four, are commonest in prosperous times, for reasons not directly connected with the well-being of employers. It is thus particularly interesting that, for the measures of strike duration, the direction of operation of all three independent variables is opposite to that for strike frequency. Employer well-being seems to have an effect on the length of strikes which is separate from more general economic influences. The positive coefficient for the profit rate is a puzzle, for it

suggests that strikes are longest when employers are most prosperous. A plausible ex post explanation is that a high rate of profit indicates that employers have large funds with which to resist a strike; when they are well off they are willing to 'take a strike' because they have the resources to support a long struggle.

In the second part of Table 6-5, I report the results of adding the peak and trough variables to the employer well-being model. Thus we may compare the relative importance of general economic factors with influences specifically related to the employer. In line with the argument of the preceding paragraph, only the peak and trough measures are significantly related to strike frequency; an R^2 of 0.82 is obtained, compared with one of 0.63, when only the measures of employer well-being are used. The position of the employer is not important for the number of strikes called, when compared with other influences. For the measures of duration, the addition of the peak and trough variables reduces the overall R^2 and no coefficient is significant. It is also notable that the coefficients of 'peak' and 'trough' are negative, compared with the positive onces obtained in predicting to strike frequency. Thus the frequency and duration of strikes are related to economic factors in opposite ways.

We may conclude that, during the Thirties, strikes continued to be related to economic conditions, of which the legacy of the Depression was the most notable, but not the only, influence. The prosperity of employers had a slight effect on strike duration, but no impact on frequency. In

other words, the decision to strike rested on discontents which were caused by general economic conditions. We cannot conclude, of course, that employers were unimportant in strikes, but only that measures of their prosperity do not explain strike activity. We shall see below that attitudes to union recognition were often crucial in whether or not a strike was called.

3. The industrial distibution of activity.

One of the most notable features of strikes under the New Deal was the upsurge of activity in the mass-production industries. In this section, I investigate the overall distribution of activity, compared with that which was observed for 1881-1905, and then focus on the auto and rubber industries as key examples of the 'breakthrough' to a 'modern' pattern of strike activity. The steel industry is used to illustrate an alternative means by which the breakthrough was achieved.

Table 6-6 shows the proportion of strikes, workers involved and days lost accounted for by each industry. The industries listed first parallel, as far as possible, those considered in chapter five, while four other sectors of interest are added at the end of the Table. Comparison with Table 5-7 reveals that building and coal became less dominant, but that this has not been at the expense of the major manufacturing sectors. The machinery, metals and transportation equipment industries, for example, did not increase their share of strikes. The most marked shift was into the 'tertiary' industries, with services and trade accounting for over one-eighth of all strikes and the 'other transport' sector significantly increasing its share. The shift was less

Table 6-6: Proportion of all stoppages and employment accounted for by each industry, 1927-40.

Industry	Percent of: N	W	D	Employment as % total
Boot and shoe	1.9	2.2	2.2	1.3
Building	12.4	5.8	5.2	4.0
Clothing	13.1	12.1	8.3	3.2
Coal	4.2	21.1	31.3	2.9
Food	5.3	2.6	2.2	3.5
Machinery: non-electrical	2.6	1.9	2.0	2.5
electrical	0.8	0.6	0.7	1.2
Metals: basic steel	0.6	2.2	2.2	2.3
other iron & steel	2.8	3.7	2.1	2.2
other	1.6	1.1	1.2	1.1
Printing & publishing	1.2	0.2	0.3	1.3
Stone, clay & glass	1.8	1.1	1.4	1.2
Textiles	7.0	9.9	12.1	4.5
Tobacco	0.5	0.5	0.5	0.4
Transport: railroad	0.1	0.1	..	3.6
other	7.0	6.3	5.3	5.8
Transport equip.: locos, cars & ships	0.5	0.8	1.1	1.6
other	1.6	6.9	4.5	1.3
All above industries	64.8	79.2	82.7	43.9

/Table continued over page.

Table 6-6: (continued).

Industry	Percent of: N	W	D	Employment as % total
Chemicals	1.0	1.1	0.7	1.3
Lumber	6.1	3.3	4.4	1.8
Rubber	0.8	1.9	0.9	0.5
Domestic & personal service	5.7	3.5	2.8	7.2
Trade	7.9	3.0	2.2	21.6
All above industries	86.4	92.0	93.7	76.3
All industries	100	100	100	100

Note: Figures for employment are for 1940 and based on estimates of total employment; they are thus not comparable with the data in Tables 6-7 and 6-8 which are based on employment of production workers only.

notable when worker involvement is considered, but still apparent. In very broad terms, the strike movement seems to have followed the growth of the economy and the expansion of service industries.

Tables 6-7 and 6-8 show that the rate of strike activity in the tertiary industries, represented by 'trade', was much lower than that in other industries. They also show very clearly the areas in which the 'strike explosion' of the Thirties was concentrated. Although activity in the industries with a long union tradition, such as coal, building and clothing, increased, it did so much less slowly than the rise in the mass production industries. In nearly all of these, very marked increases occurred, representing the 'breakthrough' to a 'modern' pattern of strike activity. At the end of the 1920's strike activity here was, in general, lower than the average but by the end of the Thirties it was closer to the average and, in a number of cases, well above it. Thus in the 'other transport equipment' sector, which consists of the automobile and aircraft industries, worker involvement rose from less than one-third of the average in 1927-29 to over four times the average in 1938-40.

The contrast with the past is made even more apparent when we consider the data on strike activity for 1916-26. Only the number of strikes in each industry was recorded in this period and the industrial classification used was unspecific and not very comparable with that employed later. Table A-19 reports such information as we have and gives figures of strike frequency for those industries for which adequate employment

Table 6-7: Number of strikes per million employees (N/E), by industry, 1927-41.

Industry	1927-29	1930-33	1934-37	1938-40
Boot and shoe	118	120	199	101
Building	122	169	206	253(1)
Clothing	192	318	479	490
Coal	103	145	148	138(1)
Food	29	64	188	182
Machinery: non-electrical	16	34	148	127
electrical	7	12	135	93
Metals: basic steel	5	21	47	34
other iron & steel	30	67	162	116
other	17	51	244	165
Printing & publishing	27	55	99	78
Stone, clay & glass	22	66	213	178
Textiles	72	112	183	86
Tobacco	19	90	138	80
Transport: railroad	0.8	0.2	2	..
all	6	12	77	76(1)
Transport equip.: locos,cars,ships	15	49	182	85
other	14	26	141	85
Chemicals	16	14	106	126
Rubber	18	49	228	177
Trade	3	5	39	44
All industries	25	39	96	96(1)

Note: (1) figures are for 1938-41.

Table 6-8: Number of workers involved per thousand employees (W/E), by industry, 1927-41.

Industry	1927-29	1930-33	1934-37	1938-40
Boot and shoe	52.3	94.5	89.0	28.6
Building	26.3	34.8	38.7	70.3(1)
Clothing	56.2	276	193	77.8
Coal	200	212	386	632(1)
Food	2.7	17.6	38.7	39.6
Machinery: non-electrical	1.2	6.5	56.0	36.7
electrical	2.0	6.1	50.5	21.2
Metals: basic steel	1.4	23.3	101	27.2
other iron & steel	3.9	12.2	38.5	25.8
other	4.5	13.3	71.7	40.5
Printing & publishing	2.3	2.7	5.6	12.3
Stone, clay & glass	5.4	11.7	70.6	35.6
Textiles	24.3	61.8	150	28.9
Tobacco	4.9	63.1	45.2	45.1
Transport: railroad	1.5	..	0.4	0.1
all	2.4	4.3	33.6	21.5(1)
Transport equip.: locos,cars,ships	8.6	19.8	167	44.5
other	3.0	27.3	267	175
Chemicals	2.8	2.0	28.4	35.4
Rubber	6.4	19.7	90.0	117
Trade	1.0	1.8	6.2	5.5
All industries	10.3	19.7	46.7	37.6(1)

Note: (1) figures are for 1938-41.

data are available. It is clear that activity was very low in the mass production industries. Many are not even mentioned in the B.L.S. classification and, in those that are mentioned, strike frequency was very low. Stoppages were concentrated in building, clothing, coal and 'other metals'. This pattern was not altered until the New Deal period. As a further breakdown of Table 6-6 shows (Table A-20), the domination of strikes by building and coal continued until 1930-33, but their share of strikes subsequently fell rapidly.

The data on industrial strike patterns in the Thirties are much less detailed than those for 1881-1905, but some conclusions are possible from Tables 6-7 and 6-8 and from Table 6-9; the last shows the size of strikes by industry (W/N) and the number of days lost per striker (D/W); the latter is a rough measure of strike 'duration'. Some of the newly-organised industries, such as steel, rubber and autos and aircraft, were marked by large and relatively short disputes; and in the last two of these overall levels of activity were very much above average. In steel, strike frequency remained low and only in 1934-37 was worker involvement much above average. Since the rubber and auto industries were noted for their high level of rank and file militancy, it seems that strikes here can be seen as 'mass protests'. This is not to say that they were 'backward looking' or unplanned, but they were based on the demands of the rank and file. In both industries, new unions emerged and were led by men who had risen from the ranks, in contrast to many other C.I.O. unions where the leaders were from existing national unions, particularly the Mine Workers.[42]

Table 6-9: Number of days lost per worker and size of strikes, by industry, 1927-40.

Industry	D/W	W/N
Boot and shoe	18.5	500
Building	16.1	200
Clothing	12.5	394
Coal	26.9	2160
Food	15.0	214
Machinery: non-electrical	19.0	313
electrical	21.9	320
Metals: basic steel	18.5	1522
other iron & steel	10.4	571
other	20.1	274
Printing & publishing	21.1	84
Stone, clay & glass	22.5	262
Textiles	22.2	607
Tobacco	17.9	483
Transport: railroad	7.5	583
other	15.3	385
Transport equip.: locos,cars, ships	23.2	740
Other	12.0	1805
Chemicals	11.4	468
Rubber	9.1	971
Trade	13.4	160
All industries	18.2	427

In the case of autos, Mitchell has argued that :[43]

> 'The characteristic achievement of the C.I.O. was in organizing the auto industry, which stood as the model of mass production, and employed almost entirely semiskilled and unskilled workers, most of these drawn from small towns and rural districts'.

But the industry's strike experience was different from that in several industries. For example, in chemicals strike activity was at about average levels and, although the strikes were short, they were also quite small. In electrical engineering, strikes were long and small, with frequency and worker involvement at about average levels. And in non-electrical machinery there was a very similar pattern. The form of unionism which developed in autos was very different from that elsewhere, with organisation 'from above' being rejected in favour of a union led by men from within the industry; the United Auto Workers developed into the prime example of so-called 'social' unionism, in contrast to the more usual 'business' unionism.[44] And rank and file action remained central to the strikes of the industry later than was the case elsewhere; the peak of this was the sit-down strike at General Motors in 1936-37, which led to union recognition here and paved the way for recognition in the rest of the industry.[45]

The rubber industry was similar to autos in many respects other than the pattern of strike activity. Sit-downs were important; indeed, the rubber workers were among the first to make systematic use of this weapon.[46]

Organisation from above was rejected and mass action stressed. These similarities of worker action are the more notable when the parallels in the structures of the rubber and auto industries are considered. Both were concentrated in particular cities: respectively, Akron, Ohio, and Detroit. Both used mass production methods and had grown up with virtually no threat of unionisation. In 1935 a government committee listed the discontents of the auto workers:[47]

> 'Labor unrest exists to a degree higher than warranted by the depression. The unrest flows from insecurity, low annual earnings, inequitable hiring and re-hiring methods, espionage, speedup and displacement of workers at an extremely early age.'

These problems were, by and large, shared by the rubber workers. Their industry relied heavily on autos for a market for its products and thus the instability of the demand for automobiles affected their earnings and security. The rubber industry was well-known for the speed-up of operations and for sacking men who became too old to tolerate the high pressure of work which was characteristic of the rubber factories.[48]

In view of all these similarities, it is interesting that the strike experience of the rubber industry was not only similar to that of autos but was very different from that elsewhere. Perhaps particular stress should be placed on insecurity and the speed-up. For autos, Fine argues that these things were more important than the monotony of mass production work;[49] as other studies have shown, this feature of the technology of auto production is a less important

cause of unrest than is often thought.[50] And the level of earnings in autos was higher than it was in other industries;[51] a high variability was the characteristic feature of earnings in rubber and autos. Insecure employment, the speed-up and inequitable hiring were, of course, not a new feature of these industries in the Thirties and they are thus not a sufficient explanation of the outbreak of unrest here. But they do distinguish them from other industries and help to explain their relatively high strike-proneness, within the context of the depression and governmental encouragement to organisation.

Thus the process of unionisation differed from that in steel and this, in turn, had implications for the form of institutionalisation which emerged. The following chapter will consider the results of this in the post-war period, but we may note here that, even before the start of the war, the U.A.W. was becoming more similar to other unions. Factionalism was declining and the distance between the workers and their leaders growing. During the war, the no-strike pledge was closely adhered to, but the pattern of strike activity did not necessarily reflect the extent of the union leaders' co-operation with the government.[52] Table 6-10 gives four indices of strike activity for the three full years of war, 1942-44. Strike activity in motor vehicles was not only greater than the national average but was considerably higher than that in comparable sectors.[53] It is notable that the strikes were small and 'short' (i.e. they had a low D/W ratio), suggesting that they were unorganised protests. The contrast with aircraft is interesting since

Table 6-10: Strike indices, selected industries, 1942-44.

Industry		N/E	W/E	W/N	D/W
Building		123	18.5	116	6.14
Clothing		147	33.5	227	4.63
Coal		543	349	642	11.6
Food		149	29.1	195	3.23
Machinery: non-electrical		179	68.8	384	3.00
electrical		91	42.9	474	2.93
Metals: basic steel[1]		400	173	433	3.23
all iron & steel		389	160	413	2.72
Textiles		153	55.6	363	6.11
Transport: all		77	15.8	204	4.08
Transport equip.: all		120	142	118	2.77
	motor vehicles[1]	268	404	151	3.13
	aircraft[1]	79	118	1488	2.12
Chemicals		130	39.3	303	3.66
Rubber		322	260	811	2.82
All industries 1942-44		95	40.0	423	5.35
	1943-44	104	49.0	470	5.42

Note: (1) 1943-44 only.

this was, of course, one of the key war industries. Here strikes were very large, but infrequent and short, suggesting that they were occasional mass protests. Whether the low level of strike activity was due to the aircraft workers' commitment to the war or to the repression of their dissatisfactions is impossible to say, but the contrast with the auto workers, who were to a large extent organised by the same union, is important.

The steel industry illustrates a very different mode of institutionalisation from that of autos and rubber. Here, a national union was created 'from above' and the crucial breakthrough, the recognition of the Steel Workers' Organizing Committee by U.S. Steel achieved without a strike. As we saw in chapter five, craft unionism was destroyed by the early twentieth century and, despite several important strikes, particularly that of 1919, the companies were able to maintain their domination. Throughout the 1920's they faced very little opposition from the workers, but in the early Thirties several local unions were established and strike activity began to increase. This is naturally seen as more than a response to the improvement of business conditions since strikes were previously concentrated in the late rather than the early stages of recovery; unrest had accumulated and conditions under the N.R.A. provided some outlet for this. More fundamentally, the protest was seen as being against the system of repression which the steel companies had built up and for greater independence for the workers.[54]

It seems clear that in these early years organisation was based on the rank and file. Several insurgent groups entered the Amalgamated Association, which retained a slight presence in the industry, and attempted to revitalise it. From 1933 to 1935 organisation 'from below' grew in importance, but was never able to achieve a significant breakthrough. In particular, a strike threat in 1934 never materialised and by 1935 the union stood more or less where it had two years previously.[55] The contrast with the arrival of S.W.O.C. in 1936 is considerable. A large number of professional organisers entered the mill towns in a carefully planned and centrally controlled drive, manned and financed very largely by the U.M.W. The agreement with U.S. Steel was negotiated by Lewis, the head of the C.I.O. and of the U.M.W., and presented as a fait accompli. But the success of this 'from the top' method was not complete. The S.W.O.C. received a severe set-back in the Little Steel strike of 1937 and did not organise these companies until 1941.

I cannot go into the question here of whether the movement of 1933-35 could have made more concrete gains or whether the S.W.O.C. 'sold out' on its members by concentrating on material gains and a union contract. For present purposes, the significance of steel is that it illustrates one route to an institutionalised system. The standard model of the process of institutionalisation sees a period of hostility and aggression giving way to more 'reasonable' and harmonious relations. But, despite U.S. Steel's position

as one of the leaders of the anti-union movement, the company recognised the union without a fight. And relations before the recognition cannot be characterised as being entirely hostile and lacking in any understanding of the other side's position. The growth of 'reasonableness' did not begin after the signing of the first contract but was central to the decision to sign in the first place. The process of institutionalisation was a complex one which had many variants. It was not inevitable that it would take a given course since, as the earlier militancy showed, directions of unionism other than that exemplified by S.W.O.C. were possible.

Strikes were not, of course, restricted to the mass production industries. Tables 6-5 to 6-9 show that many sectors not noted for a high level of militancy in the Thirties, such as boots and shoes and tobacco, had high rates of strike activity. And even where the unions were re-established fairly quickly, as in clothing[57] and building, activity was high, suggesting that the strike movement represented a general protest against conditions induced by the Depression. But on the railways activity 'withered away' to become negligible by the end of the Thirties. As Kaufman has pointed out, this was partly due to the depressed state of the industry, in contrast to the generally improving situation elsewhere. But it was also associated with the long history of collective bargaining and the established position of the unions.[58] In one industry, at least, the institutions of collective bargaining insulated the workers from the protests going on elsewhere.

The most notable feature of wartime strikes (Table 6-10) is the very high level of activity in the coal industry. Although coal was as important as aircraft to the war effort, miners were able to challenge successfully the government's attempts to maintain production. Coal strikes, and in particular the national stoppage of 1943, were the main focus of public attention and the impetus to the passing of strong anti-strike measures, notably the Smith-Connally Act. But they are of interest here for the light they throw on the expression of protest during the war. Only the miners were able to hold strikes which were anything like as long as peacetime stoppages. Other workers were prevented from holding more than protest strikes. This could be explained in terms of the miners' traditions of independence and their isolation from community pressures, or of the particular problems of wages and conditions which they faced. The former set of causes is the more important here, for it suggests that miners were not open to the pressures which were applied to other workers. There is no reason to suppose that their high strike proneness was due to a lack of 'patriotism'. The implication is that strikes would have been much more serious elsewhere in the absence of considerable efforts by the government and union leaders to prevent stoppages.

The cases of the mass production industries considered in this section, and of the other industries mentioned more briefly, indicate the variety of forms which the institutionalisation process took. Thus Lewis, who was one of the labour leaders most committed to business unionism, was prepared to lead the miners in wartime strikes. But Reuther, despite his

background in the militant United Auto Workers, backed the war effort.[59] In clothing the unions regained their position of influence, but strike activity remained high, whereas on the railraods the established position of the unions was associated with low levels of activity. The following section will examine whether structural factors can explain inter-industry differences in activity.

Certain common factors were present, however. In the mass production industries, rank and file action provided the basis of later developments, although the precise form of these varied. The 'breakthrough' of the Thirties ensured that domination by the employer was eliminated. But, at the same time, the operation of union leaderships within the context of governmental involvement in labour relations meant that, even in the auto industry, institutionalised bargaining developed.

4. Inter-industry regression equations

In this section, I shall assess the relative importance for strike activity of several indices of industrial structure. Because of the marked shifts in the strike-proneness of individual industries, the regression equations have been applied to four sub-periods of the years 1927-40, namely 1927-29, 1930-33, 1934-37 and 1938-40.[59a] Table 6-11 considers the first two sub-periods using a model similar to that employed in chapter five in which the independent variables are plant size, the wage level and horse-power.employed per head. We saw in chapter five that this last variable had a significant inverse association with strike frequency in 1901-05, but for neither of the periods considered here did

Table 6-11: Regression results, 20 industries, 1927-33.

Dependent variable	Independent variables			R^2	F
	Estab. size	H	Power		
N/E (1927-29)	Pos	Neg	Neg	0.07	1.48
	NS	NS	NS		NS
N/E (1930-33)	Neg	Neg	Neg	-0.05	0.68
	NS	NS	NS		NS

Notes: 'Power' is horse-power per head in 1927.

For the first equation Estab. size and H (wages per head) are for 1927; for the second equation they are for 1931.

it have a significant effect. As far as we can judge from this limited comparison, the level of mechanisation ceases to explain strike activity; a possible reason for this is an equalisation between industries in the amount of power employed per head, as more industries came to use mechanical methods.

The whole model of Table 6-11 clearly fails to explain differences in activity.[60] In Table 6-12, I therefore turn to a model employing union membership as an independent variable. Because of the weakness of unions before the New Deal, little would be gained from using this model for the years up to 1933; we are interested in the effects of unionisation on strikes after rapid organisation had begun, and, since the estimates of union membership are for 1936, I shall consider the period 1934-37. Since usable membership data are available for only ten industries, I cannot employ all the variables of Table 6-11 and therefore use the wage level, which is the most significant independent variable of that Table, in addition to union density. As Table 6-12 shows, strike frequency is associated directly with union density, as one would expect, but inversely with the wage level. The latter association contrasts with the finding that, over time, rising wages encouraged strikes. As wages rose after the depression, workers were given the ability to strike, but the striking was concentrated in those sectors where the <u>level</u> of economic deprivation was greatest; but, as the final equation of Table 6-12 shows, the rate of increase of wages did not affect the inter-industry differences in strike activity.

Table 6-12: Regression results, ten industries, 1934-37.

Dependent variable	Independent variables			R^2	F
	H	T/E	Ch.H		
N/E	Neg	Pos		0.56	6.84
	5%	5%			5%
N/E	Neg	Pos	Pos	0.50	3.97
	5%	5%	NS		NS

Note: 'Ch.H' is the proportionate change in H from 1931 to 1935.

One other finding for 1934-37 relates to the effect on strikes of the extent of bargaining between unions and employers. In a survey reported by Senturia, the B.L.S. studied the methods of dealing with their employees used in April 1935 by the managements of more than 14,000 establishments.[61] In passing, we may note that in over three-quarters of the plants the workers were dealt with on an individual basis only, without the intervention of independent or company unions; the breakthrough in collective bargaining occurred only after the passage of the Wagner Act. Senturia provides a classification of the establishments by industry and from this we can relate, for thirteen industries, the proportion of establishments where management deals through a union to strike frequency. One might expect dealing with a union to encourage strikes, in the same way that a high union density does; but the correlation coefficient obtained was -0.26. This gives an r^2 of 0.06, which indicates that very little association is present, but, if anything, dealing with a union discourages strikes. We may also correlate worker involvement with the proportion of workers covered by union agreements; here the association is positive, with a correlation coefficient of 0.18. The slight tendency for dealing with a union to be associated with high worker involvement but few strikes are consistent with the institutionalisation argument that under collective bargaining strikes will be large but infrequent. But the evidence is too weak to support strong conclusions.

So far in this section, I have considered the separate effects of a number of independent variables. But for the

period 1938-40 we can consider a breakdown of industries into 17 categories for which comparable data are available on several independent variables. In particular, estimates exist for 1940 of the industrial distribution of unemployment; no official data exist on this for any period, apart from a classification into such broad categories that no use can be made of the information here. The source of the unemployment estimates[62] warns that they may be more useful for comparisons over time than for analysis between industries at one time, but the importance of unemployment as an index of the labour market position of different industries means that we must examine its association with strike activity. The first equation in Table 6-13 considers unemployment together with the wage level. The overall explanatory power of the equation is moderate. The level of unemployment exerts a direct effect on strike frequency which is, of course, contrary to the findings in chapter four on the association over time between unemployment and strike frequency. Again, it seems that, over time, rising prosperity enables workers to strike but that striking is concentrated in those sectors where the level of discontent is greatest. In the second equation of the Table, the rate of profit replaces the unemployment rate; overall explanatory power is low, but there is some indication that the prosperity of employers, as measured by profits, is inversely related to strike activity. Although striking occurs in prosperous times, it is not concentrated in the prosperous industries.

Table 6-13: Regression results, 17 industries, 1938-40.

Dependent variable	Independent variables						R^2	F
	H	U/E	Profits	Value added per head	Estabs per head	Power		
N/E	Pos NS	Pos 5%					0.30	4.18 5%
N/E	Neg NS		Neg 5%				0.19	2.89 NS
N/E	Neg NS	Pos 5%	Neg NS	Pos NS			0.40	3.53 5%
N/E	Neg NS			Neg 1%	Pos 5%	Pos NS	0.30	2.71 NS
N/E		Pos NS	Neg NS	Neg NS	Pos NS		0.44	3.90 5%
W/E			Neg NS		Neg NS		-0.12	0.22 NS

Note: U/E is the unemployment rate in 1940. Figures for wages, employment, value added and number of establishments are for 1937. 'Profits' gives the mean profit rate for 1938-41. 'Power' is horse-power employed in 1929.

The following three equations report the results of combining the independent variables in different ways. I begin with the combination of wages, unemployment, the profit rate and the level of value-added per head; this last variable measures the net value of output per head in each industry and may be taken as a rough index of productivity. Only unemployment achieves significant levels of association, but the negative coefficients of the wage and profit variables are consistent with the view that strikes were concentrated in the least prosperous industries; however, the positive coefficient for value-added suggests that these were not necessarily the most technically backward.

The fourth equation of the Table considers more closely the role of the economic infrastructure of an industry. The most notable finding relates to the 'establishments per head' variable, which is calculated to be consistent with the other variables of the equation and is the reciprocal of the measure of the mean size of plants used in chapter five. Its positive coefficient indicates an inverse link between plant size and strike frequency, similar to that observed in chapter five. This is surprising in view of the arguments of Shorter and Tilly and others that large plants will be marked by high levels of unrest.[63] Since the equation has an R^2 of only 0.30, not too much weight can be placed on this finding, but it is still important that it contradicts a very common assumption about industrial conflict. I shall consider this point further in the following chapter.

In the next equation, I consider together the four variables which have, in the previous four equations, had significant regression coefficients. The R^2 is higher than in the other equations, but no variable achieves significant levels of association with strike frequency. The unemployment rate comes closest to doing so and again there is a direct link with strike activity. Similarly, the profit rate and size of plant variables retain their inverse association. The coefficient for value-added is also negative, but it is difficult to interpret this since in the third equation of Table 6-13 the coefficient is positive. However, since in the fourth equation its coefficient is significantly negative, we can tentatively suggest that the general effect on strikes is to discourage them. If this is so, we have a consistent picture in which strikes were concentrated in the industries where unemployment was highest, the rate of profit lowest and technical development (in terms of value-added per head and plant size) the least advanced. Finally in Table 6-13 we see that worker involvement between industries is not explained by plant size and the rate of profit.

In none of the equations in this section is as much as half the variance in strike frequency explained. This contrast with the findings of the time-series analysis is not surprising since we are trying to explain the very great differences in the level of activity which exist between industries rather than the fluctuations which occur over time. In the previous section, I related the strike-proneness of the rubber and auto industries to feelings of insecurity and to technical changes such as the speed-up. Although both of

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these things have an economic basis, it is hard to reduce them to measurable quantities. In view of these difficulties, the results of the present section are not altogether discouraging; we have been able to show that some clear strike patterns exist and, in particular, have seen that activity tends to be concentrated in the most 'disadvantaged' sectors. We cannot assess the importance of this for the institutionalisation theory until we have investigated the inter-industry structure of strikes in the post-war period. We shall then be in a position to see if the economic parameters of conflict have changed in a cross-sectional analysis.

As I mentioned in chapter five, one obvious limitation of inter-industry analysis is the existence of various regional effects. I have examined this by taking, for the period 1927-36, the number of strikes in each of ten industry groups in every State which had at least 25 strikes in any one year.[65] For each industry in each of the 24 States, the number of strikes was divided by the number of employees to obtain a measure of strike frequency. The question was whether an 'industry' effect could be separated from a 'State' effect and, if it could, which was the more important. The model used begins by predicting the figure in each cell of the matrix from the overall mean;[66] this is the measure against which the other estimates must perform. Separate predictions are then made using the industry mean and the State mean in turn and then the combined 'industry and State' model is applied. The chief finding from the sample of 24 States was that even this interaction model did not reduce the deviance of the

estimating errors very much (Table 6-14). The information on each cell of the 'industry by State' matrix was then examined to see if any particular combination contributed a very large part of the total deviance. The most convenient way to eliminate these exceptional cases was to remove five States from the sample. For the remaining 19 States more satisfactory results were obtained. It appears from Table 6-14 that the 'industry' is more important than the 'State' effect, but the difference between the 'industry' and the 'industry and State' models indicates that the interaction between the two effects was also important. However, as the final part of the Table shows, the explanatory power of the 'industry' model is much greater than that of the 'mean only' model and the interaction model does not improve on this to a very great extent.

These results support the greater attention given here (and of course, by other writers) to industrial than to regional differences in activity. Many things suggest that being in a certain industry has a greater effect on a group of workers than does being in a given geographical location. Bargaining structures, union penetration and technical conditions of operation set one industry off from another. Technology is unlikely to vary much within an industry between regions; and, although union density varies regionally, the organisation of unions is on an industrial basis.[67]

5. Strikes and urbanisation

In the previous chapter, I presented data on the strike-proneness of States using the degree of urbanisation as an independent variable. For the years 1927-36, it is possible to assess the effect of urban growth more directly since

Table 6-14: Results of 'industry and State' model, 1927-36.

Model	Sum of squares	d.f.	Mean square
	24 States		
Mean only	16.50×10^7	232	7.11×10^5
Industry only	11.81×10^7	223	5.30×10^5
State only	14.66×10^7	209	7.01×10^5
Industry & State	9.89×10^7	200	4.94×10^5
	19 States		
Mean only	10.64×10^4	185	5.77×10^2
Industry only	4.40×10^4	176	2.50×10^2
State only	9.56×10^4	167	5.73×10^2
Industry & State	3.21×10^4	158	2.03×10^2

Mean square as % mean square in 'mean only' model

Model	24 States	19 States
Industry only	74.5	43.3
State only	98.6	99.2
Industry & State	69.5	35.2

Note: 'Mean only' refers to the model in which each cell frequency is predicted from the grand mean alone, 'industry only' to the model in which frequencies for any industry in each State are predicted from the mean for that industry, and so on.

Peterson gives figures on the number of strikes occurring in cities which had ten or more strikes in any year.[68] Only 44 cities are included and thus the sample is severely trancated, which makes statistical examination difficult. Even if all the communities which had any strikes were included, there would still be the problem of whether all cities should be included or whether it is possible to treat strike-prone ones as a distinct population. However, Stern has recently studied the strike data for 19 8-70 for 243 Standard Metropolitan Statistical Areas and concluded that it was possible to treat strike-prone cities as distinct from others.[69] He divided his sample into a 'high-conflict' and a 'low-conflict' group and found that these form separate clusters on such characteristics as their size, degree of union organisation and so on. Hence, he argued, they could be seen as separate populations. We may assumethat this conclusion holds for 1927-36 and proceed with the statistical analysis; I shall return to Stern's substantive findings below.

For France, Shorter and Tilly found that it was necessary to separate urban growth from the effects of size per se.[70] Their evidence led them to argue against the popular theory that it is the fact of moving to a city and the 'shock' of experiencing industrial life which make workers militant. They found that the rate of growth of cities was negatively associated with the level of industrial conflict; or, rather, they showed that, in a cross-sectional analysis, the fastest growing cities had the lowest strike rates. They did not

show that, over time, a given city's strike rate was inversely related to its rate of growth. For Shorter and Tilly, the fact of being in a city makes workers more militant; as well as an increased willingness to strike, there are clear organisational advantages of being in large centres.

In Table 5-15, I give the results of the regression equations for the 41 of Peterson's 44 cities for which adequate data exist. The expectation from Shorter and Tilly is that strike frequency will be associated directly with city size and inversely with the rate of growth of the city. I have used two measures of the rate of growth, one spanning 1900-30 and reflecting long-run influences and one covering 1920-30, reflecting more short-term factors. I have also included measures of the proportions of a city's population composed of Foreign-born whites and Negroes; the former reflects the importance of immigrants in, and the latter the racial heterogeneity of, the city's work force. As expected, the two measures of the rate of growth are inversely associated with strike frequency, but city size also has a negative coefficient. But none of the five variables achieves a significant level of association with strike activity.

To investigate the links with strikes more fully, I have split the cities into two overlapping groups, composed of the 21 smallest and the 21 largest cities. For the former, an R^2 of 0.51 is obtained when city size and the two growth measures are employed as independent variables. City size is now significantly related to strike frequency and the direction of association is still inverse. But for the

Table 6-15: Regression results, 41 cities, 1927-36.

Dependent variable	Independent variables					R^2	F
	Pop. 1930	Ch.Pop. 1900-30	Ch.Pop. 1920-30	% F.B. White	% Negro		
N/Pop.	Neg	Neg	Neg	Pos	Neg	0.26	2.51
	NS	NS	NS	NS	NS		5%
N/Pop. (21 smallest cities)	Neg	Neg	Neg			0.51	5.95
	1%	NS	NS				1%
N/Pop. (21 largest cities)	Pos	Pos	Neg			0.13	0.88
	NS	NS	NS				NS

Notes: 'Pop.' is population in each city

'Ch.Pop.' is the proportionate change in population over the periods indicated

'% F.B. White' is percent. of population in 1930 who were white and born abroad

'% Negro' is percent of population in 1930 who were Negroes.

larger cities the R^2 is only 0.13 and no independent variable achieves significant levels of association. Up to a certain size, a higher population seems to have an important restraining effect on strike activity, but beyond that point it ceases to have any impact. The rate of growth of cities consistently fails to explain differences in strike activity. The change in the importance of city size may in part reflect the truncated nature of the sample. One would expect very small communities to have few strikes so that, as city size rises from very low levels, there is a direct link with strike activity. But in the middle ranges of size further growth will discourage strikes, perhaps because cities of a certain size are dominated by one company or because of some 'industry effect'. Beyond this size range, all cities are more or less equally strike-prone, although the positive coefficient for the city size variable in the sample of the 21 largest cities suggests that there is a slight tendency for increased size to be associated with a rise in strike activity.

Suitable employment data by cities are not available for 1927-36, and thus population has been used as the measure of size. However, some information is available for 1937 and much fuller data appear from 1947 onwards. Table -1 reports the results of using employment rather than population as the independent variable. In line with the findings of the previous table, markedly better results are achieved for the 20 smallest than for the 19 largest of the 39 cities for which employment data are available. The difference in

Table 6-16: Regression results, 36 cities, 1927-36.

Dependent variable	Independent variables		R^2	F
	E. (1947)	E. (1937)		
N/E (20 smallest cities)	Neg		0.35	9.75
	1%			1%
N/E (20 smallest cities)		Neg	0.13	2.79
		NS		NS
N/E (19 largest cities)	Pos		0.01	0.17
	NS			NS
N/E (19 largest cities)		Pos	0.02	0.37
		NS		NS

explanatory power of the 1947 and 1937 employment data can be attributed to the need to estimate several of the figures for 1937, with errors creeping in as a result.

We may now return to the findings of Stern. He divided his 'high-conflict' groups of cities into two further groups, which he labelled as those with 'moderate' and 'high' levels of conflict. The former sub-group had a lower mean size than the latter; this is significant in view of the above findings since it is consistent with the view that city size effects strike frequency only within a limited range of size. Stern's findings demonstrate a curvilinear relationship between size and strike frequency which is supported by the results here, although the lack of a 'low-conflict' group here means that the results cannot stand alone. In his regression analysis, Stern reports an R^2 of 0.59, which, in view of the number of independent variables employed, is not notably better than the model of Table 6-15. It is interesting that Stern's variable measuring the industry-mix of the cities did not have a significant effect, which implies that the strike-proneness of cities is determined more by their other characteristics. Stern includes measures of union density and plant size as independent variables, but it is questionable whether these can be taken as indices of the characteristics of cities. Plant size, in particular, seems to be a characteristic of industries and not cities. Although the 'industry mix' measure was not associated with strike activity, this result may not hold if a different explanatory model were employed.

However, Stern's approach helps to correct an over-emphasis on the industrial distibution of strike activity.

The results reported in Tables 6-14 and 6-15 relate to a much simpler model, but they show that the part of the Shorter-Tilly model concerned with urbanisation does not fit the American case. The model argues that the concentration of workers in large plants and cities encourages strikes. We have seen in the previous section and in chapter five that plant size does not help to explain inter-industry differences; we now know that city size does not exert a consistent effect and that, where it does, the direction of the effect is opposite to that predicted by the model.

Nor is support given to the view that mass immigration was a major cause of strike activity. Table 6-14 shows that the proportion of a city's population who were Black or born abroad did not affect its strike propensity. Internal migration from the South and rural areas has also been seen as important, for example in explaining the high strike rate in the auto industry.[71] Similar arguments have been advanced in relation to the rubber industry.[72] Detailed data which would enable us to test this proposition across several cities and industries are not available, but some analysis is possible. For autos, Harris states that immigration into the cities from rural areas of four States during the Twenties meant that, by 1930, 47% of the work force was from these areas.[73] Evidence for the rural and Southern origins of the workers also exists for the 1950's.[74] For rubber, Jones says that one third of Akron's population came from the South and the border regions.[75] But it also appears that the steel industry had a high proportion of its workers who were migrants, although its strike pattern was different from that in autos and rubber.[7

We need to spell out the argument about migration carefully. It is a variant of the view that workers who are 'new to industry' will react against their conditions through overt protest; but instead of concentrating on the effects of industry on a population which was wholly unused to industry, or on immigrants from other countries, it focuses on migrants from rural areas within the United States. These people, it is said, will experience their migration as a 'shock' and will have to adjust to industry; while they are doing this, they will exhibit discontent which will be manifested in absenteeism, a high quit rate and strikes. The strikes will not have any clear direction, but will be spontaneous, unorganised and short. As this argument stands, it is hard to test with the sort of data being used here, but some light can be thrown on it. It is obvious that rural origins are not sufficient to explain levels of strike activity among a group of workers. Many other factors were at work in the Thirties; and evidence for the steel industry for earlier decades indicates that workers were being recruited from the South without any great protests being apparent.[77] It is true that the solidarity of the 1919 strike was partly due to the discontents of the unskilled men who were new to industry. But the argument being considered here is that strikes will be an <u>immediate</u> response to the shock of industry, rather than being delayed for an indefinite period. We can say that the discontents that arise among the new workers will contribute to strikes when they occur, but that the immediate causes of the strikes must be sought elsewhere.

Much of the 'militant migrants' argument is based on the supposition that moving to industry will make workers dissatisfied. Although the breakdown of old cultural ties and the imposition of new routines are likely to induce discontent, it is also possible that the new workers will tolerate industry because they simply want to earn as much as they can and are not interested in improving conditions of work, Since they are unorganised and not used to industry, they may fall under managerial domination; cultural values of obedience to authority may contibute to this.[78] Numerous firms certainly thought that rural workers provided a tractable work force; and, independent of this, there is the fact that a heteroregeous labour force, whatever the nature at its parts, is likely to break down into factional disputes.

These are only possibilities, but they are mentioned to show that it is not self-evident that migration to industry will lead to protest, although it is likely that it will cause discontent. Evidence for an earlier period on Slavic immigrants suggests that they did not provide a tractable work force and shows that their peasant traditions of solidarity supported them during strikes,[79] but it has not been shown that these workers were more likely than others to engage in 'spontaneous protests'. For the Thirties, the question is whether Southern whites had particular cultural traits which predisposed them to such protests. Contemporary writers made various assertions on this, but it would be very hard now to provide any hard evidence on these workers' attitudes.

Instead of dealing with the question in terms of some pre-determined view of the effect of migration, we should

approach it more cautiously. The concentration of new migrants in some cities and industries may well have contributed to their strike record in the Thirties, but only alongside other factors. Strikes occurred in many areas not noted for their new immigrants. Rather than responding to the situation at once, it seems more likely that the new workers would have brooded on their discontents and the failure of their expectations and would thus have reacted particularly aggressively once other sources of dissatisfaction became significant. More generally, this aspect of strikes in the Thirties provides a link with those of earlier years. It suggests that the newness of groups of workers to industry was a continuing theme in nineteenth and twentieth century America; as we shall see in the next chapter, it did not disappear even in the post-war period. It was one of the sources of challenge to the existing system of industrial relations; new groups have had to be accommodated and the system has been unable to remain static. The final chapter will take this up at more length.

The regression analysis of this section suggested that there is no evidence that the process of becoming urban affects a population's strike activity. The presence of new immigrants may have been one source of discontent, but this did not show up in the overall regression analysis; it is likely that it was restricted to a limited number of cities in the industrial North East, where it may have been important, but only in addition to many other factors. The immigration should be seen as one structural factor putting pressure on the existing system, rather than as a force which necessarily led to protest.

6. Conclusions

We have seen in this chapter how strike trends developed during the crucial period when the institutionalised system was established. During the early years of the New Deal, important rank and file movements grew up; in addition to those I have mentioned in the mass production industries, there were significant upheavals in, for example, the San Francisco general strike of 1934 and the 'teamster rebellion' in Minneapolis in the same year.[80] The important thing for the institutionalisation theory is that these protests did not reflect the unfocussed 'hostility' posited by the theory but were based on very real discontents connected with the control of the work place. Being concerned with the day-to-day running of operations, they were not amenable to solution through formal collective bargaining. Even during the Second World War, small-scale strikes continued despite union leaders' attempts to restrain them. We shall see in the following chapter that protests based on the work place were important in the post-war period, and will consider their wider implications for the institutionalisation theory in the final chapter.

We saw in sections two and three that rank and file protests increasingly came under institutional control as the New Deal progressed. Union recognition and collective agreements with employers were made the chief aim; and the conservatism of C.I.O. leaders and the rapid growth of the A.F.L.[81] illustrate the absorption of rank and file militancy by union structures. The limitation of the scope of strikes is indicated by the decline in the number of establishments

affected by the average strike and the rapid end to the sit-down movement. We have also seen that the process of institutionalisation had a number of forms. I have concentrated on developments in the mass production industries because they are most relevant to the institutionalisation theory. The theory in its 'conventional' form, suggests, in very general terms, that hostility will be replaced by accommodation as conflict becomes regularised. We have seen that, as a description of the process of institutionalisation, this has some broad relevance, but that the <u>form</u> of accommodation depends on factors which are not dealt with and that accommodation is far from being a natural process. In discussing various forms of the process, I have sought to illustrate some of the ways in which institutional control of conflict developed; clearly, other modes of institutionalisation were possible, but this discussion will serve to remind us of the complexities of the process and the need to avoid the assumption that any given development was 'natural' or 'inevitable'. Although the New Deal saw the 'breakthrough' of strike activity from the very low levels of the 1920's, the results of this breakthrough were far from certain.

On the inter-industry distribution of activity, we have seen that strikes were concentrated in the 'disadvantaged' industries. Although indices of mechanisation failed to explain strike activity, the general similarity with the findings of chapter five is clear; stoppages were concentrated in industries where plants were small and the workers in a poor economic position. At the end of the nineteenth century technical change was the factor behind the concentration of

activity in the least advanced sectors; during the 1930's the economic position of the workers was more important but the concentration of strikes in 'backward' industries remained. The findings relating to the effect of plant size are particularly notable, for they cast doubt on the view that large concentrations of workers were highly strike-prone. This view of the importance of concentration is further weakened by the findings on the distribution of activity among cities, reported in section five: large cities were not the most strike-prone inthe period considered. In the final section of chapter five, I suggested some reasons for the diversity of strike experience at the end of the nineteenth century. Factors such as ethnic divisions within the working class and the sheer size of the country may also be relevant here; solidarity remained locally based, even in a time of militant strikes, and did not develop beyond the individual plant. Thus there was no reason for large cities to be more strike-prone than small ones. I return to the general significance of this in the final chapter.

This chapter has also begun the systematic examination of the influence of the employer on strike activity. We have seen that, over time and between industries, measures of the prosperity of employers were not closely related to strike frequency or duration; the latter finding is the more surprising since one might expect employers to be able to influence the length of a strike even if they could not affect the decision to stop work in the first place. This does not mean, of course, that employers were unimportant during the 1930's. As we saw in the case of the steel industry, the decision of U.S. Steel to recognise the S.W.O.C. led to a

peaceful transition to collective bargaining, whereas the hostility of the Little Steel companies resulted in the violent strikes of 1937. And, in general, the change in the attitude of employers towards unions was clearly important to the development of strikes throughout the 1930's. But changes in attitude did not, it would seem, stem directly from the employers' economic position; or, at least, such changes may have been influenced by economic factors but the precise policy adopted was not determined by them. Employers had considerable freedom of action to decide how to deal with the union challenge and this is reflected in the lack of direct links between their prosperity and strike activity.

By 1945, the nature of the institutionalised system had been established; in the following chapter I shall investigate its working during the post-war period.

Notes

1. L. Troy Trade union membership, 1897-1962 (National Bureau of Economic Research, N.Y., 1965)p. 2.
2. These measures were, of course, part of the National Labor Relations Act (the Wagner Act) which also established a new National Labor Relations Board (N.L.R.B.). For discussion of New Deal Labour legislation see I. Bernstein The New Deal collective bargaining policy (Univ. of California Press, Berkeley & Los Angeles, 1950); R.W. Fleming 'The significance of the Wagner Act' pp. 121-55 in M. Derber & E. Young (eds) Labor and the New Deal (Univ. of Wisconsin Press, Madison, Wisc., 1957); R.C. Cortner The Wagner Act cases (Univ. of Tennessee Press, Knoxville, Tenn., 1964).
3. M. Dubofsky 'Introduction' pp. 3-30 in Dubofsky (ed.) American labor since the New Deal (Quadrangle Books, Chicago, 1971) at pp. 15-17.
4. See R.R.R. Brooks When labor organizes (Yale Univ. Press, New Haven, Conn., 1937)p.53; P.Ross The government as a source of union power (Brown Univ. Press, Providence, R.I., 1965) pp.51-132.
5. On the weakness of governmental aid to the unions under the N.R.A. see W.E. Leuchtenburg Franklin D. Roosevelt and the New Deal 1932-40 (Harper & Row, N.Y. 1963)pp. 108-09; A.M. Schlesinger The age of Roosevelt: Vol. 2 The coming of the New Deal (Heinemann, London, 1960) pp. 142-44.
6. D. Brody 'Labor and the Great Depression: the interpretive prospects' Labor Hist., 13, pp. 231-44 (1972) at p.235; P. Taft 'The philosophy of the American labor movement' pp. 133-42 in W. Haber (ed.) Labor in a changing America (Basic Books, N.Y. 1966) at p. 137.

7. The two standard histories taking this line are W. Galenson The C.I.O. challenge to the A.F.L. (Harvard Univ. Press, Cambridge, Mass., 1960); and I. Bernstein Turbulent years (Houghton Mifflin, Boston, 1970).
8. J. Green 'Working class militancy in the depression' Radical America, 6, no.6, pp. 1-35 (1972) at pp. 3-13.
9. See the discussion of the 'radical' writers in chapter two. For the Thirties in particular see S. Lens Left, Right and Center: conflicting forces in American labor (Henry Regnery Co., Hinsdale, Ill., 1949) pp. 287, 294-96; A. Preis Labor's giant step: twenty years of the C.I.O. (Pathfinder Press, N.Y., 1972) e.g. pp. 46-50, 85, 187; S. Lynd 'Introduction' in Lynd (ed.) American labor radicalism (Wiley, N.Y.,1973) pp.4-5.
10. J. Brecher The sit-down strikes of the 1930's: from baseball to bureaucracy (Root and Branch pamphlet no. 4, Cambridge, Mass., n.d., 1971?).
11. D. Brody 'Review essay of A. & S. Lynd Rank and file; personal histories by working class organizers' Labor Hist., 16, pp. 117-26 (1975) at p. 125.
12. Brody 'Labor and the Great Depression' op. cit., p.242. Perhaps the meaning of the term 'strike wave' should be made clearer. For Shorter and Tilly (E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974) pp.106-07)a wave occurs 'when both the number of strikes and the number of strikers in a given year exceed the means of the previous five years by more than 50%.' On this criterion, strike waves occurred in the years under consideration in 1933, 1934, 1937 and 1944. But although 1946 constituted the greatest peak in strike

activity since 1919, this year would not be included. Such problems make the use of the Shorter-Tilly method questionable. Table A-21 lists the years since 1881 in which at least one index passed the '50% more than the previous five years average' mark.

13. Brody 'Review essay ...' op.cit., p.121
14. For 'liberal' views on this see Leuchtenburg op.cit., 107-09, 163-65; R. Hofstadter The American political tradition (Jonathan Cape, London, 1962) pp. 332-38. Cf. B.J. Bernstein 'The New Deal: the conservative achievements of liberal reform' pp.263-88 in Bernstein (ed.) Towards a new past (Pantheon Books, N.Y., 1968). See also J.S. Auerbach 'New Deal, Old Deal or Raw Deal: some thoughts on New Left historiography' J. Southern Hist., 35, pp. 18-30 (1969).
15. R.S. & H.M. Lynd Middletown (Harcourt, Brace & Co., N.Y., 1929) pp. 39-44, 72-78.
16. See 'Index of productivity of labor in the steel, automobile, shoe and paper industries' Monthly Lab. Rev., 23, pp.1-19 (1926).
17. M. Josephson Sidney Hillman: statesman of American labor (Doubleday, N.Y., 1952) p.481; on Hillman's later activities see chaps 21-23. J. Seidman American labor from Defense to Reconstruction (Univ. of Chicago Press, Chicago, 1953)pp. 55-69, 81-84.
18. Preis op. cit., pp. 112-19; Seidman op.cit., p.48; H. Pelling American labor (Univ. of Chicago Press, Chicago, 1960) pp. 172-76.
19. F. Peterson Strikes in the United States, 1880-1936 (U.S. Dept. of Labor Bulletin 651, Washington, D.C., 1938)pp.54-55.

20. S. Fine The automobile under the Blue Eagle (Univ. of Michigan Press, Ann Arbor, Mich., 1963) pp.142-227, 274-83, 377-400; R.R.R. Brooks As steel goes... (Yale Univ. Press, New Haven, Conn., 1940)pp. 46-89; C.R. Daugherty et.al. The economics of the iron and steel industry (McGraw-Hill, N.Y., 1937) pp.932-43; R. McKenney Industrial valley (Harcourt, Brace & Co., N.Y., 1939)pp.93-207; D. Brody The Butcher Workmen (Harvard Univ. Press, Cambridge, Mass., 1964)pp.154-66. See also M. Goldbloom, J. Herling, J. Seidman & E. Yard Strikes under the New Deal (League for Industrial Democracy, N.Y., n.d., 1935?) esp. pp.36-40.

21. 'Work stoppages in 1936' Monthly Lab. Rev., 44 (1937) p.1234.

22. Ibid., p.1234; 'Number of sit-down strikes in 1937' Monthly Lab. Rev., 47 (1938)p.361; 'Work stoppages in 1938' Monthly Lab. Rev., 48(1939)p.1130. Cf. Preis op.cit. p.64, where it is stated that the sit-downs were rarely defeated.

23. See refs in note 20. The proportion of the sit-downs of 1936 and 1937 accounted for by each type of union was as follows:

A.F.L.	20.6%	No organisation	10.7%
C.I.O.	59.9	Rival unions	3.1
Other	5.7	Total	100.0

24. They were made illegal in the 'Fansteel' decision of 1939; see Bernstein Turbulent years p.678. The union leaders' attitude is reflected in the remark by the C.I.O. President, J.L. Lewis: 'A C.I.O. contract is adequate protection for any employer against sit-downs, lie-downs,

or any other kind of strike' (quoted in Galenson op.cit., p.145). On local government attitudes see J.W. Howard 'Frank Murphy and the sit-down strikes of 1937' Labor Hist., I, pp. 103-40 (1960).

25. J.R. Sperry 'Rebellion within the ranks: Pennsylvania anthracite, John L. Lewis and the coal strikes of 1943' Pennsylvania Hist., 40, pp. 293-312 (1973); A.M. Winkler 'The Philadelphia transit strike of 1944' Mississippi Valley Hist. Rev., 59, pp.73-89 (1972); I. Howe & B.J. Widick The U.A.W. and Walter Reuther (Random House, N.Y., 1949) pp.107-25. See also section 3, below.

26. The national textile strike was defeated and a general strike in San Francisco, in support of the demands of the longshoremen, petered out. Strike threats in steel and autos did not materialise. Labour attitudes are represented by T. Brown, the President of the union of Mine, Mill and Smelter Workers: 'the only thing the N.R.A. did was to solidify industry into one common mass with one purpose to disfranchise labor'. (quoted in V.H. Jensen Nonferrous metals industrial unionism 1932-54 (Cornell Univ. Press, N.Y.,1954)p.13). For other aspects of the N.R.A. industrial codes see S. Fine 'President Roosevelt and the automobile code' Mississippi Valley Hist. Rev., 45, pp.23-50 (1958); J.P. Johnson 'Drafting the N.R.A. code of fair competition for the bituminous coal industry' J. Amer.Hist 53, pp.521-41 (1966). Each code was to include the rights of organisation laid down in the N.I.R.A. but the auto firms were able to exclude their industry from two important provisions and companies elsewhere ignored the requirements of the Act.

27. See, for example, L.L. Cary 'Institutionalized conservatism in the early C.I.O.: Adolph Germer, a case study' Labor Hist., 13, pp. 475-504 (1972).

28. Cf. Galenson op.cit. (note 7) p.608, where it is argued that there was no chance of the C.I.O. helping to establish a third political party.

29. Many radicals who had organised worker movements in the early 1930's remained in the C.I.O. and left, or were removed, only slowly. For the views of one on the C.I.O. leaders see L. de Caux Labor radical: from the Wobblies to the C.I.O., a personal history (Beacon Press, Boston, 1970) e.g. pp. 237-47,276.

30. See P.A.C. Koistinen 'Mobilizing the World War II economy: labor and the industrial-military alliance' Pacific Hist. Rev., 42, pp. 443-78 (1973); B. Stein 'Labor's role in government agencies during World War II' J. Econ. Hist., 17, pp. 389-408 (1957).

31. Similar trends are revealed in the distribution of cases handled by the N.L.R.B. (see Table A-18). The proportion of representation cases rose, and that of unfair labour practices cases fell, suggesting that representation was increasingly being made a matter of bureaucratic procedure, and less a direct confrontation with the employer.

32. Seidman op.cit.(note 17) pp. 94-105, 109-29; Preis op.cit. (note 9) pp.154-67;Lens op. cit. (note 9) pp.341-52.

33. S. Weir 'Class forces in the 1970's Radical America, 6, no. 3,pp.31-77 (1972) at pp.42-43; following quote from p.44. See also T.R. Brooks Toil and trouble: a history of American labor (Delacorte Press, N.Y., 1964) p.204.

34. Several writers mention the liberating aspect of strikes in the Thirties e.g. de Caux op. cit., p. 229; Brecher op. cit. (note 10) p.2; M. Dubofsky op. cit., (note 3) p.7.

35. Brody 'Labor and the Great Depression' op.cit., p. 236

36. See E. Ginzberg & H. Berman The American worker in the twentieth century (Free Press, N.Y.,1963) p.159 where it is noted that the years 1934 and 1936-37 were noted by particularly rapid wage increases; as Table 6-1 shows, these years were also marked by booms in strike activity.

37. W. Galenson '1937: the turning point for American labor' Univ. of California at Berkeley Instit. of Ind. Rels Reprint no. 120, 1959 (orig. publ. 1958).

38. Galenson The C.I.O. challenge p. 601.

39. The correlation matrix for four strike variables for 1936-41 is :

	N/E	W/E	W/N
W/E	0.83		
W/N	0.40	0.84	
Duration	-0.59	-0.71	-0.49

For six years, the 5% significance levels for the one and two tailed tests are, respectively, 0.73 and 0.81; thus only the correlations between frequency and worker involvement and between worker involvement and size are significantly different from zero.

40. I use the level of the productivity index, and not its rate of change, to measure the general progress of productivity; we are interested in the effect which the state of productive efficiency has on employer well-being and not in year-to-year changes in the rate of productivity growth.

41. It will be recalled from chapter three (note 1) that Rose and Hartman refer to D/W as the duration of strikes; see note 5 to that chapter for comment on the imprecision of this term.

42. On autos see Fine op.cit. (note 20) and, for example, S. Fine 'The Toledo Chevrolet strike of 1935' Ohio Hist. Quart., 67, pp.326-56 (1958); see also Galenson The C.I.O. challenge pp. 123-84 and Bernstein Turbulent years pp.96-98,220-29, 499-516. On rubber see McKenney op.cit. (note 20); Galenson The C.I.O. challenge pp.266-82; A.W. Jones Life, liberty, and property (J.B. Lippincott Co., Philadelphia, 1941)pp.83-138.

43. B. Mitchell Depression decade: from New Era through New Deal (Holt, Rinehart & Winston, N.Y.,1964)p. 295, emphasis added.

44. Howe and Widick op.cit., pp.47-82; J. Skeels 'The background of U.A.W. factionalism' Labor Hist., 2,pp.158-81 (1961); J.R. Prickett 'Communists and the automobile industry in Detroit before 1935' Michigan Hist., 57, pp. 185-208 (1973); and refs in note 35.

45. S. Fine Sit-down: the General Motors strike of 1936-37 (Univ. of Michigan Press, Ann Arbor, Mich.,1969); H. Kraus The many and the few (Plantin Press, Los Angeles, 1947).

46. McKenney op.cit. pp. 56-68; Jones op.cit., p.99; M.H. Vorse Labor's new millions (Modern Age Books, N.Y.,1938) pp.7-10.

47. This was the so-called Henderson committee; quoted in Kraus op.cit. p.12.

48. McKenney op.cit., p.166; Jones op.cit., pp. 137-38. In view of the findings of section 4, it is interesting that Jones lists the high and rising wage level of the rubber workers as a cause of their high strike activity. On industrial espionage see 'Labor espionage: summary of Senate inquiry' Monthly Lab.Rev., 46,pp.693-98 (1938); J.S. Auerbach Labor and liberty: the La Follettee Committee and the New Deal (Bobbs-Merrill, Indianapolis, Ind., 1966).

49. Fine Sit-down pp. 55-60.

50. H.A. Turner, G. Clack & G. Roberts Labour relations in the motor industry (George Allen & Unwin, London, 1967) e.g. pp.169,329-33; J.H. Goldthorpe, D. Lockwood, F. Bechhofer & J. Platt The affluent worker: industrial attitudes and behaviour (Cambridge Univ. Press, Cambridge, 1968) esp. pp. 180-83. Assembly line work is not as dominant in the industry as is often thought: see C.R. Walker & R.H. Guest The man on the assembly line (Harvard Univ. Press, Cambridge, Mass.,1952)pp.38-65.

51. 'Wage structure of the motor-vehicle industry, part I' Monthly Lab. Rev., 54, pp.279-304 (1942) at pp.279,291.

52. By 1941 the aircraft and rubber industries had union agreements which, like those in most other industries, banned strikes during the term of the contract: see 'Strike restrictions in union agreements' Monthly Lab. Rev., 52, pp.546-64 (1941) at pp.549,560-61.

53. The separation of the motor vehicle and aircraft industries is made possible through the use of the data in Work stoppages: motor vehicles and motor vehicle

equipment industry 1927-58 (B.L.S. Report No. 148, 1959) and Work stoppages; aircraft and parts industry 1927-59 (B.L.S. Report No. 175, 1961). Before the war, the aircraft industry was relatively insignificant in the strike movement; this, and the lack of adequate employment data before 1942, means that little would be gained by separating it from motor vehicles.

54. Daugherty et.al. op.cit.(note 20) pp.932-77, 187-98.

55. See S. Lynd 'The possibility of radicalism in the early 1930's: the case of steel' Radical America, 6, no. 6, pp.37-64 (1972).

56. Many reasons have been suggested for the failure of the earlier rank and file movement and for the capitualtion of U.S. Steel, in view of the company's long history of opposition to unionism. See Galenson The C.I.O. challenge pp.91-95; Bernstein Turbulent years pp.467-69; D. Brody Labor in crisis (J.B. Lippincott Co., Philadelphia, 1965) pp.180-83. But one obvious reason for the company's decision was the belief that unionism was inevitable; thus the company sought to accommodate to the union on the terms most beneficial to itself. It is unlikely that this belief would have been held if there had not been a background of militancy in the industry.

57. Like the U.M.W., the clothing unions grew rapidly during the early New Deal. In two months in 1933, the U.M.W. added 300,000 members, the International Ladies' Garment Workers' Union 100,000 and the Amalgamated Clothing Workers 50,000 (T.R. Brooks Toil and Trouble p.163).

58. J.J. Kaufman Collective bargaining in the railroad industry (King's Crown Press, Columbia Univ., N.Y., 1954) pp. 78-80. See also Galenson The C.I.O. challenge p.579: the gains of the railroad workers were made with a minimal amount of strife, but subsequent events showed that the 'millenium had not yet arrived for railroad industrial relations ..... Maturity in trade union organisation and collective bargaining relationships constitute no certain guarantee of industrial peace'.

59. See, for example, W.P. Reuther 'Labor's place in the war pattern' pp. 132-41 in Dubofsky (ed.) op.cit. (note 34); essay orig. publ. 1942.

59a These periods are, of course, the same as those employed in the discussion of trends from 1881 to 1972; they correspond roughly to the years of prosperity at the end of the 1920's, the Depression years, the early New Deal and the late New Deal.

60 The results were not improved by predicting to the log of N or by adding variables for the change in wages and the change in plant size. Even less association was found with worker involvement than with strike frequency.

61. J.J. Senturia 'Types of employer-employee dealing' Monthly Lab.Rev., 41,pp.1441-66 (1935).

62. D.L. Kaplan 'Unemployment by industry: some comments on its measurement and behavior' pp.281-323 in National Bureau of Economic Research The measurement and behavior of unemployment (Princeton Univ. Press, Princeton, N.J., 1957) at p.301. Kaplan argues that occupation is more important for a person's unemployment prospects than is the industry in which he is employed and that occupational

differences between industries make the use of this data for cross-sectional analysis misleading. But, although the data may not give a true estimate of industrial differences in unemployment, they may reflect differences in the power of the workers and thus be relevant to strike activity.

63. Shorter and Tilly op.cit.(note 12) e.g. p.227; S. Cleland The influence of plant size on industrial relations (Industrial Relations Section, Princeton Univ., Princeton, N.J., 1955) esp. pp.53, 62; R.W. Revans 'Industrial morale and size of unit' Polit.Quart., 27, pp.303-11 (1956) at p.307; cf. G.K. Ingham Size of Industrial organization and worker behaviour (Cambridge Univ. Press, Cambridge, 1970).

64. Also, each industry is a heterogeneous collection of sectors, so that the industry groups for which we have data do not represent the full spread of positions on the dependent or independent variables.

65. The years 1927-36 are taken because detailed and consistent data exist on strikes by State and industry. See Peterson op.cit. (note 19) Table 35.

66. The GLIM (General Linear Interactive Modelling)programme was used. I am very grateful to Clive Payne of the Nuffield College Research Services Unit for making this programme available and for help in the setting up and analysis of the model.

67. See L. Troy Distribution of union membership among the States, 1939 and 1953 (National Bureau of Econ. Research, N.Y., 1957).

68. Peterson op.cit. (note 19), table 33.

69. R.N. Stern 'Intermetropolitan patterns of strike frequency' Ind. & Lab. Rels Rev., 29, pp.218-35 (1976) at pp.219,221,226.

70. Shorter and Tilly op.cit. Chap.10.

71. See the quotation from Mitchell, cited in note 43 and M. Handman 'Changing ideologies in the American labor movement' Amer.J.Sociol., 43, pp.525-38 (1938) at pp.529-31.

72. 'Rubber workers: sit downs, short days and caution' pp.130-38 in J. Barbash (ed.) Unions and union leadership (Harper and Bros., N.Y.,1959) at p. 131; essay orig.publ. in Business Week, April, 1953.

73. H. Harris American labor (Yale Univ. Press, New Haven, Conn.,1939)p.272; cf. Howe & Widick op.cit.(note 25) pp. 6-11. According to Fine (The automobile under the Blue Eagle p.42) 'laborers and operatives' in the Detroit auto industry in 1930 were 42% foreign-born whites and 13% Negro.

74. Of a sample of Detroit union members in 1952, 89% were white and 11% Negro; 46% were brought up on farms or in small towns, compared with 10% in medium-sized cities and 44% in big cities; 50% were brought up in Michigan, 18% in the South, 18% in the rest of the U.S. and 14% abroad. See A. Kornhauser, H.L. Sheppard & A.J. Mayer When labor votes (University Books, N.Y.,1956) pp.24,26. But cf. J.C.Leggett Class, race and labor (Oxford Univ. Press, N.Y.,1968). Although Leggett puts much weight on the role of the 'uprooted' in the development of class consciousness, he does not mention immigration as a factor

in his listing of the causes of unrest in the Thirties and, in his own study, excludes the Southern-born from his sample (pp.48, 174-78).

75. Jones op.cit. (note 42) p.66; an explicit comparison is made with the Michigan auto cities. Cf. rather different figures in McKenney op.cit. (note 20) p.xv.

76. Daugherty et.al. op.cit. (note 20) p.126.

77. H.B. Davis Labor and steel (Martin Lawrence, London, 1933) pp. 28-29 gives figures on the rise of Negro and native white employment between 1910 and 1930.

78. See, for example, S. Aronowitz False promises (McGraw-Hill, N.Y.,1973) p.183 for the view that the most important factor in the domination of the corporations after 1890 was the agrarian origin of the majority of the work force.

79. V.R. Greene The Slavic community on strike (Univ. of Notre Dame Press, Notre Dame, Ind., 1968).

80. These are treated in the standard works, but see also C.P. Larrowe 'The great maritime strike of '34' Labor Hist., 11, pp.403-51 (1970) and 12, pp. 3-37 (1971); F. Dobbs Teamster rebellion (Monad Press, N.Y. 1972).

81. Bernstein (Turbulent years pp. 773-74) and Galenson (The C.I.O. challenge pp. 584-88)point out that contemporary estimates exaggerated the growth of the C.I.O. and that the A.F.L. remained much larger and moved into several new areas. See also M. Derber 'Growth and expansion' pp. 1-44 in Derber and Young (eds) op.cit. (note 2) at pp.14-16.

82. J. Seidman 'Labor policy of the Communist Party during World War 2' Ind. & Lab.Rels Rev., 4,pp.55-69 (1950).

CHAPTER SEVEN

THE WORKING OF THE INSTITUTIONALISED SYSTEM, 1950-72

We saw in the previous chapter that the Second World War marked an important phase in the formalisation of industrial relations. It was followed by a large strike wave, which did not subside until the end of the 1940's. More days were lost in strikes in 1946 than in any previous or subsequent year although, as we saw in chapter three, total strike volume, in relation to the size of the work force, may have been less than in 1919. As several writers noted, this great amount of activity occurred within the framework of collective bargaining and was conducted according to certain established 'rules of the game'. The violence and bitterness of the Thirties had disappeared. Disputes still occurred over what could be included in bargaining, but the parties recognised the right of the other side to exist.[1] With the decline in strike activity in the Fifties, it is not surprising that industrial relations were characterised as 'mature'.

In this chapter I shall investigate the nature of strike activity under this system. From the early Sixties, activity began to rise again; section one examines this at the aggregate level and gives particular attention to the view that a 'labor revolt' was taking place. The radical argument is that, within the system of institutionalised relations, considerable pockets of rank and file discontent remained. Although the unions were able to provide satisfactory wage settlements, they did not concern themselves with matters of work conditions and discipline; these things had also been

present in the Fifties, but it was not until the Sixties that a significant movement of protest developed. I shall argue that there is some evidence for a revolt, but that this has been exaggerated and that a rank and file rebellion cannot account for the overall rise in activity which occurred. Various other factors are considered, of which inflation is among the most significant.

This chapter is called the 'working of the institutionalised system' rather than the 'breakdown of the system' because the evidence of section one does not suggest that the system as a whole was being destroyed by protest from below. We should not discount the significance of this protest, for it shows that total harmony does not prevail and that unrest has not been stifled. But the institutionalised system of relations continues; indeed, as several writers have argued, it has become more firmly established with the political integration of the unions into the Democratic Party [2]. The unrest of the Sixties was a reflection of the way in which relations had become institutionalised. For example, the focus on work conditions indicated a lack of concern among union officials with such things; but protest remained at the local level. The unions may have been able to incorporate some of the feelings of unrest in their national strikes for wage increases; in other words, the challenge of inflation forced rank and file concern away from matters of work conditions and onto wages and thus brought the workers back into a reliance on their official leaders.

In section two, I examine the industrial distribution of activity and consider some of the more important manifestations

of the rise in strikes. Section three deals with the factors which might explain inter-industry differences and suggests that some of the 'parameters of conflict' have changed. Section four gives particular attention to the effect of collective bargaining coverage on strike activity; the differences which appear suggest that the degree to which relations are institutionalised exerts an effect on strike patterns. This question is considered further in section five, where trends in activity within industries are considered. We may thus examine whether activity is more predictable in the institutionalised than in the other sectors. We can also see if patterns of activity observed at the national level are repeated at the industry level. Section six considers whether regional differences are still present and whether they can be related to the institutionalisation model.

1. Aggregate trends and the militancy of the 1960's

As we saw in chapter three, strike activity declined during the 1950's and rose during the 1960's. In Table 7-1, I give more detailed figures on this. Activity was high during the early Fifties, but fell throughout the decade, with intermittent reversals of the trend. As Ross suggests, overall trends may be somewhat misleading since they were affected by 'cycles of strikes' in certain industries;[3] during the Fifties national strikes in the steel industry exerted a large effect on the aggregate figures, particularly those for strike volume. Thus relations elsewhere may have been more peaceful than the overall data suggest. The decline in activity continued until the early 1960's but was then reversed. We shall see in the following section that this was not due

Table 7-1: Annual strike indices, 1950-72.

	W/N	D/W	N/E	W/E	D/E	Mean duration
1950	498	16.1	107	53.3	0.858	19.2
1951	469	10.3	99.0	46.4	0.479	17.4
1952	692	16.7	105	72.5	1.21	19.6
1953	471	11.8	101	47.8	0.563	20.3
1954	441	14.8	70.7	31.2	0.461	22.5
1955	613	10.6	85.2	52.3	0.556	18.5
1956	497	17.4	73.0	36.3	0.632	18.9
1957	378	11.9	69.4	26.3	0.312	19.2
1958	558	11.6	71.8	40.1	0.465	19.7
1959	507	36.3	69.4	35.2	1.29	24.6
1960	396	14.5	61.5	24.3	0.352	23.4
1961	431	11.2	62.1	26.7	0.301	23.7
1962	340	15.1	64.7	22.0	0.333	24.6
1963	280	17.1	58.8	16.5	0.282	23.0
1964	449	14.0	62.8	28.2	0.394	22.9
1965	391	15.0	65.2	25.5	0.383	25.0
1966	445	13.0	69.0	30.7	0.398	22.2
1967	625	14.7	69.6	43.4	0.637	22.8
1968	525	18.5	73.9	38.9	0.719	24.5
1969	435	17.3	81.3	35.4	0.611	22.5
1970	578	20.1	80.9	46.8	0.940	25.0
1971	639	14.5	72.6	46.4	0.673	27.0
1972	342	15.8	68.6	23.5	0.371	24.0

Note: Indices are as defined in Table 6-1.

to a revival of activity in the steel industry and that the rise in strike-proneness was very widespread.

It was during the 1950's that the institutionalised system seemed to be working most effectively; as we saw in chapter two, the 'conventional' institutionalisation theory developed in response to this. Collective bargaining was established in most industries and its scope was gradually being extended, with such things as pension and unemployment benefits being negotiated. And, after, the conflicts of the immediate post-war period, unions and employers seemed to accept each other. Although strikes in industries such as steel continued to gain attention, these conflicts were less bitter than those of the past and were the exception rather than the rule. However, as Table 7-1 shows, the strike trends of the 1950's were not continued. In the remainder of this section, I shall examine the reasons for this, giving particular attention to the role of rank and file action in the individual work place; the analysis of events in the 1960's will indicate how able the system was to cope with challenges from outside. Before turning to data which bear directly on these unofficial strikes, I shall consider the overall trends of activity in relation to two predictive models. The first concentrates on indices of employer well-being throughout the period 1948-72 and the second on economic indices for 1962-72. Thus these models deal, respectively, with a comparison of the Sixties and earlier periods in terms of the role of the employer and with the details of trends in the Sixties.

On the importance of the employer, several writers noted the emergence of a 'hard line' in the late 1950's, representing

a desire to fight what was seen as the encroachment by unions on managerial prerogatives.[4] 'Radicals' have also stressed a change in managerial attitudes, explaining it in terms of economic stagnation and a slowing of the rate of growth of productivity; capitalism was facing a crisis and it responded with a tougher line on wages and production standards.[5] Table 7-2 gives the results of a regression model with which I attempt to test this; the model uses the same five independent variables as those employed in Table 6-5 and no further comment on them is therefore required. The sixth variable, 'wage control', is taken from a study by Lipsky and Farber of strikes in the building industry; its importance for other industries will be considered in section five.[6] It is a dummy variable, taking the value of one in years when a government policy of wage control was in operation, and zero otherwise.

I examine the period 1948-72 as a whole and then compare two overlapping sub-periods to see if the effects of employer well-being on strike activity have changed. For the simple equation using productivity, profits and the rate of change of wholesale prices, strike frequency is predicted satisfactorily only in 1957-72, which is consistent with a change in managerial attitudes around 1960. But only the price change variable attains significance, so that this may reflect the general effect of inflation rather than a specifically managerial influence. The addition of the 'peak' and 'trough' variables improves the fit considerably for 1948-72 as a whole; in line with the findings for 1927-41, reported in Table 6-5, these variables are more important than are the measures of employer well-being. In the two sub-periods none

Table 7-2: Regression results, employer well-being model, 1948-72.

Dependent variable	Independent variables						R^2	D-W
	Prod.	Profits	Ch.P	Trough	Peak	Wage control		
N (1948-72)	Neg	Pos	Pos				0.19	0.77
	5%	NS	NS					
N (1948-72)	Neg	Pos	Pos	Pos	Neg		0.55	1.26
	5%	NS	NS	5%	1%			
N (1948-72)	Neg	Pos	Pos	Pos	Neg	Pos	0.57	1.65
	1%	NS	NS	5%	1%	NS		
N (1948-59)	Neg	Neg	Pos				0.11	1.54
	NS	NS	NS					
N (1948-59)	Neg	Pos	Pos	Pos	Neg		0.27	1.67
	NS	NS	NS	NS	NS			
N (1948-59)	Pos	Pos	Neg	Pos	Neg	Pos	0.67	2.32
	NS	5%	NS	5%	5%	5%		

/ Table continued over page.

Table 7-2: (continued)

Dependent variable	Independent variables						R^2	D-W
	Prod.	Profits	Ch.P	Trough	Peak	Wage control		
N (1957-72)	Pos	Neg	Pos				0.49	1.15
	NS	NS	1%					
N (1957-72)	Pos	Neg	Pos	Pos	Neg		0.57	1.50
	NS	NS	NS	NS	5%			
N (1957-72)	Pos	Neg	Pos	Pos	Neg	Neg	0.58	1.51
	NS	NS	NS	NS	NS	NS		
Duration (1948-72)	Pos	Pos	Neg				0.47	1.48
	1%	NS	5%					
Duration (1948-72)	Pos	Pos	Neg	Neg	Pos		0.48	1.56
	1%	NS	NS	NS	NS			

/ Table continued over page.

Table 7-2: (continued).

Dependent variable	Independent variables						R^2	
	Prod.	Profits	Ch.P	Trough	Peak	Wage control		
D/W (1948-72)	Pos NS	Pos NS	Neg NS				-0.10	
D/W (1948-72)	Pos NS	Pos NS	Neg NS	Pos NS	Pos NS		-0.10	
D/E (1948-72)	Neg NS	Pos NS	Neg NS			0.08	1.50	
D/E (1938-72)	Neg NS	Pos NS	Neg NS	Pos NS	Neg NS	0.08	1.95	

Notes: 'Prod.' is index of productivity

'Profits' is rate of profit (book value) after tax

'Ch.P' is percent. change in wholesale prices

'Wage control' is a dummy variable: see text

'Duration' is mean duration of strikes, in days.

of the three 'employer' variables is significant and the overall results improve little. The addition of the wage control dummy slightly improves the fit for the whole period, but for the first sub-period there is a marked improvement, with the R^2 increasing from 0.27 to 0.67. The coefficient of the profits variable becomes significant and positive. This, like the findings for 1927-41, suggests that the expectation that strikes will be associated with times of economic crisis for employers in unfounded.

The final part of Table 7-2 considers the relationship between employer well-being and strike duration and volume. Mean duration is associated with employer well-being, but neither the number of days lost per worker nor volume has any relationship with it. For mean duration, the negative coefficient of the price change variable indicates that strikes tend to be shorter the faster the rate of inflation; taken with the findings of Table 7-3, reported below, this suggests that stoppages are frequent and short when price inflation is rapid. The addition of the 'peak' and 'trough' measures improves the overall fit only slightly and neither variable attains significance. It appears that they do not dominate the employer well-being variables as they do in relation to strike frequency; in other words, duration is less dependent than frequency on general economic conditions, a finding which, as we saw in chapter six, also holds for the period 1927-41. The trend element in the productivity variable means that we cannot conclude that duration is largely determined by the employer; the upward trend in duration parallels, but need not be caused by, the upward trend in productivity. The

lack of significance of the profits and price change variables also suggests that we cannot be confident that employer well-being determines duration. What is clear is that duration and frequency are influenced by economic conditions in opposite directions; only the sign of the profits variable is the same in the equations predicting to them from the employer well-being and peak and trough measures.

The results for 1957-72, as a whole, indicate that there is no evidence that economic stagnation and a squeeze on profits made firms more willing to 'take a strike'. Herding has suggested that the 'labor revolt' of the 1960's was caused, in the main, by the neglect of work conditions by union leaders and tha attempt to control wages through government policy.[7] I shall consider work conditions later in this section; on wages policy, the evidence of Table 7-2 shows that it was in the Fifties rather than the Sixties that wage control was important. During the Korean War, the government sought to impose controls; as Table 7-1 shows, activity was very high and thus the coefficient of the wage control variable is positive. For 1957-72, the coefficient is negative, since activity was relatively low when controls were in operation.

Before turning to the details of the 'labor revolt', I shall consider strike trends as a whole during the 1960's. In Table 7-3, I use quarterly data to assess the detailed movement of strike activity, from 1962-to 1972, in relation to economic variables. We saw in chapter four (Table 4-9) that strike activity in this period was inversely related to the unemployment rate, but not associated with the rate of

Table 7-3: Regression results, quarterly data, 1962-72.

Dependent variable	Independent variables						R^2	D-W
	U/E	P	H	Ch.P	Ch.H	Time		
N	Neg 1%	Pos 5%	Neg 5%				0.29	2.00
N	Pos NS			Pos 1%	Pos NS		0.36	1.98
N	Neg NS	Pos NS	Neg NS	Pos 5%	Pos NS		0.34	1.99
N		Pos NS		Pos 1%		Pos NS	0.35	2.02

/Table continued over page.

Table 7-3: (continued).

Dependent variable	Independent variables							R^2	D-W
	U/E	Ch.P	Ch.H	Time	Q_1	Q_2	Q_3		
N	Neg	Pos	Pos	Pos	Pos	Pos	Pos	0.87	1.76
	NS	1%	NS	1%	5%	1%	1%		
W	Neg	Pos	Neg	Pos	Neg	Pos	Pos	0.55	0.88
	NS	5%	NS	5%	NS	1%	NS		

	Independent variables								
	$(U/E)_{t-1}$	$(Ch.P)_{t-1}$	$(Ch.H)_{t-1}$	Time	Q_1	Q_2	Q_3		
N_t	Neg	Pos	Neg	Pos	Pos	Pos	Pos	0.90	2.26
	5%	1%	NS	1%	1%	1%	1%		

change of real wages. We must now examine the matter more closely. In the first equation of Table 7-3, the levels of unemployment, prices and wages are all shown to be significant influences on strike frequency; but when, in the second equation, the changes in prices and wages are considered, the latter is seen to be non-significant. And the level of unemployment not only loses significance but changes its sign. The third equation combines the first two; again only the rate of change of prices attains significance. It might be felt that price changes reflect a more general time trend; that is, that many factors were tending to increase strike activity and that price changes are only one of these. But the fourth equation of the Table indicates that, when time and the level and rate of change of prices are considered together, it is only the price change variable which is significant.

The overall explanatory power of these equations is low. The addition of seasonal dummies does much to improve the situation. Only the time trend and the rate of change of prices, apart from the seasonal dummies, attain significance when predicting to strike frequency and worker involvement. The final equation of Table 7-3 shows the effect of lagging the explanatory variables. This improves the overall fit slightly and enables the level of unemployment to attain significant levels of association with the number of strikes. In general, the results of Table 7-3 give strong support to the view that price inflation was a source of rising strike activity in the 1960's; activity was linked with changes in prices but not, as we saw in chapter four, with changes in real wages. More qualitative evidence on this will be presented

in the following section.

I now turn to the 'labor revolt' of the Sixties. 'Radical' writers naturally place great weight on the trends of this period as revealing a rise in working class militancy. They concentrate on small, 'unofficial' stoppages based on immediate workplace grievances; but we must remember in discussing these strikes that large disputes were a very important part of the total. As Table 3-3 showed, strikes involving at least 10,000 workers grew in significance during the Sixties. Although a greatly increased share of large strikes, similar to that observed in Britain,[8] did not occur, the rise was sufficient to show that there was no wholesale shift to small and unconstitutional stoppages. Large strikes were more important in 1970-72 than at any time during the Thirties and the proportion of workers involved in them was surpassed only in 1946-49.

On 'unofficial' strikes, no direct data exist on the extent to which stoppages were formally authorised by union hierarchies, but it is possible to estimate trends using indirect evidence. Since 1961, the B.L.S. has recorded the contract status of strikes; the three main categories are 'first agreement and union recognition', 'renegotiation of existing agreement' and 'during term of agreement'. The last includes those strikes which occurred while a contract was in force; in the great majority of cases, these were unconstitutional because most agreements include a clause banning strikes while the contract is in operation. Stieber suggests that the number of strikes during the term of an agreement and lasting three days or less is an index of unofficial stoppages,[9] since these strikes are short as well as unconstitutional.

Clearly, this can be no more than an index of trends because it does not measure unofficial stoppages directly; not all short and unconstitutional strikes need be unauthorised, and longer or constitutional strikes need not be authorised.

Table 7-4 shows the trend of 'unofficial' strikes from 1961 to 1972, divided into those lasting one day and those lasting two or three days. There is a slight but clear upward trend in the proportion of such strikes in the total; since the total number was increasing, the rise in absolute terms was more marked. The trends for worker involvement and days lost are less clear, but some rise towards the end of the period is apparent. The coefficient of correlation between the total number of strikes and the proportion unofficial is 0.69, indicating quite a strong tendency for a rise in activity to be associated with an increase in unofficial action; this contradicts the view that official and unofficial strikes are alternatives and that they will therefore be inversely related. Without comparable data for the 1950's, it is hard to assess the significance of the evidence of Table 7-4. But it is clear that the increase in unofficial action was far from dramatic, particularly when worker involvement is considered; if the increase of 1971-72 is maintained, there will be firmer evidence for a secular change. At the same time, short, small and unconstitutional stoppages have accounted for between 14% and 25% of the total and cannot be ignored.

The distribution of strikes by contract status is considered further in Tables 7-5 to 7-7. The first shows that about one-sixth of all strikes are for union recognition or a first agreement, and that there has been a slight decline in this proportion. When this number is added to the number of

Table 7-4: 'Unofficial' strikes, 1961-72.

% of all stoppages accounted for by strikes which were during course of agreement and lasted:

	1 day			2-3 days		
	N	W	D	N	W	D
1961	7.3	5.4	0.5	9.0	5.7	1.1
1962	5.9	5.0	0.3	7.7	7.7	1.1
1963	8.2	6.3	0.4	9.4	9.8	1.2
1964	7.4	5.8	0.4	9.3	7.4	1.1
1965	7.6	5.9	0.4	8.4	6.8	1.0
1966	8.2	6.6	0.5	9.0	7.3	1.1
1967	8.7	4.8	0.3	8.5	6.3	0.9
1968	9.3	5.0	0.4	8.4	6.5	0.9
1969	9.9	8.2	0.5	8.3	8.1	0.9
1970	9.3	4.4	0.2	7.7	4.8	0.5
1971	10.4	4.8	0.3	8.3	4.5	0.6
1972	13.2	9.9	0.6	11.5	11.0	1.4

Table 7-5: Strikes by contract status, 1961-72.

	% of strikes with given contract status				% of workers involved in strikes with given contract status			
	First agreement	Re-negotiation	During term	Other	First agreement	Re-negotiation	During term	Other
1961	15.2	45.1	32.2	1.7	2.5	70.2	26.0	0.5
1962	16.8	48.3	29.8	2.5	4.1	64.6	28.3	2.5
1963	18.1	43.4	35.8	1.9	7.0	81.7	11.1	0.2
1964	17.7	44.1	36.1	1.6	6.5	83.2	9.9	0.3
1965	17.5	45.5	34.7	1.7	7.9	80.0	11.6	0.2
1966	17.1	44.1	36.5	2.0	7.5	79.8	12.3	0.4
1967	16.0	46.9	33.9	2.7	4.8	87.6	7.3	0.3
1968	15.0	47.7	34.2	2.5	4.9	80.0	14.6	0.5
1969	14.2	48.6	34.4	2.2	5.0	59.4	34.7	0.8
1970	12.8	51.3	33.1	1.6	4.7	89.4	5.6	0.1
1971	12.7	51.0	33.4	2.0	3.7	90.5	5.5	2.2
1972	13.4	43.5	39.8	2.6	7.4	83.0	8.7	0.6

Note: Percentages for each year do not add to 100 because of the exclusion of the 'insufficient information' category; this generally accounted for less than 1% of strikes and less than 0.1% of workers involved. 'First agreement' includes union recognition strikes; 'other' includes cases where there was no contract.

Table 7-6: Strikes by contract status and size, 1961-72.

Size	% of strikes in each size class				% of workers involved in strikes in each size class			
	First agreement	Re-negot-iation	During term	Other	First agreement	Re-negot-iation	During term	Other
6-19 workers	32.3	10.2	14.5	31.3	3.7	0.2	0.5	2.0
20-99 "	46.4	37.6	31.6	40.7	18.3	2.9	4.2	9.6
100-249 "	13.2	24.0	23.4	13.3	17.2	5.7	10.0	10.9
250-499 "	4.8	12.6	15.3	7.7	13.8	6.5	14.1	14.6
500-999 "	1.8	7.5	8.2	4.7	10.6	7.7	14.9	17.0
1000-4999 "	1.3	6.3	6.4	2.2	18.2	18.7	33.2	20.4
5000-9999 "	0.1	0.9	0.4	0	5.3	9.1	7.3	0
10000 and over	0.1	0.8	0.3	0.2	12.9	49.3	15.9	25.5
All	100.0	99.9	100.1	100.1	100.0	100.1	100.0	100.0

Table 7-7: Strikes by contract status and issue, 1961-72.

Issue	% of strikes with given issue				% of workers involved in strikes with given issue			
	First agreement	Re-negotiation	During term	Other	First agreement	Re-negotiation	During term	Other
Wages, hours and other contractual matters	31.1	89.6	10.8	60.6	39.1	81.2	13.7	61.1
Union organisation & security	61.7	3.6	3.9	6.3	51.5	5.3	2.4	3.7
Job security, plant administration	5.1	5.1	49.9	24.6	4.5	12.4	63.5	26.6
Inter and intra union	1.5	0.2	27.7	4.4	4.3	0.3	13.5	4.1
Other work conditions	0.6	1.5	7.8	4.2	0.6	0.8	6.9	4.5
All issues	100.0	100.0	100.1	100.1	100.0	100.0	100.0	100.0

'unofficial' strikes, it is clear that the picture of strikes as being dominated by union-led bargaining disputes at the termination of an agreement is an exaggeration. Although most workers involved in strikes are affected by these disputes, a significant number of strikes does not fit this picture. Table 7-6 shows that strikes during the term of agreements are not particularly small, although one might expect them to be smaller than disputes over the re-negotiation of contracts. The smallest strikes are in the 'first agreement' category, which is surprising in view of the institutionalisation argument that such stoppages will be large battles over 'fundamental' matters. As we shall see below, this is partly explained by the industrial distribution of strikes by contract status, but it is still significant; in the terms of the institutionalisation thesis, strikes over recognition are small and limited to a few marginal sectors whereas conflict elsewhere is under institutional control.

The breakdown of strikes by contract status and issue is given in Table 7-7. As one would expect, most strikes in the 'first agreement' category are over union organisation and security, while those over the re-negotiation of a contract are heavily concentrated on 'wages, hours and other contractual matters'. More interesting is the tendency for strikes during the term of agreements to be focussed on matters relating to the work place, with particular emphasis being given to 'job security and plant administration'. It is unfortunate that further sub-divisions by the duration of strikes are not available, but it is likely that strikes 'during term and lasting three days or less' are concentrated on work place matters at least as heavily as are all strikes during the term of an agreement. Thus unofficial strikes fit the radical model in

being rank and file actions concentrated on work place issues, but it does not follow that a 'rank and file revolt' was occurring; to assess this question, we must consider other dimensions of the revolt.

In addition to unofficial strikes, Herding lists seven elements in the 'labor revolt'.[10] These are: violations of plant discipline and absenteeism; challenges to union leaders in elections; contract rejection by the rank and file; disaffiliation from national unions; de-certifications of a union as the bargaining agent for a group of workers; de-authorisation of obligatory union membership agreements; and the re-emergence of political strikes. This is an impressive list, but the elements are not of equal significance for Herding's case. Thus disaffiliation, de-certification and de-authorisation can all be seen as reflecting the 'crisis of the labor movement' rather than a rise in rank and file militancy.[11] They indicate a dissatisfaction with national unions and do not necessarily imply a growth of militancy. Indeed, a desire to leave a national union may well indicate the lack of class solidarity rather than the reverse. This is apart from questions of the extent to which there has been an increase in disaffiliations and so on.

Similarly, contract rejection is only an indirect index of militancy. It indicates the extent to which proposals for a new contract made by union leaders are rejected by the members. But there is considerable disagreement as to the significance of this. Simkin[12] argues that in most cases contract rejection reflects the repudiation of the union leaders; he shows that the rate of rejection was rising from 1964 to 1967. But these figures relate, as Simkin stresses,

only to cases in which Federal mediation was involved; they are thus the most difficult to solve and rejection is less significant among negotiations in general. In 62% of the cases, no strike followed rejection: in the majority of cases, a tentative agreement was rejected but a subsequent one accepted. Summers [13] has pointed out that contract rejection is not as simple as it may seem. Union negotiators may pretend to agree with the employer and then urge rejection; submission of the terms to the membership is here merely a bargaining ploy to support further demands. Or demands may be submitted to the members only at the employer's insistence; here, rejection is a statement of confidence in the union leaders' refusal of the employer's offer. These and other problems make the use of the overall rate of rejection very difficult. Summers' conclusions are supported by a study by Burke and Rubin.[14] They found that rejection is less widespread than is often thought and that it is often due to a failure of communication within a union; the members are not properly informed of the conditions of an agreement and express their discontent by voting against the leadership.

Herding also emphasises direct challenges to a union's leadership through the procedures for the election of new officers. The two most well known instances are the unseating of the presidents of the Steel Workers' and Mine Workers' unions in 1965 and 1973. Rank and file discontent with union policy seems to have been important in this. For example, after a series of strikes in the 1950's, McDonald, the Steel Workers' leader, began a policy of active co-operation with the employers which involved relatively low wage settlements.

It is not surprising that this encouraged discontent with the centralised nature of the union's bargaining which, as we saw in the previous chapter, has been characteristic of it since the Thirties. But, as Edelstein and Warner point out, the unseating of an incumbent union president usually depends on the presence of a highly-placed opposition group with considerable power in the union.[15] Thus the defeat of a union's leaders does not reflect only rank and file dissatisfaction.

Herding's final two elements are the political strike and the violation of plant discipline. He cites strikes in plants producing arms for the Vietnam war after the assassination of Senator Kennedy as an example of the former; but such cases are hardly sufficient to establish that a general trend to politically-motivated action is occurring. One can point to the contrasting case of attacks on anti-war demonstrators by building workers to suggest that political involvement need not go in one direction.[16] On plant discipline, Herding notes that it is hard to analyse such aspects of the labour revolt and uses wildcat strikes as an index of the infraction of discipline. Thus we return to unofficial disputes as an index of rank and file protest.

Although the evidence for each of Herding's factors does not suggest that large-scale rank and file action was occurring, taken together they point to an increase in protest. Several other writers have pointed to an increase in unrest. For example:[17]

> 'At the work place, class struggle has been as intense and serious in the U.S. setting as in any other ... but its focus has always been local'.

As in the Thirties, action at the level of the work place has not become generalised. And, as Flanagan et.al. argue, the extent of job dissatisfaction has been exaggerated and there is no necessary link between feelings of discontent and behaviour; job discontent does not provide much of the explanation of the increase in strike activity.[18] Radicals place little weight on job satisfaction surveys, of course, but if the rank and file revolt is not to be explained by a growth of feelings of discontent which these surveys measure, then some other source must be found. One line is to suppose that the rank and file are inherently militant and that it is the passivity of the Fifties, and not the revolt of the Sixties, which has to be explained. I would agree that we cannot assume that workers are naturally contented, but this is no reason to refuse to seek the sources of discontent and its expression in strikes.

We saw at the start of this section that the prosperity of employers does not explain strike activity in the Fifties or the Sixties; in the latter period, price inflation was particularly important. Although rank and file protests increased, they cannot account for the rise in activity as a whole since they remained a small proportion of the total. Demands for increased wages to compensate for rising prices naturally became important, as the data on the issues in strikes (Table 3-5) show. Union leaders are much more able and willing to press for wage increases than they are to deal with matters of job control. Hence, I would suggest, the need for workers to concentrate on wage demands led them to work through their union leaders; in turn, this enabled the leaders

to adapt to the 'challenge from below' and disarm the threat to their position.

If inflation was so important, it may be argued, I need to show why any movement based on the shop floor developed. I am not denying that work-based discontents were important, but merely suggesting that, during the Sixties, the emphasis on them was reduced as the focus shifted to wage demands. They arose in the first place as a reaction against the policies of union leaders. As I suggested in chapter six, discontents based on the immediate work place can be solved only in day-to-day struggles with employers and are not amenable to solution through collective bargaining. The development of the rank and file rebellion in the early 1960's can thus be attributed to union leaders' earlier concentration on formal bargaining and their increasing distance from work-based matters.

Two more general factors which have been cited as sources of unrest must also be mentioned. Firstly there is the 'generational conflict'. It is said that the new generation of young workers is no longer willing to submit to industrial discipline or to emulate its elders in the pursuit of material reward. Young workers concentrate on intrinsically satisfying work and are prepared to forego high earnings to pursue their non-work interests. We do not need to spend long on this argument; Herding is correct in suggesting that it is, at best, of secondary importance to the explanation of strike trends.[20] 'Generational conflict' is much too vague a concept to be useful; the evidence for its presence is not very substantial;

and its applicability to industrial conflict unclear. Strikes involved workers in many different positions and cannot be seen as reflecting only or largely the discontents of the young.

More important is the possibility that technical change during the Fifties and Sixties was putting increasing pressure on work conditions. In the early Sixties, automation was widely cited as a cause of increasing industrial conflict; the challenge of automation was seen as important in the 1959 steel strike, the stoppage in New York newspapers in 1962-63, the lengthy work rules dispute on the railroads and in several other cases.[21] However, as Kennedy has suggested, automation may increase the possibility of conflict only up to a certain point, beyond which operations can be continued without the presence of production workers so that the power of the strike is much reduced.[22] He, like other writers, suggests that in sectors such as chemicals this point has already been reached. Thus there is no agreement whether, in the aggregate, automation will increase or reduce the amount of conflict.[23]
It is also notable that the stress placed on automation declined during the Sixties, but we can see it as a background factor which in some cases exerted recognisable effects. Its present significance is not that it may have increased the potential for conflict in some industries and reduced it in others. We can see it as one influence which unsettled the relatively stable relations of the 1950's; it was a challenge to the system which brought work conditions and rules to the centre of attention and may have contributed to the rise in rank and file protests based on these aspects of day-to-day

operations.

I would suggest, then, that technical change, possibly combined with a change in managerial policies, may have posed a background challenge to the institutionalised system. The direct challenge came from the rank and file, but, I have suggested, this challenge had a limited scope; it indicated that workers were not prepared meekly to follow their union leaders in everything, but was not part of a self-conscious movement to establish job control.[24] The system was able to survive because of the limited aims and extent of the challenge and because of its own resilience and ability to adapt to external pressure. In the following section, I shall consider in more detail the interaction between challenge and response.

2. The industrial distribution of activity

The distribution of strikes among selected industries for 1950-61 and 1962-72 is shown in Table 7-8. It is roughly comparable with Tables 5-7 and 6-6, but differences of definition inevitably arise; for example, 'leather' replaces 'boots and shoes'. To facilitate comparison, the industries are listed in approximately the same order as in the other two tables; this explains the unconventional appearances of Table 7-8, with manufacturing and non-manufacturing industries not being separated. The most notable feature of the Table is that the industries listed in the first part account for only 37% of total non-agricultural employment. This is due, of course, to the expansion of the tertiary sector; services, trade and government cover over half of total employment. In chapter six we saw that strikes were important in the first

Table 7-8: Proportion of all stoppages accounted for by each industry, 1950-72.

Industry	1950-61 % of: N	W	D	Employment as % total	1962-72 % of: N	W	D
Building	19.1	15.0	12.8	5.3	19.8	17.5	19.4
Clothing	3.6	1.5	0.9	2.3	2.0	0.8	0.7
Coal and mining	8.2	7.4	7.0	1.3	8.2	7.4	4.4
Food	4.4	3.6	2.8	3.3	4.5	3.1	2.8
Leather	1.2	0.7	0.4	0.7	0.6	0.4	0.3
Machinery: non-electric	5.8	6.3	8.5	2.7	6.1	5.6	7.3
electrical	2.9	4.4	4.6	2.7	3.7	5.7	6.3
Metals: basic steel	2.3	10.5	19.1	1.7	2.4	2.5	2.6
other primary	3.4	3.0	3.6	0.6	2.1	2.2	3.2
fabricated	6.0	4.4	4.6	2.1	6.3	3.6	4.6
Printing & publishing	1.0	0.6	0.6	1.6	1.4	1.1	2.1
Stone, clay & glass	3.0	1.3	2.0	1.1	3.1	1.7	2.0
Textiles	1.9	1.7	2.3	1.7	0.9	0.6	0.5
Tobacco	0.1	..	..	0.2	0.1	0.2	0.2
Transport	7.2	10.7	7.4	7.4	6.1	20.5	13.2
Transport equipment:							
motor vehs	2.4	8.9	5.2	1.4	1.9	7.1	9.0
other	1.4	3.5	3.6	1.5	1.5	2.7	2.5
All above industries	73.9	84.0	85.4	37.6	70.7	83.7	81.1

/Table continued over page.

Table 7-8: (continued).

Industry	1950-61 % of: N	W	D	Employment as % total	1962-72 % of: N	W	D
Chemicals	2.2	1.3	1.5	1.5	2.7	1.4	2.4
Lumber	2.0	1.2	2.2	1.2	1.4	0.6	1.0
Rubber	2.2	4.4	2.2	0.7	1.9	1.9	2.6
Services	3.5	0.8	0.8	18.6	3.9	1.4	1.5
Trade	8.4	2.8	2.9	21.0	8.7	3.1	3.1
Government	0.6	0.3	0.1	15.4	4.5	5.5	2.5
All above industries	92.9	94.9	95.2	95.9	93.7	96.4	94.3
All industries	100	100	100	100	100	100	100

Note: Employment is for 1960.

two of these by the 1930's, but stoppages among government employees do not become significant until the 1960's. These workers are better described as 'public employees' since they include teachers, firemen and sanitation workers as well as government administrators. Their willingness to strike is one of the most marked recent changes in the pattern of activity. Just as the strikes in trade and services in the Thirties reflected a 'lagged response' to the growth of these sectors, so the government strikes of the Sixties indicate that the strike movement was following, in a muted way, the distribution of employment in general.

Table 7-8 also shows the decline in the importance of steel strikes; there were no national stoppages in the Sixties on the scale of those of the Fifties.[25] But there are no other marked changes apart from a rise in the proportions of workers involved and days lost accounted for by the transport industries.[26] This suggests that, except for the rise of strikes in the public sector, the industrial distribution remained fairly constant; any rise in rank and file protest is not revealed in a sudden shift in the industrial distribution.

Tables 7-9 and 7-10 continue the comparison between 1950-61 and 1962-72. As the figures for 'all industries' show, strike frequency and worker involvement fell and duration rose only slightly. This indicates that, although activity was rising during the Sixties, activity in this period, taken as a whole, was not very different from that in the past. The reason why the frequency and worker involvement figures do not show an increase is that the earlier period includes several years of high strike activity; 1959 was surpassed only by 1946

Table 7-9: Strike indices, by industry, 1950-61.

Industry	N/E	W/E	W/N	D/W
Building	285	113	395	13.0
Clothing	138	29.8	215	8.9
Coal and mining	414	190	458	14.5
Food	162	68.1	420	11.8
Leather	151	45.0	298	9.1
Machinery: non-electrical	206	112	544	20.5
electrical	145	111	764	15.8
Metals: basic steel	132	307	2334	27.6
other primary	442	189	427	19.2
fabricated	288	107	373	15.9
Printing & publishing	76.0	21.5	283	15.4
Stone, clay & glass	276	82.5	299	16.9
Textiles	77.6	35.1	452	21.4
Tobacco	35.0	9.7	278	16.2
Transport	71.7	53.5	746	10.5
Transport equip.: motor vehicles	162	292	1798	8.9
other	83.9	113	1346	15.9
Chemicals	173	50.7	293	17.1
Lumber	129	38.4	299	28.0
Rubber	417	427	1024	7.5
Services	17.3	2.1	120	15.4
Trade	31.9	5.3	166	16.0
Government	3.6	0.8	224	3.9
All industries	80.6	40.5	503	15.3

Note: N/E is number of strikes per million employees
W/E is number of workers involved per thousand employees
W/N is number of workers involved per strike
D/W is number of days lost per worker involved.

Table 7-10: Strike indices, by industry, 1962-72.

Industry	N/E	W/E	W/N	D/W
Building	282	117	414	17.9
Clothing	77.2	14.1	183	14.5
Coal and mining	596	254	426	9.6
Food	173	56.7	328	14.6
Leather	90.7	31.5	347	10.5
Machinery: non-electrical	227	97.7	430	21.1
electrical	141	102	721	17.7
Metals: basic steel	161	78.5	486	16.6
other primary	287	143	500	23.8
fabricated	285	77.0	270	20.8
Printing & publishing	99.0	36.5	368	31.4
Stone, clay & glass	284	71.5	252	19.7
Textiles	51.2	16.3	318	13.2
Tobacco	34.0	48.0	1423	17.4
Transport	66.1	104	1576	10.4
Transport equip.: motor vehicles	132	237	1788	20.6
other	67.5	89.6	838	15.0
Chemicals	215	54.6	254	26.8
Lumber	119	26.2	219	25.1
Rubber	224	103	460	22.5
Services	13.2	2.2	166	17.2
Trade	29.1	4.8	166	16.3
Government	18.1	10.5	577	7.3
All industries	70.2	33.1	471	16.2

Note: Indices are as defined in Table 7-9.

in the total number of days lost and activity was high in several sectors in the early 1950's.

These tables confirm the rise in activity in the public sector. There were very large increases in strike frequency and worker involvement; and the size and duration of disputes both more than doubled. Since this sector was new to strikes on a large scale it is interesting that stoppages became more 'sophisticated', to use the terms considered in chapter five.[27] A growth in sophistication is not limited to the 'modernisation' of strikes during early industrialisation, but can occur whenever a group of workers begins to use the strike weapon systematically. Stieber has provided a useful survey of government employees' strike activity.[28] Between 1958 and 1970, 92% of the strikes were at the local level, 7% were among State employees and 1% among Federal workers. In 1965-69 the distribution by occupation of strikes by workers other than teachers indicated that stoppages were concentrated among sanitation, sewage and street maintenance workers, although there were several strikes by police, fire and hospital workers. Thus the majority of stoppages are among manual workers at the local level and there is little reason to treat them as different from those in the private sector. Only the fact of working in sectors defined as 'public' marks these workers off from employees in private industry.[29]

On the reasons for the increase of activity, perhaps one should begin with the reasons for such a low level of strikes before the 1960's. Stoppages by public employees were generally illegal and the right to join a union severely restricted. Many unions were opposed to the use of strikes, for reasons of

professional status, as was the case with teachers' and nurses' unions, or because of the special position of the workers they represented (police federations and the Association of Fire Fighters). Although strikes remain widely illegal, the government's attitude has changed. At the Federal level, an order of 1962 allowed workers to organise and, locally, the recognition of collective bargaining as an appropriate means to deal with public employees became more accepted. Union attitudes also changed, with teachers' unions, in particular, accepting the need to use the strike to obtain their ends.[30] As one would expect, government strikes are over union recognition more often than is the case nationally and the proportion of unorganised stoppages is also high; the latter feature can be explained, as Stieber says, by the newness of union organisation, the lack of contact between workers wanting to be organised and the unions and the absence of legal protection for bargaining in many sectors.[31]

Thus during the Sixties several facilitating factors came into operation. For the manual workers, these are sufficient to explain the rise in strike activity, since there is nothing about them to set them apart from other manual groups. For non-manual employees, matters are more complex. The standard 'sociological' argument about such workers is, of course, that aspects of their social position inhibit feelings of class solidarity and reduce the willingness to join unions and strike.[32] I cannot go into the details of this here, but it is worthwhile pointing out that it is unlikely that the social position of teachers changed so rapidly that the rise in strike activity can be accounted for. Apart from the

enabling factors of changes in governmental attitudes, the rise in prices in the Sixties seems to have been important. A rash of teachers' strikes at the end of the 1940's has been related to the rapid inflation of the period[33] and it is certainly plausible that rising prices, combined with the high visibility of pay settlements in the private sector, led to dissatisfaction among teachers in the Sixties.

Public employee strikes as a whole fit the institutionalisation model of rising conflict in a period when bargaining rights are being sought. Time will tell whether activity will decline as bargaining becomes established, but it seems unlikely that strikes will wither away. Until the Sixties they were prevented from occurring and the establishment of bargaining is likely to give them a place in a system of negotiations, whereas previously they were outside the normal procedures for supporting a demand. It seems clear that the strikes represent a desire to achieve bargaining rights on a par with those in private industries and that they are not part of a 'revolt' by the rank and file.

If we return to Tables 7-9 and 7-10, we can see that several sectors were not noted for a rise in activity in the Sixties. In clothing, for example, activity continued to decline; as the more detailed figures in Table A-22 show, this is not a function of the periods chosen for comparison but a long-term trend. Similar trends are apparent in textiles and rubber, for example. Let us consider, then, where the increase in activity was concentrated. Construction, mining and transport all showed large rises in worker involvement during the Sixties; and there were less marked increases in

machinery and fabricated metals. But in many cases these rises were not great compared with post-war experience as a whole. We must give particular attention to the steel and auto industries since it is here that the rank and file revolt is said to be concentrated. In the former, the strike pattern fits this picture, with frequency rising slightly between the Fifties and Sixties and worker involvement falling; a concomitant of this is the sharp fall in the mean size of strikes. The number of days lost per striker fell between the late Fifties and early Sixties and then rose again. Although the great national strikes ended, strike activity at plant level remained high. In autos frequency and worker involvement both fell between the two decades, and the recovery during the Sixties was not particularly rapid; there was no strong trend in the size of strikes and loss per striker increased. This contrasts with the expectation from the picture of rank and file revolt that strikes will be short, small and frequent expressions of work place discontent.

Tables 7-11 and 7-12 enable us to consider the matter further; they give, respectively, the distribution of strikes by contract status and issue for ten selected industries, plus 'all manufacturing', for 1961-72.[34] Of the manufacturing industries, primary metals and transport equipment are particularly prone to stoppages during the term of agreements; and they have more strikes than average over matters of job security and plant administration. They are thus prone to unofficial actions based largely on the work place. On changes over time, Herding suggests that wildcats in autos and steel have not been increasing more rapidly than strikes

Table 7-11: Strikes by contract status, selected industries, 1961-72.

Industry	% of strikes in each industry with given contract status				% of workers involved in strikes in each industry with given contract status			
	First agreement	Re-negot-iation	During term	Other	First agreement	Re-negot-iation	During term	Other
All manufacturing	15.4	58.4	25.4	0.8	3.6	62.8	33.4	0.2
Building	7.0	34.6	57.2	1.1	1.4	79.6	18.6	0.4
Clothing	27.4	31.3	40.3	1.0	10.5	56.6	32.4	0.5
Coal and mining	3.0	7.2	89.3	0.4	1.3	19.2	79.4	0.1
Food	17.8	59.7	21.5	1.0	4.9	64.0	30.4	0.6
Metals: primary	9.5	53.6	36.6	0.3	2.7	52.0	45.2	0.1
Printing & publishing	25.0	61.6	12.9	0.4	4.0	86.2	9.7	..
Textiles	25.4	50.2	20.3	4.0	6.1	76.1	16.7	1.1
Transport equipment	12.4	47.6	39.6	0.4	1.6	67.3	31.0	0.1
Services	38.0	46.6	10.9	4.5	18.9	69.4	10.3	1.4
Government	27.5	37.2	12.7	22.6	32.9	37.1	18.9	11.1

Table 7-12: Strike issues, selected industries, 1961-72.

Industry	% of strikes with given issue						% of workers involved in strikes with given issue					
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
All manufacturing	63.9	11.7	5.3	14.9	2.8	1.5	56.3	5.8	6.1	27.4	3.0	1.4
Building	36.4	11.6	2.2	8.4	0.9	40.5	66.2	13.2	2.5	5.8	0.5	11.9
Clothing	47.8	26.3	4.7	12.2	5.9	3.1	65.4	10.0	3.1	15.0	4.5	2.0
Coal and mining	14.2	3.5	11.6	54.6	8.8	7.4	23.5	3.9	8.8	47.4	5.4	10.9
Food	63.1	11.8	5.4	15.6	1.9	2.2	59.7	5.4	7.1	21.5	1.9	4.5
Metals: primary	60.4	6.4	5.8	23.6	3.0	0.8	51.1	3.8	8.0	32.4	3.1	1.7
Printing & publishing	59.6	18.9	7.0	11.0	2.0	1.5	68.0	7.5	12.8	8.8	1.8	1.1
Textiles	57.7	20.8	2.1	14.9	3.0	1.5	62.5	13.8	1.1	19.5	2.5	0.7
Transport equipment	50.8	8.7	5.5	30.6	2.7	1.6	32.5	3.2	5.8	55.7	2.3	0.5
Services	55.5	29.3	2.5	9.1	0.9	2.7	63.0	16.7	8.2	7.7	0.5	3.8
Government	65.3	15.3	2.6	14.1	1.6	1.1	81.0	6.3	0.9	9.5	1.5	0.7

Note: (1) Wages, hours and other contractual matters
(2) Union organisation and security
(3) Job security
(4) Plant administration
(5) Other working conditions
(6) Inter and intra union

in general, but that these industries have remained on a plateau while the rest of industry has been catching up with them.[35] Table A-23 shows that, for the number of strikes, activity in these two industries has fallen while in all manufacturing it has remained constant; thus there has been a 'levelling down' rather than a 'levelling up'. For worker involvement, the proportion of strikes during the term of agreements has fallen in these two industries but risen elsewhere. On the issues in strikes, the proportion accounted for by disputes over job security and plant administration has fallen in all three sectors considered.

As we saw in chapter three, wages and other contractual matters became increasingly important strike issues in the Sixties; Table A-24 bears this out for our three manufacturing industries. In a time of rising prices, this is not surprising, but it suggests that there were important limits to the movement for job control. With inflation attacking real wage levels, workers began to concentrate on their economic position, with work conditions being less important. The radical argument is that union leaders are much more able and willing to obtain wage increases than they are to deal with work conditions. This is used to explain the 'revolt' of the early and mid-Sixties,[36] but it can also be used for the subsequent decline in the indices of revolt: unions were able to cope with increased membership pressure for wage increases and unofficial action therefore subsided. This does not mean that union members are necessarily satisfied with their leaders, but it points to limits of the revolt. No one would suggest that the events of the Sixties indicated that manual workers had developed a revolutionary class consciou-

sness; the revolt represents a rejection of the union because of its inability to deal with certain plant level problems. As we saw in the previous section, the protest was on a limited scale; we have now seen that it did not prevent workers from returning to action through unions when they felt that this would help them protect their real wage level.

As I have said, the overall increases in strike activity in the Sixties in steel and autos were not particularly marked; the sectors of 'revolt' did not lead the strike movement as a whole. Increases were widespread throughout industry, but I shall consider specifically only the mining and construction sectors. In the former, strike frequency and worker involvement fell rapidly during the 1950's; this was probably associated with the economic decline of the industry and the union's acceptance of the need for mechanisation.[37] In the Sixties, strike frequency rose sharply but the number of days lost per striker fell. The very large proportion of strikes which were during the term of agreements might suggest that an important rank and file revolt was developing in the Sixties. However, too much weight should not be placed on the high <u>level</u> of strikes during the term of agreements, compared with other industries; it is well-known that miners tend to strike frequently over immediate work place matters.[38] However, as Table A-23 shows, the proportion of strikes 'during term' rose in 1970-72, so that a <u>trend</u> in the direction of 'revolt' is discernible within the industry. It is notable that this occurs in the early Seventies rather than the Sixties, when the revolt in other industries was developing. As I have mentioned, it was at

the start of the Seventies that the revolt against the officials who had been running the Mine Workers' Union since 1960, when Lewis, the President since 1919, resigned, culminated in the defeat of the incumbent President. A plausible link can be established between this and the rise in 'protest' strikes. The rise in activity since 1961 may be associated with the greater stability of the industry and more regular working; I shall return to this in section five.

The high level of strikes in building led to increasing public concern during the Sixties. Here, too, strikes were concentrated in the 'during term' category of contract status, although most strikers were involved in stoppages over the re-negotiation of agreements. But few stoppages were on work conditions issues. Building has had a long history of action by craft groups over matters of immediate concern and the concentration of strikes in the 'during term' category cannot be taken as indicating a protest against union leaders. The large number of jurisdictional disputes, revealed by the 'inter and intra-union' section of Table 7-12, has been a constant feature of the industry.[39] The difference between the Sixties and the Fifties lies in the greatet size and length of strikes, and it is probably this which aroused the concern about the industry's strike-proneness. I shall consider this further in section five; the importance of the industry here is as an important contributor to the rise in overall activity in the Sixties where a rank and file revolt cannot be discovered.

Finally in this section, I return to the auto industry to examine the characteristics of the revolt, and to deal with

some other points of importance for the institutionalisation thesis. As I showed in chapter six, the industry was one of the centres of the militancy of the Thirties; in the post-war strikes the Auto Workers' union attempted to make matters of pricing and profits subjects for collective bargaining, but failed to break General Motors' determination not to give way.[40] Harbison and Dubin argued in 1947 that this pattern of conflict was not typical of the industry as a whole and suggested that 'constructive relations' were possible.[41] They compared General Motors with the Studebaker company and sought to explain the differences in their patterns of labour relations; the stability of relations in Studebaker was attributed to mutual trust between the two sides, the sharing of information and the exclusion of outsiders from the bargaining relationship. The writers argue that the constructive relations in Studebaker can be developed elsewhere.

As an argument that labour relations are not determined by technical or other conditions of an industry, this is a valuable contribution, but its position as a case study supporting the 'conventional' institutionalisation case is much less certain. As the approach of Harbison and Dubin itself makes clear, and as Macdonald has subsequently pointed out, stable relations in Studebaker depended on the company's position at the periphery of the industry.[42] It was not one of the 'pattern-setting' firms and was able to follow the agreements reached elsewhere; domestic relations could thus continue peacefully. The company was noted for its loose production standards and this further reduced the potential for conflict, particularly when compared with General Motors, which has always sought to keep control of standards.

'Constructive relations' in autos seem to be a special case which is limited to the economic periphery of the industry; industrial peace rests on the lack of serious economic conflict and thus the case cannot be given more general application.

Despite the appearance that the union has a strong position in the industry, it has been convincingly argued that on all important matters of principle it has been forced to give way to the companies.[43] Although it has made important breakthroughs on the economic front, notably in securing Supplementary Unemployment Benefits from Ford in 1955 and from the other companies subsequently, it has been unable to wrest from management any say in the planning of operations or the control of line speed. Particularly during the Sixties, the practice grew up of reaching a national settlement on economic issues and leaving questions of work conditions to be settled locally; this frequently led to local strikes.[44] These have been seen as part of the 'labor revolt' but it is not clear how far the union in fact condoned them; it claimed that local negotiations were part of its democratic tradition.[45] Nevertheless, the union's lack of concern with local demands and its treatment of them as marginal to the main negotiations is likely to have stimulated local discontent. The union has also been criticised for an increasingly bureaucratic stance and for becoming dominated by 'business' ideology while retaining the language of its earlier days.[46]

These tendencies came together in the 1970 strike at General Motors and were combined with matters of economic security. The 'cost of living escalator' clause, which had initially been granted by G.M. in 1948, had subsequently been weakened and the union demanded the restoration of unlimited

cost of living increases, as well as a general wage rise and a provision for early retirement. The strike began in September and ended in December with agreement on the first two union demands and a compromise on early retirement. But, as Serrin puts it;[47]

> 'The strike was a political strike, a strike not to win agreement but to win ratification. General Motors would have signed the same agreement in September if the UAW had made it known that it was prepared to settle. But Woodcock is unsure whether the final settlement could have been ratified without a strike'.

An apparent victory was in fact a less clear gain than it seemed and local demands remained outside the national bargaining arena.

In 1972 came the strike at Lordstown, Ohio, which has been important for radical writers and which must therefore be considered here.[48] The plant had been custom-built and began to recruit workers in 1966, but production never reached company expectations. The strike was the culmination of several years of disputes between workers and management over the speed of operations and plant discipline, and has been seen as part of a revolt of young workers against the conditions of work in the auto plants and the imposition of rules of behaviour by management. For radicals, this and the growing dissatisfaction of Black workers with the U.A.W. indicate the development of a militant spirit among auto operatives. But too much weight has been placed on a few incidents of this type, and it has not been shown that the reaction against the work place has grown into a more self-

conscious movement designed to gain control of the work process. Indeed, the evidence for a lack of commitment to monotonous work among the young suggests that they would be very unlikely to develop such a movement. This, plus the greater degree of flexibility of the U.A.W. compared with other unions, has meant that the union's leadership has not been subjected to direct challenges of the membership like those which occurred elsewhere.

The case of autos indicates that a significant strand of rank and file protest can exist without significantly altering the union's approach to bargaining or creating a movement of its own. I do not want to belittle the discontents of the workers or the extent to which a protest movement grew up in the Sixties. But the evidence considered in this and the previous section suggests that the growth of protest was not as marked as radical writers imply and that the rank and file revolt was strictly limited to matters connected with the work place. The move towards economic bargaining strikes also suggests that workers were not prepared to forego wage increases to improve their work lives. Although they were prepared to repudiate their union leaders, this cannot be seen as a simple rejection of all that the national unions can offer. As we saw in chapter two, radical writers such as Hyman stress the dual role of unions in providing a channel for protest and a means of controlling the protest which has been encouraged.[49] The protests of the Sixties were a reaction against the latter function and did not necessarily mean that the unions' policies as a whole were being replaced by a more radical alternative.

3. Inter-industry differences in activity

Table 7-13 shows the correlation coefficients between three strike indices and a large number of independent variables, for 17 industries.[50] Since these variables will be important in the subsequent discussion, I shall explain their significance here. The levels of wages and union density require no special comment. The profit rate and the four-firm concentration ratio reflect the economic organisation of an industry; the former is a rough measure of 'employer well-being' and the latter an index of the concentration of productive capacity in a few firms. The next set of variables measures the bargaining structure of an industry. 'Strike ban %' refers to the proportion of collective agreements which include a clause banning strikes during their term; 'workers with strike ban' is the proportion of all workers under agreements who are covered by contracts including a strike ban. The next three measures reflect the coverage of contracts; 'X' is the proportion of all contracts limited to one plant; 'Y' the proportion limited to one employer but covering more than one plant; 'Z' is the proportion covering more than one employer. Hence 'X plus Y' is the proportion limited to one employer and 'Y plus Z' the proportion covering more than one plant.

The remaining variables measure the structure of an industry. Establishment size is already familiar. 'E_n/E_p' is the ratio of non-production to production workers. The former are those employees not directly concerned with productive operations; they have become important in several industries and the ratio is one index of the extent of tech-

Table 7-13: Correlation coefficients between strike indices and economic variables, 17 industries, 1955-69.

Index	N/E	D/E	W/N
Wage level	0.54	0.48	0.25
Union density (T/E)	0.50	0.33	0.23
Profit rate	-0.24	0.07	0.26
4-firm concentration ratio (C.R.)	0.04	0.38	0.72
Strike ban %	0.29	0.13	-0.14
Workers with strike ban	0.24	-0.24	-0.28
X: % workers in single-plant bargaining units	0.11	0.24	-0.03
Y: " " " one-firm, many-plant units	0.45	0.68	0.65
Z: " " " multi-employer units	-0.35	-0.62	-0.46
X plus Y: % workers in one-firm units	0.41	0.65	0.50
Y plus Z: " " " many-plant units	0.03	-0.12	0.11
Establishment size	-0.22	0.19	0.89
E_n/E_p	-0.07	0.23	0.10
Score heavy-light	-0.47	-0.33	-0.01
Process	-0.18	0.05	0.15
Assembly	-0.19	-0.37	-0.01
Mixed process and assembly	0.42	0.37	-0.16
Rank on multiplant operations	-0.14	0.22	0.68
" " growth	0.42	0.66	0.27
" " flux	0.61	0.58	0.37

Note: For explanation of indices, see text.

Signif. levels:	5% level	1% level
2 tailed test	0.482	0.606
1 tailed test	0.412	0.558

nical advance in an industry. The remaining variables are taken from a listing of industries' characteristics given by Florence.[51] The 'heavy-light score' is a dummy variable with a value of one for industries such as primary metals dominated by 'heavy' operations, going up to four for light industry. Similarly the 'assembly', 'process' and 'mixed' variables are dummies reflecting the category into which most of an industry's operations fall. Finally, the last three variables give the ranking of an industry on dimensions of: the interdependence between plants; the rate of growth of output; and the variability of production.

In most cases, the expected link with strike activity is clear. Thus a high ratio of non-production to production workers might be expected to reduce activity, for reason which include the ability of staff workers to operate plants during a strike; such arguments have been advanced for the chemicals and other industries. A high ranking on the 'flux' variable indicates that an industry is prone to fluctuations in production; the resulting uncertainties might be expected to increase strike activity. And assembly-line production would be expected to be more strike-prone than that based on process operations.

The positive correlations with the 'flux' variable indicate that the expectations regarding it are fulfilled, but there is a <u>negative</u> association with the 'assembly' variable and no clear link with the E_n/E_p measure. The fastest growing industries have the highest strike rates, which accords with expectations since in declining industries the power of workers to wrest concessions from the employer is weakened.

Similarly, it is not surprising that strikes are concentrated at the 'heavy' end of the heavy-light continuum. The very high association between plant size and the size of strikes would be expected were it not for the low level of association for earlier periods, noted in the two previous chapters. When we consider the variables measuring bargaining structure, we see that, for strike frequency, the important distinction seems to be between one-employer and multi-employer units. It might be thought that stoppages will be particularly frequent where bargaining is limited to single plants, since several individual disputes will occur whereas only one strike need be called where bargaining is more centralised. But both the 'X' and the 'Y plux Z' variables have lower levels of association with strike frequency than the 'X plus Y' index. No significant associations are observed between the 'strike ban' measures and strike activity, but the tendency is for stoppages to be smaller and more frequent the greater the proportion of agreements which ban strikes. This is consistent with an attempt by management to deal with these small strikes by persuading the union to agree to ban them. In other words, the presence of small and frequent strikes may have been the casual influence on the implementation of these agreements; but in many cases they have been in operation for a long time and they have not solved the 'problem' of frequent disputes.

Of the remaining variables in Table 7-13, the profit rate is not significantly associated with strike activity, but there is a tendency for it to reduce strike frequency and increase the size of stoppages. The degree of concentration of ownership does not affect frequency but has a strong direct impact

on size. High levels of wages and union density encourage strike activity, although the association is not as strong as one might have expected. The negative link of strike frequency with profits is in line with the findings of chapter six, but the positive one with the wage level is contrary to that observed in several of the regression equations reported there.

We must now employ regression analysis to consider more fully the relationships reported in Table 7-13. I begin with the 'economic structure' model (Table 7-14), using those measures of the economic position of our 17 industries with the highest correlation coefficients with strike frequency. Reasonable, but not outstanding, levels of explanatory power are achieved when the ranks on 'growth' and 'flux' and the heavy-light score are used. But, in the model using plant size and the ratio of non-production to production workers instead of the growth and flux measures, no satisfactory results are achieved. In the first two equations, the directions of association are as expected and in the third a high ratio of non-production to production workers leads to a low strike frequency. But the coefficient for plant size is negative, suggesting, in line with the findings of earlier chapters, that strikes are not concentrated in large factories.

We may compare these results with those reported in Table 7-15. Here, in a slightly wider sample of 19 industries, a simple model using wage and organisational measures is employed. The results are less satisfactory than those reported above; in none of the three equations does the F statistic achieve significance. Thus what we may call a simple 'worker

Table 7-14: Regression results, economic structure model, 17 industries.

Dependent variable	Independent variables					R^2	F
	Heavy-light score	Rank growth	Rank flux	Estab. size	E_n/E_p		
N/E	Neg	Pos	Pos			0.35	3.87
	NS	NS	5%				5%
Log N/E	Neg	Pos	Pos			0.39	4.47
	5%	NS	NS				5%
N/E	Neg	Neg	Neg			0.13	1.79
	5%	NS	NS				NS

Table 7-15: Regression results, 19 industries, 1955-69.

Dependent variable	Independent variables				R^2	F
	H	T/E	Ch.H	Ch.E		
N/E	Pos	Pos	Neg	Neg	0.26	2.56
	NS	5%	NS	NS		NS
D/E	Pos	Pos	Neg	Pos	0.29	2.87
	5%	NS	5%	NS		NS
W/N	Pos	Pos	Neg	Pos	0.18	2.02
	NS	NS	NS	NS		NS

Note: 'Ch.H' and 'Ch.E' are the proportionate changes in wage levels and employment between 1955 and 1969.

organisation and well-being' model does less well than the 'economic structure' model. It is interesting that a rapid rate of wage increase tends to be inversely associated with strike activity whereas the wage level has a direct association. This may be taken to indicate that prosperity encourages strikes and that a rapid improvement in the relative position of workers makes them contented; but the overall results are not good enough to establish this firmly.

Returning to the sample of 17 industries, we may consider Table 7-16 which compares the explanatory power of three measures of bargaining coverage. In line with the findings of the correlational analysis, the proportion of contracts covering one employer ('X plus Y') is the important index. Only the equation using it achieves a significant F statistic and the variable's coefficient is significant in its own right. In this equation, establishment size again has an inverse link with strike frequency, but the wage level variable also has a negative coefficient, contrasted with the positive ones reported in Table 7-15. This suggests that the impact of wages is not consistent; and the failure of the variable to attain significance in Table 7-16 shows that it may have only limited importance. Similarly, the non-significant coefficient for union density may mean that this variable is less important then is often thought. Table 7-16 also reports the results of predicting to the size of strikes from plant size and two measures of bargaining coverage. With a corrected R^2 of 0.80 and a 1% significance level for the plant size variable, this indicates a change from the patterns observed for earlier periods (see Table 5-16). As one would

Table 7-16: Regression results, bargaining coverage model, 17 industries.

Dependent variable	Independent variables							R^2	F
	N H	T/E	Estab. size	X	Y	(X + Y)	(Y + Z)		
N/E	Pos NS	Pos NS	Pos NS	Neg NS				0.20	2.02 NS
N/E	Neg NS	Pos NS	Neg 5%			Pos 5%		0.41	3.75 5%
N/E	Pos NS	Pos NS	Neg NS				Neg NS	0.21	2.07 NS
W/N			Pos 1%	Neg NS	Pos 5%			0.80	21.8 1%

Note X is % of workers in single-plant bargaining units
Y " " " " " one-firm, multi-plant units
Z " " " " " multi-employer units

(X + Y) is % of workers in single-firm units
(Y + Z) " " " " " many-plant units

expect, the largest strikes occur in the largest plants and a large number of multi-plant negotiations also encourages large stoppages.

With Table 7-17 we move on to the 'contract provisions' model. The 'strike ban' variables replace the bargaining coverage ones of the previous table. Although strike frequency is not adequately predicted by the new model, when the log of N/E is used much better results are achieved. As we found in the correlational analysis, the presence of agreements banning strikes encourages strike activity; the curvilinear relationship exhibited in the second equation of the Table means that, as the 'strike ban %' increases, strike frequency rises more or less proportionately. The final equation shows that strikes become smaller the greater the proportion of workers covered by agreements banning strikes. The supposition that strike ban agreements are associated with frequent and small strikes is confirmed. It is notable that these effects of the strike ban measures occur in a model in which the wage level and union density are present; again, it seems that these last variables exert only a limited impact on differences in activity between industries.

In Table 7-18 a more complex model is introduced in which the profit rate and concentration ratio are considered together with four of the variables already discussed. Again, only when predicting to the logarithmic form of strike frequency are satisfactory results obtained. Only the union density measure achieves significance, but the direction of influence of the other variables is consistent with the correlational analysis. A high profit rate depresses activity and

Table 7-17: Regression results, contract provisions model.

Dependent variable	Independent variables						R^2	F
	H	T/E	Estab. size	Strike ban %	Workers with strike ban	(X + Y)		
N/E	Pos NS	Pos NS	Neg NS	Pos NS			0.32	2.91 NS
Log N/E	Pos NS	Pos NS	Neg 1%	Pos 1%			0.65	8.33 1%
W/N	Pos 1%		Neg 5%	Pos NS			0.82	25.3 1%

Note 'Strike ban %' is % of agreements including a ban on strikes during the term of the contract; 'workers with strike ban' is % of workers covered by such agreements.

Table 7-18: Regression results, employer well-being model

Dependent variable	Independent variables						R^2	F
	T/E	Estab. size	X	C.R.	Profits	Heavy-light score		
N/E	Pos	Neg	Pos	Pos	Neg	Neg	0.36	2.51
	5%	5%	NS	NS	NS	NS		NS
Log N/E	Pos	Neg	Pos	Pos	Neg	Neg	0.57	4.58
	5%	NS	NS	NS	NS	NS		5%
N/E	Pos	Neg	Pos			Neg	0.41	3.81
	5%	5%	NS			NS		5%
Log N/E	Pos	Neg	Pos			Neg	0.63	7.89
	1%	5%	NS			5%		1%
D/W	Neg	Neg	Pos	Neg	Pos	Neg	0.43	3.05
	NS	NS	5%	NS	NS	NS		NS
Log D/W	Neg	Neg	Pos	Neg	Pos	Pos	0.25	1.87
	NS	NS	NS	NS	NS	NS		NS
Log D/E	Pos	Neg	Pos	Pos	Pos	Neg	0.11	1.32
	NS	NS	NS	NS	NS	NS		NS

a high level of concentration of ownership encourages it. The third and fourth equations of the Table show that dropping the profit rate and concentration ratio improves the corrected R^2 and allows the 'heavy-light score' to attain significance when predicting to the log of strike frequency. If we can take the profit rate as an index of differences in employer well-being between industries, and the concentration ratio as a measure of the centralisation of employer power, it appears that these aspects of the employer's position do not help to explain inter-industry differences in strike frequency.

Table 7-18 also reports the results of predicting to strike volume and the number of days lost per worker involved. Just as one might expect variations over time in the duration and intensity of strikes to be influenced by the prosperity of employers, variations between industries might be related to the employer's position. But none of the final three equations in the Table has a significant F statistic. Only the equation predicting to the number of days lost per worker approaches a satisfactory fit and only the variable measuring bargaining structure attains significance. Strikes seem to be 'longer' the higher the proportion of single-plant agreements. This is surprising in view of the argument that those industry-wide strikes which occur will be lengthy battles over 'fundamental' matters. It appears that small-scale strikes are relatively more severe, although the low explanatory power of the equation means that this conclusion cannot be stated very firmly.

There are obviously many ways of combining the variables listed in Table 7-13 into regression equations. We have seen

above that the 'economic structure' and 'wage and organisational' models alone are not very satisfactory, but that various combinations of their constituent variables are quite successful. Thus in Table 7-19 I use three variables from each model together. It is clear from the fourth and fifth equations that different factors explain strike frequency and the volume of disputes. For the former, small plants and a high degree of instability in an industry encourage activity; for the latter a rapid growth rate of the industry and a high wage level are encouraging factors. In both cases, a slow rate of change of wages increases activity, as one would expect on the assumption that relative economic deprivation will lead to dissatisfaction. But, in this model, union density is not a significant explanatory factor; this might suggest that organisational factors are unimportant. This would be particularly significant in relation to the number of days lost per employee; a lack of association with strike frequency could be explained in terms of the number of strikes reflecting 'spontaneous' protests, but the D/E index would be expected to depend on the extent of organisation of the workers. However, we are concerned here only with differences in activity between manufacturing industries. Since density is similar, it is not surprising that it cannot explain differences in strike activity.

It will be seen from the comparison of the third and fifth equations of Table 7-19 that the addition of the 'wage change' variable is particularly important for the explanation of days lost per employee. When a group of workers falls behind in the pursuit of higher wages, this seems to lead to a high volume of strike activity; but a high level of

Table 7-19: Regression results, combined model.

Dependent variable	Independent variables						R^2	F
	H	T/E	Ch.H	Estab. size	Rank growth	Rank flux		
N/E	Neg NS	Pos NS		Neg 1%	Pos NS	Pos 1%	0.55	4.90 5%
Log N/E	Neg NS	Pos NS		Neg 1%	Pos NS	Pos 5%	0.61	5.93 1%
Log D/E	Pos NS	Neg NS		Neg NS	Pos 5%	Pos NS	0.43	3.43 5%
Log N/E	Pos NS	Pos NS	Neg 5%	Neg 1%	Pos NS	Pos 5%	0.69	6.83 1%
Log D/E	Pos 5%	Neg NS	Neg 5%	Neg NS	Pos 5%	Pos NS	0.62	5.38 5%
D/W	Pos NS	Neg NS	Pos NS	Neg 1%	Pos 5%	Pos NS	0.41	2.84 NS
Log D/W	Neg NS	Neg NS	Pos NS	Neg 5%	Pos 5%	Neg NS	0.40	2.76 NS

wages also increases strike volume. In other words, activity is highest among well-paid workers who are becoming relatively less well off. Or, rather, this appears to be the case in inter-industry comparison; we are dealing here with industry characteristics and not with individual groups of workers.

The final part of Table 7-19 gives the results of predicting to the number of days lost per worker and to the logarithmic form of this index. The fit is much less satisfactory than that obtained for frequency and volume, but the direction of operation of the independent variables is similar. The significant influences on duration are establishment size and the 'rank growth' variable; long strikes are associated with industries which grow rapidly and those with small plants. We saw in Table 7-7 that, over time, the relationship of strike duration to economic influences is different from that of strike frequency, but it appears that, between industries, the relationships are similar. Industries with frequent strikes are also those where there is a high ratio of days lost to workers involved, but this does not hold for fluctuations over time. Apart from the equations relating to duration, the results of Table 7-19 are quite impressive, in view of the very wide differences which exist between industries. Strike frequency and volume can be explained by a relatively small number of industry characteristics. Both 'wage' and 'economic structure' measures are important, but the role of the employer seems to be less central.

One challenge to the above findings is presented by the work of Eisele, who has considered two hypotheses about strike activity: that frequency increases with organisational size;

and that, for a given size, plants with mass-production technologies are more strike-prone than those with small-batch or process methods.[52] From a study of 282 manufacturing plants, he concludes that the first hypothesis receives qualified support but that the second has to be rejected. The findings for the effects of technology are consistent with those reported here for inter-industry differences; but the direct link between organisational size and strike activity is contrary to the inverse link between establishment size and strike frequency. However, Eisele argues that his findings give only limited support to his first hypothesis. Also, they relate to organisational and not plant size; and they refer directly to a sample of plants rather than to inter-industry comparisons. Finally, Eisele's measure of strike frequency is the number of strikes over a twenty year period divided by the number of years during which a plant had been continuously organised by a union. All these differences from the approach adopted here suggest that Eisele's findings do not challenge the results reported above. Cass has attempted to show that there is a direct link between firm size and strike activity, but he does not produce any direct evidence on this and proceeds on the basis of some very dubious assumptions.[53]

Similarly, Roomkin's findings do not challenge my conclusions above. Roomkin conducted a cross-sectional analysis of trade unions with the aim of assessing the effect of the centralisation of control on strike activity.[54] Although he stresses that his results are exploratory, he argues that centralisation tends to reduce strike frequency, a finding

which obviously supports the institutionalisation thesis. However, the overall explanatory power of his model is very low, which suggests either that other variables should have been included or that the union is not the most appropriate focus for the cross-sectional study of strike activity. Many unions operate in several industries and the strike-proneness of the union as a whole may not mean very much.

I have argued in this section that various models can be applied to inter-industry differences in strike activity. A priori, one might expect strikes to be associated with an industry's technology, its bargaining structure or the organisational abilities of its workers. But a model derived from one of these sets of expectations need be no more 'correct' than one derived from a different set. It would be unwise in our present state of knowledge to start with, say, an 'organisational' model and attempt to test it on inter-industry data without comparing it with other models. It is, in principle, possible for two or more sets of independent variables to explain variations in an independent variable with equal success. I am not suggesting that one can select one's independent variables at random; as the discussion of Table 7-13 shows, I have sought indices of several features of an industry's structure which can be expected to be related to its strike rate. For example, the possible roles of technology and the economic position of the employer are clear. Given these sets of independent variables, the task is to assess their relative significance. Thus, I have argued that measures of employer well-being are not significant contributors to the explanation of inter-industry differences of strike activity,

compared with measures of the rate of change of wages and the economic structure of industries. The wider importance of these findings will be considered at the end of section five, when the inter-industry analysis is complete, and in the concluding section.

4. Strikes by collective bargaining coverage

The effect of collective bargaining on strikes is clearly of central importance to the institutionalisation theory. In the previous section I considered the impact of bargaining structure, but will now examine the effect of bargaining coverage in more detail. The proportion of workers covered by collective agreements, in industries where suitable data exist, is classified in Table 7-20. The data are for 1962, and the measures of strike activity are for this year and seven years before and after it. We may thus assess the broad impact of bargaining and also compare particular industries; this seems to be preferable to employing a regression model.[55]

There is a clear tendency for strikes to become larger as the extent of bargaining coverage increases, which holds in comparisons between otherwise similar sectors, such as electrical and non-electrical machinery, as well as in the aggregate. As we saw in chapter two, one version of the 'conventional' theory expects strikes to become large battles when bargaining is established, but it also argues that stoppages will become less frequent. But, among manufacturing industries, strike frequency is highest among industries with moderate bargaining coverage. Since frequency in the industries with 75-100% coverage is much greater than in those with 25-50% coverage, it seems that bargaining encourages strikes. Or,

Table 7-20: Strike activity by collective bargaining coverage, by industry, 1955-69.

Manufacturing industry

% of workers under union agreement		N/E	W/E	W/N	D/W
75-100	Machinery: electrical	1.43	1.11	778	16.1
	Metals: basic steel	2.05	3.06	1498	26.3
	Ordnance	0.80	0.91	1150	11.8
	Rubber	4.27	2.77	650	15.3
	Stone, clay & glass	3.23	0.98	302	19.1
	Transport equip.: motor vehicles	1.85	3.38	1830	10.7
	" " other	1.06	1.26	1184	14.4
	All	1.88	1.84	983	16.8
50-75	Chemicals	1.98	0.53	270	21.1
	Furniture	3.12	0.60	191	17.1
	Instruments	1.21	0.44	364	19.9
	Leather	1.49	0.51	343	10.0
	Metals: primary, other than basic steel	3.10	1.32	426	24.5
	Machinery: non-electrical	2.48	1.23	497	19.5
	Paper	1.68	0.51	301	17.8
	Printing & publishing	0.90	0.34	377	27.9
	Tobacco	0.33	0.30	903	11.4
	All	2.23	0.81	365	19.5
25-50	Lumber	1.46	0.32	218	22.5
	Textiles	0.81	0.26	328	16.8
	All	1.07	0.29	267	19.4

/Table continued over page.

Table 7-20: (continued).

Non-manufacturing industry

% of workers under union agreement		N/E	W/E	W/N	D/W
75-100	Building	4.46	1.53	342	15.7
	Mining	4.81	2.01	418	13.9
	Transport & communication	0.95	0.96	1006	11.0
	All	2.65	1.27	481	13.6
Less than 50	Trade	0.47	0.07	155	15.3

Note: Employment is at 1960. Figures for N/E and W/E are the totals of N and W divided by employment in this year (N/E is the number of strikes per thousand employees and W/E the number of workers involved per employee); the figures are thus not comparable to those in other tables.

The percentage of workers under union agreement is at 1962.

at least, a high level of bargaining coverage is a concomitant of a high rate of activity; as the case of textiles suggests, factors peculiar to an industry may militate against both strikes and a high coverage of its workers by collective agreements.

Worker involvement rises continuously with an increase in bargaining coverage, which again suggests that bargaining does not make strikes 'wither away'. Strikes are frequent, even though bargaining is said to deal with many disputes through procedures which avoid the need for a strike; and worker involvement is high, even though it should help to establish democracy in industry and remove certain 'fundamental' sources of dissatisfaction.[56] The only index on which industries with a high bargaining coverage score lower than those with less coverage is the number of days lost per striker (D/W). Since strikes are 'shorter' in this sense, one expectation of the institutionalisation theory is fulfilled. The difference between the manufacturing industries with high and moderate bargaining coverage would be greater if the steel industry were excluded; as we have seen, there were long national strikes in the Fifties which distort the picture here. But the lack of any difference between the industries with moderate and low coverage suggests that the tendency to a shortening of strikes occurs only when bargaining has become widely established.

From the very limited comparisons which are possible within the non-manufacturing sector, we can see that a pattern similar to that in manufacturing exists; bargaining encourages larger and more frequent strikes, but tends to make them

'shorter'. The comparison between sectors with 75-100% bargaining coverage shows that non-manufacturing industries have more frequent, but smaller, strikes which are rather shorter. As we saw in section two, the frequency of strikes in building and mining can be explained by the tendency for disputes over immediate work place matters to develop into stoppages. In line with this, strike frequency in transport and communication is relatively low. Thus the high frequency in non-manufacturing as a whole is partly explained by the characteristics of particular industries and not by the extent of bargaining coverage. Similarly, the low ratio of days lost to strikers in transport is, as we saw in chapters five and six, a persistent feature of the industry. It might be suggested that this brevity is due to the inability of employers to depend on inventories to last out a strike. But building employers are also unable to rely on stocks and strikes here are relatively long; and in the newspaper section of the printing and publishing industry employers are in a similar position and yet strikes, in the industry as a whole, are particularly long. As I suggested in the previous chapters, and will argue further in the final chapter, the brevity of transport strikes may be associated with the high level of involvement by outside parties and the belief that they endanger the community much more than stoppages where the effect on the consumer is less immediate and visible.

The most notable feature of Table 7-20 as a whole is not a tendency for strike activity to decline as bargaining increases but the very low level of activity in those sectors where bargaining is rare. And we have seen in section two that, among public employees, a rise in activity was a concomitant of rising bargaining activity. More generally,

chapter six demonstrated that, in several sectors where bargaining was virtually non-existent before the New Deal, activity was exceptionally low, compared with contemporary rates of activity elsewhere and with the subsequent experience of these sectors. Collective bargaining may serve to free workers from autocratic managerial control, but such control cannot be the basic cause of unrest since its removal seems to encourage strikes. Bargaining allows 'unrest' to be made overt; there are, as yet, no signs that it has solved the problems which lead to the unrest, since activity is still high in the sectors with a high level of bargaining coverage.

The institutionalisation theory argues that the establishment of bargaining alters the character of industrial conflict. As I said in chapter two, I am not primarily concerned with this aspect of it, but some comments are called for here. In the broadest sense, it is obvious that strikes since the Second World War have differed in character from earlier ones. Violence has largely, although not completely, disappeared;[57] strikes occur as part of established relations between unions and employers; the language of management has come to stress accommodation with unions rather than outright hostility to them; and so on. Similarly, the government has come to play an established role in industrial relations. All this is more or less accepted as a general description of the differences between the present and the past, but it is less clear whether collective bargaining is the most important cause of the changes which have occurred or whether its establishment merely reflects a more basic change of attitude.

Thus, it is said that violence in strikes ended when the parties recognised the right of the other to exist and ceased to conflict over 'fundamental' matters.[58] But it is not clear whether attitudes changed and then bargaining was established or whether the forms of bargaining were forced on the parties, who then recognised their value.

This may seem to be a minor point, but it is central to the treatment of strike character by the institutionalisation writers. They offer little more than a description of the changes which have occurred; the discussion of the causes of these is blurred. As we saw in section one, a large proportion of strikes is still outside the area of disputes at the termination of contracts, but it has not been shown whether these differ in character from strikes within that area. Despite these difficulties, and the vagueness of the concept of strike character, we may consider the light Table 7-20 sheds on the discussion. There are no very obvious differences between the sectors of high and moderate bargaining coverage in the character of strikes, but the low-coverage industry of textiles has features which mark it off from these sectors. However, its paternalism and other characteristics do not seem to be shared by the lumber or trade sectors.

It is clearly hard to say anything more definite on strike character, In general, it seems that intransigent employers mean that strikes are likely to be bitter and violent conflicts; in the post-war years the clearest examples are the Kohler strike and the various attempts to organise the agricultural workers of California.[59] But saying this does not

take us very far. The conventional institutionalisation theory does not explain the reasons for intransigence and, more importantly, it does not deal with the changes in strike character in those sectors, where bargaining has been established, which are associated with the 'labor revolt'. The nature of stoppages such as the Lordstown strike cannot be explained in terms of the picture of modern strikes as unemotional bargaining tactics. We may conclude that, in a very general way, the character of strikes has altered. The conventional writers are entitled to stress this as an achievement of a 'reasonable' approach to industrial relations, but it is clear that a significant number of strikes occurs outside this model. The character of these strikes cannot be explained by the model, which is more of a descriptive than an analytical tool. A stress on strike character does not rescue the conventional case that formal institutions will alter the nature of industrial conflict. These institutions have been unable to prevent strikes during the term of agreements. There are no marked differences in strike character between sectors. And, in any case, the concept of the character of strikes is too vague to support the weight it would have to bear if the conventional theory were to be vindicated.

5. Intra-industry trends in activity

An obvious test of the power of the economic models of strike activity considered in chapter four is their performance in explaining strike trends within particular industries. This is also directly relevant for the institutionalisation theory since we shall be able to see if activity in

the institutionalised sectors is more predictable than that in others.

For most industries, adequate year-to-year data are available only for the post-war period, but in coal mining long series of strike indices and economic measures can be used. Thus I begin with the results for this industry for the period 1899-1956 (Table 7-21). One might expect that the use of economic measures directly related to the industry's prosperity will lead to very successful explanatory models. For example, the average number of days worked in a year is a close index of the continuity of operations and might be expected to have a clear influence on strike activity. But the results are generally disappointing. The highest R^2 is 0.41, obtained in the first equation, where worker involvement is explained by three variables. Of these, only the wage level is significant, with a direct effect on worker involvement. The negative coefficient for the 'output' measure might suggest that strikes are used as a form of output restriction: as production falls, more workers go out on strike. But the positive coefficient for 'days worked' goes against this interpretation. Comparison with the third equation indicates that strikes are more frequent when output is rising, but also when the number of days worked is falling. Thus there is no clear association between the economic position of the industry and strike activity.

Three equations include a measure of the number of union members in the industry. The period up to 1934 is considered because, after that date, unionisation has varied little and cannot therefore explain changes in strike activity; before

Table 7-21: Regression results, coal industry, 1899-1956.

Dependent variable	Independent variables					R^2	D-W
	Days worked	Output	H/P	T	Mech. cut		
W/E 1907-52	Pos	Neg	Pos			0.41	2.43
	NS	NS	1%				
W/E 1907-34	Pos	Neg	Pos	Neg	Neg	-0.01	2.71
	NS	NS	NS	NS	NS		
N/E 1916-34	Neg	Pos	Neg	Pos		0.27	1.50
	1%	5%	NS	NS			
N/E 1899-1956	Neg	Pos	Neg			-0.05	2.52
	NS	NS	NS				
D/E 1899-1934	Neg		Pos	Neg	Neg	0.05	2.55
	NS		5%	NS	NS		

Notes: 'Days worked' is average number of days worked each year
'Output' is total coal production, in millions of tons
'H' is the mean wage level in the coal industry
'T' is the membership of the United Mine Workers
'Mech.cut' is the percentage of coal cut by mechanical methods.

then, the fluctuations in membership were considerable and one might expect them to be related to strike activity. But there is, throughout, a lack of significant association between the number of unionists and the level of strike activity. This is surprising in view of the general arguments about the importance of organisation for strikes, but is even more notable when it is recalled that, at times and places where the union was absent, managerial domination was said to be virtually complete.[60] There is also no link between the measure of the mechanisation of operations, the proportion of total production which was cut mechanically, and strike activity.[61] The expectation that changes in the nature of operations will increase conflict is not fulfilled; indeed, the coefficient of the mechanisation variable is negative.

We cannot conclude, of course, that strike activity in the coal industry occurred 'randomly'. There were differences between coal fields which are not caught in the aggregate model used here, and even pits in the same region sometimes differed markedly. But Table 7-21 shows that trends over the whole industry were not closely related to economic or organisational factors. This is particularly notable for strike frequency, since we saw in chapter four that this was the variable which, at the aggregate level, was most closely linked to economic changes.

With Table 7-22 we turn to data on ten industries for the period 1947-71.[62] Correlation coefficients are given between the three strike measures and the unemployment rate and the price level. It is clear that there is no uniform reaction to economic changes. Thus in the correlations between

Table 7-22: Correlation coefficients between economic variables and strike indices, by industry, 1947-71.

Industry	Correl. of U/E with: N	W	D	Correl. of Consumer Price Index with: N	W	D
Building	0.07	-0.26	-0.13	0.68	0.49	0.70
Chemicals	-0.10	-0.44	-0.28	0.81	0.18	0.61
Clothing	-0.43	0.26	-0.24	-0.73	-0.09	-0.09
Food	-0.28	-0.44	-0.30	0.49	-0.01	-0.11
Furniture	-0.36	-0.63	-0.17	-0.22	-0.04	0.44
Machinery: electrical	-0.29	-0.27	-0.24	0.69	0.50	0.56
Mining	-0.49	-0.15	0.04	-0.06	-0.34	-0.36
Primary metals	-0.66	-0.23	-0.05	-0.01	-0.34	-0.12
Textiles	-0.38	-0.45	-0.51	-0.66	-0.40	-0.43
Transport equipment	-0.43	0.03	0.05	0.30	-0.06	0.30

Note: Signif. levels:	5% level	1% level
2 tailed test	0.396	0.505
1 tailed test	0.337	0.462

the price level and the number of strikes and days lost, five industries had a direct association and five an indirect. The closest approach to uniformity was the association between the rate of unemployment and the number of strikes; in nine industries this was inverse, and the positive coefficient for building was not significantly different from zero. The much greater diversity in the associations with the price index than in those with the unemployment rate is probably due to the use of the level of the index rather than its rate of change. There is thus a time element within the index, since there was, of course, a strong upward trend in the price level. But the correlations with it still reveal the great differences between the strike experiences of particular industries. For example, the strong positive associations for building and electrical machinery contrast with the negative ones for textiles and clothing. The Table also shows that, for a given industry, the directions of association with economic measures need not be the same for the three strike indices. Thus in clothing the rate of unemployment is related inversely to the numbers of strikes and days lost and directly to the number of workers involved.

In Table 7-23, I report the results of applying a simple regression model to each of the ten industries, predicting strike frequency from the rate of unemployment and the level of real wages. As I mentioned in chapter six, estimates of unemployment are not available for each industry and therefore the aggregate rate is used as an index of the business cycle; but the figures for wages relate to each industry. In general,

Table 7-23: Regression results, individual industries, 1947-71: dependent variable N/E.

Industry	Independent variables		R^2	D-W
	U/E	H/P		
Building	Pos	Pos	0.01	1.38
	NS	NS		
Chemicals	Neg	Pos	0.50	2.36
	NS	1%		
Clothing	Neg	Neg	0.77	1.12
	5%	1%		
Food	Neg	Pos	0.16	2.09
	5%	5%		
Furniture	Neg	Neg	0.14	1.26
	NS	5%		
Machinery; electrical	Neg	Pos	0.02	1.33
	NS	NS		
Mining	Neg	Pos	0.15	0.34
	NS	5%		
Primary metals	Neg	Pos	0.19	1.52
	1%	NS		
Textiles	Neg	Neg	0.29	1.63
	NS	1%		
Transport equipment	Neg	Pos	-0.03	1.85
	NS	NS		

Note: U/E is the aggregate rate of unemployment
H/P is the level of money wages in each industry divided by the aggregate Consumer Price Index.

the model does not achieve very impressive results, but an R^2 of 0.50 is obtained for chemicals and one of 0.77 for clothing, although here the Durbin-Watson statistic is not within the acceptable region and hence the R^2 is biased upwards. These results suggest that the model itself may be applicable and that further refinement could improve the fit for other industries. But of more interest here is the difference between industries. The coefficient of the unemployment variable is generally negative, but the wage level is associated directly with strike frequency in seven cases and inversely in three. Of these three, textiles and clothing are closely related since they use the same raw materials and both depend on the demand for finished textile products. But furniture is clearly separate from these two sectors. Neither do these three industries share a particular level or type of bargaining coverage. Thus it seems that the direction of response to economic variables cannot be explained in terms of the extent of institutionalisation or some obvious feature of particular industries.

As a comparison of the separate R^2's, shows, the overall level of explanatory power of the model of Table 7-23 does not seem to be related to the degree of institutionalisation of bargaining. And, although the coefficient of the unemployment variable is negative in every case except building, in some industries it is significant and in others not. Again, there is no immediate reason why this should be so. It might be possible to try to construct an explanation, but this is not the purpose of the present discussion. The aim is to show that industries differ in the nature of their response to economic

conditions and that this cannot be related to the extent to which bargaining is institutionalised. Although aggregate trends, and inter-industry differences, can be explained in terms of economic variables, intra-industry trends show considerable variation.

Perhaps the simplest way of reconciling these findings is to use the language of strike-probabilities. In an article which I have already discussed in chapter four, Ashenfelter and Johnson develop a model in which the probability of a strike is considered.[63] They recognise that economic conditions do not directly 'cause' strikes but influence the probability that they will occur. I do not wish to consider here the particular formulation used by Ashenfelter and Johnson but merely to borrow the language of probabilities. Economic conditions exert identifiable effects on every industry, but they may lead to a strike and they may not; the probability of a strike will depend on various factors, some of which have been considered in the inter-industry comparisons of section three. The more industries one considers, the greater will be the liklihood that these individual factors will cancel each other out. Hence, in the aggregate, changes in economic conditions have clear effects on strike activity, but within a given industry they are mediated by several other factors and their impact is therefore weaker.

Finally in this section, I turn to Table 7-24, As we saw in section one, Lipsky and Farber employ a 'wage Control' variable to predict strike activity in the building industry; the Table reports the results of applying their model to five other industries. The results are far from impressive, with

Table 7-24: Regression results, individual industries, wage control model, 1947-71: dependent variable N/E.

Industry	Independent variables			R^2	D-W
	U/E	Time	Wage control		
Clothing	Neg NS	Neg 1%	Pos NS	0.73	0.95
Mining	Neg NS	Pos 1%	Neg NS	0.25	0.37
Primary metals	Neg 1%	Pos NS	Neg NS	0.15	1.53
Textiles	Neg NS	Neg 1%	Neg NS	0.38	1.49
Transport equipment	Neg NS	Pos NS	Neg NS	-0.06	1.89

the highest acceptable R^2 being 0.38. The wage control variable never attains significant levels of association with strike frequency and the unemployment rate does so only for primary metals. It might appear that this points to a difference between building and other industries but, as Lipsky and Farber admit, their model does not explain strike frequency in building, which they take as the number of strikes divided by the average number of days worked in an industry.[64] They obtained an R^2 of 0.38 for days lost divided by days worked and rather higher figures for the numbers of strikes and days lost, uncorrected for employment. I argued in chapter four that, for long periods, it is inadvisable to use such uncorrected measures; this is particularly so here, when the time variable is strongly associated with the N and D indices. This association could be largely a result of a rise in employment. Thus it does not seem that Lipsky and Farber have provided an adequate explanation of strike activity in building.

The point of interest from their model is the diverse experience of the various industries. In building and mining the time variable has a strong upward influence on strike frequency; in primary metals and transport equipment the direction is positive, but not significant; and in clothing and textiles it is significantly negative. Since these results apply to the whole of the period 1947-71, and not just the years since 1960, it appears that the strikes have not been 'withering away' in the post-war years in several important industries. Reasons could be advanced for the particular experiences of clothing and textiles, but for the institutionalisation theory it is more important to consider their diffe-

rences. Levels of union density and bargaining coverage are very different, but the industries have reacted similarly to economic conditions. The similarities of relying on the same market have outweighed the institutional differences of their industrial relations structures.

For building, Lipsky and Farber suggest that the major source of increasing strike frequency has been the strong trend in jurisdictional disputes. As I have mentioned, such disputes have been a constant feature of the industry, but the growth in their importance goes against the expectations of the institutionalisation theory. The 'weak' versions allow for strikes to continue over economic matters, but see jurisdictional disputes as characteristic of 'immature' relations. The case of building indicates that such stoppages need not disappear as relations become more 'mature'. More importantly, Lipsky and Farber also show that strike frequency is not related to the unemployment rate but that measures of time loss are inversely linked with unemployment; thus, unemployment does not affect the workers' willingness to strike but does affect their ability to engage in large and lengthy battles. We have seen that similar results for frequency are obtained for the industries considered in Table 7-24. In the aggregate, however, strike frequency is the index which is most closely associated with economic changes. It appears, again, that the decision to strike in any one industry is dependent on a large number of factors which are not caught by the relatively simple models used here. But, overall, these average out. For the other measures of strike activity, no such averaging process operates.

The results for the coal industry reported in Tables 7-23 and 7-24 are consistently unsatisfactory. When these are linked with the earlier findings, it appears that changes in strike activity cannot be related to economic conditions. However, certain broad patterns of association can be observed. During the Fifties strike frequency and worker involvement both fell sharply, but recovered in the Sixties; in the case of frequency, the recovery was to levels greater than those prevailing at the end of the Forties.[65] The decline in employment in the industry during the Fifties was halted subsequently and in some years there was even a slight rise. The mechanisation of operations, through the power loading of coal once it had been cut, was virtually complete at the end of the Fifties. And the stability of employment, as measured by changes in the average number of days worked, increased in the Sixties. Thus workers in the industry were less insecure than they had been and they were therefore in a stronger position to support strikes. When the challenge of inflation and intra-union problems are added to this situation, we have a plausible explanation of the rise of activity in the Sixties.

I must emphasise that this is no more than a plausible account. It is possible, for example, that an increase in the stability of an industry will reduce its strike activity, but the particular set of circumstances in coal may have meant that it contributed to an increase. It would not, of course, be valid to infer from the <u>cross-sectional</u> evidence on the link between the instability of an industry and its strike activity that <u>trends</u> within an industry will be in a

given direction.

In this and the three earlier sections, I have offered some explanations of the patterns of activity in particular industries, but the main aim has been to consider the inter-industry evidence as a whole. The direct evidence on bargaining coverage examined in section four did not suggest that the institutionalisation thesis is on strong ground in inter-industry comparisons. The less direct evidence of the present section shows that the nature of the link between strikes and economic variables, within certain industries, is not affected by the degree to which bargaining is institutionalised. Section three considered the patterns of association between strikes and economic variables in a cross-sectional analysis; although measures of bargaining structure were correlated with strike activity, in regression analysis the strength of their impact proved to be weaker than that of other variables. In the final 'combined model' measures of wages and the economic structure of an industry proved to be the most significant factors.

We must briefly compare these inter-industry findings with those of chapters five and six. The explanatory power of the present equations is generally greater than that of those in the earlier chapters. This may be partly due to the much wider range of indicators available or to their greater reliability. But the analysis of the data for 1938-40 (Table 6-12) involved a large number of indices and achieved only moderately satisfactory results. In chapter two, I argued that one implication which could be drawn from the institutionalisation theory is that strike activity will become more pre-

dictable as relations grow more 'orderly'. Strikes in a particular sector will cease to be determined 'randomly' and will come to reflect objective economic conditions. In very broad terms, the findings presented here confirm that this is the case. There has also been a shift in the determinants of strike activity. For example, measures of mechanisation, which were very important at the end of the nineteenth century, lose their explanatory power by the 1930's.

I suggested in chapter six that strikes were concentrated in the 'disadvantaged' industries, in which wages were low and unemployment high, and that this represents a basic similarity with the position at the end of the nineteenth century. We have now seen that, in the period 1955-69, strikes were concentrated in sectors where wages were low and rose slowly, plants were small and the uncertainty due to fluctuations in production high. Thus we have a consistent picture in which strike activity is concentrated in industries where workers are disadvantaged and plants small; the advanced, high-wage industries in which workers are brought together in large masses are not the most strike-prone, Similarly, the evidence on the link between profits and strikes for the period since the 1930's shows that there is, if anything, a tendency for stoppages to be concentrated where profits are low.

The obvious explanation of this is that the 'disadvantaged' industries are those in which the conflict of interest between workers and employers is most clearly felt; employers cannot 'buy off' their workers in the way that firms in more prosperous industries can. Although, as we saw in chapter four, over time strikes are concentrated in the most pros-

perous periods, this activity occurs in the least prosperous sectors. It may be suggested that, within these sectors, strikes will be concentrated in the most advanced plants, because the conflict of interest will be most marked here; but to assess this question we would need to analyse samples of plants within certain key industries.[65a]

6. Regional patterns of activity

I shall not consider the regional distribution of activity in detail, but restrict the discussion to certain points of importance to the institutionalisation theory and the economic model of strike activity. Table 7-25 gives the results of several regression equations for the differences in strike frequency between 48 States. It has been possible to use estimates of unemployment as rough indices of the states of local labour markets.[66] The three equations in which this variable is used show that it is strongly and positively associated with strike frequency; thus, strikes are concentrated in areas where the market position of labour is weakest. This apparently paradoxical result is in line with the findings for the inter-industry distribution of activity reported in Table 6-12. It suggests that strikes express discontent over the insecurity which high unemployment brings. But one might expect that the number of days lost per worker would be inversely related to the rate of unemployment, on the grounds that the ability of workers to stay out on strike will be affected by their economic position. However, an equation not reported in the Table shows that the relationship is direct.[67] Strike volume is greatest where unemployment is highest.

The positive coefficients for the wage level indicate that strikes are not concentrated where the workers are worst

Table 7-25: Regression results, 48 States, 1955-69: dependent variable N/E.

Equation	Independent variables								R^2	F
	H	T/E	U/E	E/C	Estab. size	Value added per head	Ch.E	South		
(1)	Pos 1%	Neg NS	Pos 1%						0.28	7.08 1%
(2)	Pos 1%	Neg NS	Pos 1%	Neg 1%					0.48	12.0 1%
(3)	Pos 1%	Neg NS	Pos 1%	Neg 1%				Neg NS	0.47	9.47 1%
(4)					Pos NS	Pos NS	Pos NS	Neg 5%	0.03	1.40 NS
(5)				Neg 1%	Pos NS	Pos NS	Pos NS	Neg 5%	0.33	5.67 1%

Note: 'C' is total Civilian employment; i.e. E/C is the ratio of non-agricultural to total employment.
'Ch.E' is the proportionate change in non-agricultural employment between 1950 and 1960.
'South' is a dummy variable, taking value 1 for seven Southern States and 0 elsewhere.

off. Since wages are likely to be highest in industrialised States, and since measured unemployment will also be highest here, it might be suggested that the results for wages and unemployment simply reflect the fact that strike activity is concentrated in industrial areas. However, in the second and third equations of the Table, I include a variable which measures the extent of industrialisation: this is the proportion of total employment in non-agricultural establishments (E/C). The coefficient of this index is negative, indicating that a high proportion of industrial employment is associated with a low level of strike activity. Since strikes are supposedly concentrated in industrialised areas, this is a very surprising result. In the terms of the institutionalisation thesis, it appears that strikes occur in the less industrialised areas where bargaining has not become established. This view is supported by the negative coefficient of the union density variable; strike frequency declines where union density is highest.

In the third equation of the Table, a dummy variable representing the South is included. This is designed to allow for any special features of Southern States which tend to reduce their strike-proneness. As one would expect, the coefficient of this variable is negative, indicating that the effect of the addition of the variable is to reduce the corrected R^2 of the model as a whole. It has also been suggested that the legal framework of particular States will affect their strike activity.[68] Several passed so-called right-to-work laws, which restricted the ability of unions to negotiate closed shop agreements with employers; and there

are differences between States in the degree to which the provisions of the National Labor Relations Act have been incorporated into legislation applying to intra-State commerce. To assess the effects of legal factors, I used two variables, one measuring the presence of a right-to-work law and the other the overall attitude to labour of different legal systems. Each was used to replace the South variable in the third equation, but neither contributed significantly to the explanation of differences in strike frequency.

The last two equations of the Table report the attempt to predict to strikes from measures of economic structure. The variable measuring the rate of change of non-agricultural employment is included because, during the Fifties, several States industrialised rapidly;[69] one might expect this rapid change to influence strike activity. Although the coefficient of the variable is positive, it does not attain significant levels of association with strike frequency. It is notable that the coefficient for establishment size is positive, in contrast to the consistently negative coefficients obtained in the inter-industry analyses. This, together with the findings noted above, suggests that the regional parameters of conflict are not identical with the industrial ones.[70] As I noted in chapter six (section five), it has been shown that the industry-mix of cities does not help to explain their strike-proneness. Not only are the parameters different between time-series and cross-section analysis, but within the latter type important differences appear.

From the comparison of the fourth and fifth equations of Table 7-25 it is clear that it is only the addition of the

E/C variable which leads to significant results. The coefficient of this measure is again negative. This strong inverse association with strike frequency, in two separate models of regional differences in activity, is in line with the argument in chapter six that the 'industrialisation leads to strikes' thesis is incorrect. The most industrialised areas are not the most strike-prone. From the results of Table 7-25 alone, it is hard to advance an explanation of why strikes are most frequent where wages and unemployment are high and levels of industrialisation low. Perhaps a high wage level means that workers are able to strike, high unemployment that they are discontented and low industrialisation that they are particularly willing to turn discontent into protest. Several of the significant 'labor revolts' occurred away from the main industrial centres in plants which had been built in an attempt to establish industrial relations on a fresh footing with a new group of workers.[71] This indicates that it is possible that a more general movement was occurring in the moderately industrialised States towards a high level of strike activity.

The 'industrialisation leads to strikes' view contains two separate argument: that a high level of industrial development encourages strikes; and that the process of becoming industrialised causes protests. We have seen here and in previous chapters that the former view is not supported by American evidence and that, in the aggregate, the latter also fails. But, at a less aggregate level, becoming industrial may be important. We have seen that a curvilinear relationship seems to operate when the strike activity of cities is considered and a similar process may be at work in the inter-

State model, with strikes being concentrated in the States where industry is newly-established. This relationship does not hold in the aggregate, but it is possible that it applies to the States adjacent to the main industrial areas.

To test this view that becoming industrial may be important in certain areas, data would be required on strikes at the city level in the States adjacent to the main industrial areas, but the qualitative evidence on strikes in plants in these areas suggests that they may be particularly strike-prone. Moreover, we may tentatively suggest that the results of Table 7-25 reflect this. However, more important is the finding that high levels of industrialisation do not encourage strikes. This, together with the only slight, or even inverse, link between union density and strikes suggests that the 'organisational-political' model cannot be used to explain regional differences in activity. High levels of unemployment seem to create the discontents necessary for striking and high wage levels the means to support strikes.

7. Conclusions

In sections one and two, I examined various aspects of the rise in strike activity in the 1960's and attempted to assess its significance. Several possible causes were mentioned, but one other factor, which may have had background importance, needs to be considered. This is the changing nature of corporate ownership, as indicated by the growth of conglomerate firms and the multinational character of many of the largest firms' operations.[72] American firms have had a long history of owning foreign subsidiaries, but the direct threat of this to unions at home was not very apparent until the Sixties.

The growth of conglomerates, largely through mergers, became very marked at the same time.[73] Radicals argue that this has enabled employers to erode the unions' position, although they also stress that the growth of conglomerates is one more stage in the road towards the final collapse of 'monopoly capitalism'.

Craypo has studied bargaining in the conglomerate firm of Litton industries.[74] Centralised managerial control, combined with the de-centralisation of production and the ability of the firm to shift operations between plants, weakened the position of the unions. With one quarter of its manufacturing capacity abroad, the company was in a very strong position. Craypo argues that the cross-subsidisation of operations which firms like Litton can practise invalidates the assumption of institutionalised bargaining that there is a rough balance of power between the parties. Employers are free to cut labour costs and he envisages a return to a situation similar to that which prevailed in the 1920's. Although this last statement may be too extreme, Craypo's study is important in pointing up one of the challenges to the institutionalised system which developed in the Sixties. Whether conglomerate operations exerted an identifiable effect on strike activity is is not possible to say, but, like automation, the growth of conglomerate firms may well have had an unsettling effect on industrial relations.

An obvious response to corporate power is the development of 'coalition bargaining' by unions. According to the major study of coalition bargaining,[75] it differs from other forms of joint bargaining in being aimed at companies which operate

in several markets and bargain separately for their various operations; it is different from the multi-craft bargaining of industries such as building in not being limited to one labour market and in involving a number of industrially-organised locals, with each plant having only one local rather than several craft unions. The study argues that coalition bargaining has the potential for more frequent, larger and longer strikes than would occur in its absence.[76] One might expect the centralisation of bargaining to reduce strike frequency, but there are certainly good reasons to expect large and long stoppages; the mere fact that unions make the effort to work together implies that a major confrontation is envisaged.

Two of the most notable strikes of the Sixties, the national copper dispute of 1967 and the General Electric strike of 1969, occurred where coalitions of unions had been established. Both largely failed in their aim of forcing the companies to accept joint bargaining, but their length and size indicated that important struggles were being undertaken.[77] There is a clear link with the institutionalisation theory, since, as we saw in chapter two and section four of this chapter, the theory argues that strikes will be particularly large and long when on side wants to alter fundamentally the character of the collective agreement. Dunlop has suggested that several other important strikes in the Sixties reflected attempts to change the conditions of bargaining.[78] 'Weak' versions of the theory can allow for such challenges to the existing system, but they cannot explain why they emerge.

The challenge to the institutionalised system, rather

than to the theory of its operation, came from the protests of the rank and file. I have argued that these protests do not come up to the radicals' expectations, although they indicate the limitations of the conventional approach. Thus the two auto strikes which I considered at the end of section two exemplify the dual nature of strikes under the institutionalised system. On the one hand, rank and file pressure was important in the national strike as well as the Lordstown dispute, but, on the other, the union's pattern of accommodation with the industry survived largely unchanged and the issues on which the pressure was focussed left unresolved. Similar remarks apply to the 1969 General Electric strike. There would be nothing particularly remarkable about this, were it not for the extreme views of at least some of the radical writers, who felt that the institutionalised system could be overthrown. Perhaps the vehemence of their arguments can be explained as a reaction against the complacency of the conventional approach during the Fifties and early Sixties; but this seems to have led to an over-emphasis on the radical possibilities of rank and file action and a corresponding lack of concern with its limits and the resilience of the institutionalised system. I shall return to the question of the dual nature of strikes and worker protest in the final chapter.

As well as considering the challenges to the system, this chapter has examined in detail the inter-industry differences in activity which arise under it. No marked shifts in the 'parameters of conflict' were observed; but the greater explanatory power of models of strike activity, compared with

the 1930's, suggests that strikes have become more predictable . The weaker versions of the institutionalisation theory argue that industrial peace is contingent on the economic circumstances of an industry. This chapter has shown which factors are important and which are not, when one industry is compared with others, It has also shown that the experience of particular industries over time cannot be related to the degree to which bargaining is institutionalised. The results of Table 7-20 show that a high degree of bargaining coverage is associated with high levels of strike activity, which further weakens the institutionalisation thesis.

Sections one and three showed, respectively, the lack of association between strikes and measures of employer well-being over time and between industries. This does not mean that the employer is unimportant in the calling of strikes, but suggests that his influence is less direct than that of other factors. In a particular case, unions may take account of a firm's profit position before striking and may decide against such action or direct their attack at firms which are more able to pay. But the overall strike activity of an industry is more closely associated with other things; similarly, over time, strike frequency in the aggregate does not reflect the prosperity of the employer, when this factor is taken in combination with others. It will be recalled that Shorter and Tilly use a model in which the position of the employer has two sorts of effect on strike activity; a direct one and one which works through the prosperity of the workers and the level of labour organisation.[79] It appears that the United States does not exhibit the first sort of effect. On the second,

I have argued in chapter two that it is very hard to establish that it necessarily operates. In time-series analysis, for example, the prosperity of workers is are so closely linked to that of employers that it is very hard to separate them. But, without adopting the dogmatic approach of Shorter and Tilly, I would suggest that employer prosperity is an important background factor affecting industrial conflict. I shall return to this in the final chapter.

The other background influence to which I have given particular weight here is technological change. This is obviously likely to be linked to employer attitudes. For example, the attempts by some employers to achieve 'fundamental' changes in the structure of bargaining in the Sixties stemmed from a desire to introduce technical changes; examples include the 1962-63 New York newspaper strike and the 1959 steel strike. These attempts were not always the result of new innovations. The dispute over manning levels on the railroads dates back to the introduction of Diesel engines in the Thirties. Thus too much weight should not be placed on the newer types of technical change described as 'automation'. But the discussion of the challenge of automation suggests that one constant pressure on industrial relations has come from technical change. We saw in chapter five that technical developments were often crucial at the end of the nineteenth century; mass production methods in the early twentieth retarded union growth; and we have now seen the impact of more recent changes. I am not suggesting that the nature and extent of early mechanisation have exact parallels now, or that the effects of technical changes are identical to those of the past. But a persistent challenge to worker security can be located in the technical sphere.

The source of the long-term stability of strike patterns is another question to which I shall return in the final chapter. We have seen here how the institutionalised system has operated. It has not ensured industrial harmony, but has provided a channel for the expression of protest. This channel has not been perfect, as the 'labor revolt' shows, but the system has survived this 'challenge from below'.

Notes:

1. See, for example, 'The labor situation' Fortune,34 no. 5, pp.121-26, 280-86 (1946); J. Barbash Labor unions in action (Harper & Bros., N.Y., 1948)p.134; T.R. Brooks Toil and trouble (Delacorte Press, N.Y.,1964) p.211; S.Lens Left, Right and Center (Henry Regnery Co., Hinsdale, Ill., 1949) p.365; J. Seidman American labor from Defense to Reconstruction (Univ. of Chicago Press, Chicago, 1953) pp.224-25,246; C.R. Walker Steeltown (Harper & Bros., N.Y., 1950) p.124.

2. J.D. Greenstone Labor in American politics (Vintage Books, N.Y.,1970; orig.publ.1969) passim; V. Vale Labour in American politics (Routledge & Kegan Paul, London, 1971) pp.129-45; I. Richter Political purpose in trade unions (George Allen & Unwin, London, 1973) pp.190-217.

3. A.M. Ross 'The prospects for industrial conflict' Ind.Rels, 1, no.1, pp.57-74 (1961) esp. pp.66-72.

4. See the symposium in Ind.Rels, 1,no. 1,pp. 9-55 (1961); G. Strauss 'The shifting power balance in the plant' Ind.Rels, 1, no.3,pp. 65-96 (1962).

5. P.M. Sweezy and H. Magdoff The dynamics of U.S. capitalism (Monthly Review Press, N.Y.,1972) esp. pp. 43-50; B. Wycko 'The work shortage: class struggle and capital reproduction' Rev. of Radical Pol.Econs, 7,no.2, pp.11-30 (1975) esp. pp. 12-14.

6. D.B. Lipsky & S. Farber 'The composition of strike activity in the construction industry' Ind. & Lab. Rels Rev., 29, pp. 388-404 (1976).

7. R. Herding Job control and union structure (Rotterdam Univ. Press, Rotterdam, 1972) p.298.

8. See M. Silver 'Recent British strike trends: a factual analysis' Brit.J.Ind.Rels,11,pp.66-104 (1973):R. Hyman 'Industrial conflict and the political economy: trends for the 1960's and prospects for the '70's' Socialist Register,1973 pp. 101-53.

9. J. Stieber 'Grievance arbitration in the United States' in Royal Commission on Trade Unions and Employers' Associations Research Paper no.8, Three studies in collective bargaining (H.M.SO., London, 1968) pp.24-25.

10. Herding op.cit pp.257-84. For other radical accounts see S.Aronowitz False promises (McGraw-Hill, N.Y.,1973)pp. 214-50; S.Weir 'U.S.A.: the labor revolt' Internat. Socialist J., 20,pp.279-96 and 21,pp. 465-73 (1967).

11. Writers on the 'crisis' argued that unions were losing their direction and that members were leaving out of apathy and disillusionment rather than because the unions were not militant enough. See A.A.Blum 'Labor at the crossroads' Harvard Bus.Rev., 42, no.4,pp.6-19,172 (1964); S. Barkin 'A new agenda for labor' Fortune, 62,no.5 pp. 249-55 (1960); symposium on 'The crisis in the labor movement' Annals of the Amer.Acad.of Pol. & Soc.Sci.,350 (1963); P.E.Sultan The disenchanted unionist (Harper & Row, N.Y.,1963).

12. W.E.Simkin 'Refusals to ratify contracts' Ind. & Lab. Rels Rev., 21, pp. 518-40 (1968)esp. pp.520-21, 525,528.

13. C.W.Summers 'Ratification of agreements' pp.75-102 in J.T.Dunlop & N.W.Chamberlain (eds) Frontiers of collective bargaining (Harper & Row, N.Y.,1967).

14. D.R.Burke & L.Rubin 'Is contract rejection a major collective bargaining problem?' Ind. & Lab.Rels Rev., 26,pp.820-33 (1973) esp. pp.826-27,833.

15. J.D.Edelstein & M.Warner Comparative union democracy (George Allen & Unwin, London,1975)p.319; see pp.319-30 for discussion of the Steel and Mine Workers' and other cases. See also J.Herling Right to challenge: people and power in the Steelworkers' union (Harper & Row.N.Y.,1972); L.Ulman The government of the Steel Workers' Union (Wiley,N.Y.,1962); T.O'Hanlon 'Anarchy threatens the kingdom of coal' Fortune,83,no.I,pp.78-85 (1971); and refs in note 10.

16. H.Bigart 'Hard-hats attack demonstrators' pp.302-06 in M.Dubofsky (ed.) American labor since the New Deal (Quadrangle Books, Chicago,1971); article orig.publ. in New York Times, May,1970.

17. S.Rosen 'The United States: a time for re-assessment' pp.333-63 in S.Barkin (ed.) Worker militancy and its consequences,1965-75 (Praeger, N.Y.,1975) at p. 353. See also P.Henle 'Organized labor and the new militants' Monthly Lab.Rev., 92, no.7, pp.20-25 (1969).

18. R.J.Flanagan, G.Strauss & L.Ulman 'Worker discontent and work place behavior' Ind.Rels,13, no.2,pp.101-23 (1974). See also H.Wool 'What's wrong with work in America?- a review essay' Monthly Lab.Rev., 96,no.1, pp.38-44 (1973), where very similar conclusions are reached.

19. See Work in America (Report of a Special Task Force to the Secretary of Health, Education and Welfare, M.I.T. Press, Cambridge,Mass.,1973) esp.pp.43-51; B.Kreman 'No pride in this dust' pp.11-22 in I.Howe (ed.) The world of the blue-collar worker (Quadrangle Books,N.Y., 1972); J.Gooding 'Blue-collar blues on the assembly line' Fortune, 82,no.1,pp.69-71, 112-17 (1970). Other studies of the more general problem of the 'blue-collar blues' include H.L.Sheppard & N.Q.Herrick Where have all the robots gone? Worker dissatisfaction in the '70's (Free Press,N.Y.,1972); S.A.Levitan (ed.) Blue-collar workers (McGraw-Hill,N.Y.,1971); R.Schrank 'Work in America: what do workers really want?' Ind.Rels,13,no.2,pp.124-29 (1974); A.B.Shostak Blue-collar life (Randon House,N.Y., 1969) pp.46-49, 84-87; Work in America,op.cit., pp.13-17, 29-38.

20. Herding op.cit., p. 296.

21. See J.Stieber (ed.) Employment problems of automation and advanced technology; an international perspective (Macmillan,London,1966); A.R.Weber 'Collective bargaining and the challenge of technological change'pp.73-90 in J.H.G.Crispo (ed.) Industrial relations: challenges and responses (Univ.of Toronto Press, Toronto,1966);

G.G.Somers, E.L.Cushman & N.Weinberg (eds) Adjusting to technological change (Harper & Row, N.Y., 1963); E.B. Shils Automation and industrial relations (Holt,Rinehart & Winston, N.Y.,1963); C.C.Killingsworth 'The automation story: machines, manpower and jobs' pp.15-47 in C.Markham (ed.) Jobs, men and machines: problems of automation (Praeger, N.Y.,1964). On work rules see J.J. Kaufman 'Logic and meaning of work rules on the railroads' pp.378-88 and J.Stieber 'Work rules and practices in mass production industries' pp.399-412 in Ind.Rels Research Assoc. Proceedings of the 14th annual meeting, 1961.

22. T.Kennedy 'Freedom to strike is in the public interest' Harvard Bus.Rev., 48, no.4,pp.41-57 (1970) at 51-52.

23. Even in some traditionally conflict-prone industries, technical change was introduced peacefully. See, for example, P.T.Hartman Collective bargaining and productivity: the longshore mechanization agreement (Univ.of California Press, Berkeley & Los Angeles,1969); M.D. Kossoris 'Working rules in West Coast longshoring' Monthly Lab.Rev., 84, pp.1-10 (1961).

24. I take up the general significance of this in chapter eight.

25. In the terms used by Ross, a cycle of strikes in the steel industry ended in 1959. Ross is correct to stress that such shifts in strike activity cast doubt on the view that certain sectors are necessarily strike-prone. See Ross op.cit.(note 3) p.67.

26. Much of this rise is due to increasing activity among East Coast longshoremen. The West Coast industry has been peaceful, on the whole, since the Second World War and, as we have seen, mechanisation agreements were successfully introduced. On the East Coast there has been a long history of strikes, usually involving Taft-Hartley injunctions. See V.H.Jensen Strife on the waterfront: the port of New York since 1945 (Cornell Univ.Press, Ithaca, N.Y.,1974).

27. That is, they became larger, longer and more frequent.

28. J.Stieber Public employee unionism: structure, growth, policy (Brookings Instit.,Washington, D.C.,1973) esp. pp.161-171. See also S.C.White 'Work stoppages of government employees' Monthly Lab.Rev., 92, no.12,pp.29-34 (1969); J.A.Alutto & J.A.Belasco 'Determinants of attidudinal militancy among nurses and teachers' Ind.& Lab.Rels Rev., 27, pp. 216-27 (1974); W.A.Wildman 'Collective action by public school teachers' Ind. & Lab. Rels Rev., 18,pp.3-19 (1964).

29. J.F.Burton 'Can public employees be given the right to strike?' pp.472-78 in Ind.Rels Research Assoc. Proceedings of the spring meeting, 1970 (reprinted in Lab.Law J., Aug.1970); J.Stieber 'Collective bargaining in the public sector' pp.65-88 in L.Ulman (ed.) Challenges to collective bargaining (Prentice-Hall, Englewood Cliffs, N.J.,1967). Cf. G.W.Taylor 'Public employment: strikes or procedures?' Ind. & Lab. Rels Rev., 20,pp.617-36 (1967).

30. Refs in notes 28 and 29 and M.H.Moskow Teachers and unions (Univ. of Pennsylvania Wharton School of Finance and Commerce, Philadelphia, 1966); L.Kramer Labor's paradox: the American Federation of State, County and Municipal Employees (Wiley, N.Y.,1962); J.Seidman 'Nurses and collective bargaining' Ind. & Lab.Rels Rev., 23,pp. 335-51 (1970).

31. Stieber Public employee unionism p.171.

32. On white-collar unionism in America see E.M.Kassalow 'White-collar unionism in the U.S.' pp.305-64 in A. Sturmthal (ed.) White-collar trade unions (Univ. of Illinois Press, Urbana,Ill.,1966); A.A.Blum, M.Estey, J.W.Kuhn, W.A.Wildman & L.Troy White-collar workers (Random House, N.Y.,1971); M.H.Moskow & R.E.Doherty 'United States' pp.295-332 in A.A.Blum (ed.) Teacher unions and associations: a comparative study (Univ. of Illinois Press, Urbana, Ill.,1969). For criticisms of the 'sociological' view see, especially, G.S.Bain, D.Coates &V.Ellis Social stratification and trade unionism (Heinemann, London,1973); cf. R.Crompton 'Approaches to the study of white-collar unionism' Sociology,10, pp.407-26 (1976).

33. B.Yabroff & L.M.David 'Collective bargaining and work stoppages involving teachers' Monthly Lab.Rev., 76,pp. 475-79 (1953).

34. Tables A-23 and A-24 give more detailed figures for four sectors, broken down into three sub-periods.

35. Herding op.cit., pp.281-82.

36. Note that there is some disagreement as to the precise timing of the revolt. Herding concentrates on the 1960's as a whole, whereas Aronowitz stresses the post-1967 revolt (op.cit.,pp.214-15). The various indices of revolt are not closely correlated; for example, 'unofficial' strikes have been most frequent in the early 1970's whereas opposition to union leaderships peaked in the mid-Sixties.

37. Brooks op.cit. (note 1) p.220; B.J.Widick Labor today (Houghton Mifflin, Boston,1964)pp.165-67. See also 'Continuous coal mining' Fortune, 41,no.6,pp.111-27 (1950); R.T.Adams 'Technology and productivity in bituminous coal, 1949-59' Monthly Lab.Rev., 84,pp.1081-86 (1961).

38. On the miners' traditions of independence and freedom from close supervision see C.Goodrich The miners' freedom (Workers' Educational Bureau of America,N.Y., 1926). See also J.T.Dunlop Industrial relations systems (Southern Illinois Univ.Press, Carbondale, Ill.,1970; orig.publ. 1958) chap.5; G.V.Rimlinger 'International differences in strike propensities of coal miners: experience in four countries' Ind. & Lab.Rels Rev.,12, pp.389-405 (1959).

39. W.Haber Industrial relations in the building industry (Harvard Univ. Press, Cambridge,Mass.,1930)esp.p.152.

40. B.R.Morris 'Industrial relations in the automobile industry'pp.399-417 in C.E.Warne et.al. (eds) Labor in postwar America (Remsen Press, N.Y.,1949); I.Howe & B.J.Widick The U.A.W. and Walter Reuther(Random House, N.Y.,1949)pp.126-48.

41. F.H.Harbison & R.Dubin Patterns of union-management relations (Science Research Associates, Chicago,1947) esp. pp.11,36,86-90, 147-50, 203-11, 215-20.

42. R.M.MacDonald Collective bargaining in the automobile industry (Yale Univ.Press, New Haven, Conn.,1963) pp. 259-84, 361-63.

43. Ibid. , e.g. pp.348-50; Herding op.cit. (note 7) pp.121, 139-40; W.Serrin The company and the union: the 'civilized relationship' of the General Motors' Corporation and the United Auto Workers (Vintage Books edn., N.Y.,1974) esp. pp.20, 157-68, 308-09.

44. 'As is usual in the auto industry negotiations, agreement on a national economic settlement without a strike did not prevent strikes on local working conditions issues' Labor Month in Review, Sept.1961, Monthly Lab.Rev., 84, no.9 (1961).

45. On this tradition see J.Stieber Governing the U.A.W. (Wiley, N.Y.,1962); J.Skeels 'The background of U.A.W. factionalism' Labor Hist.,2,pp.158-81 (1961).

46. Serrin op.cit., pp.144-48; B.J.Widick Labor today (Houghton Mifflin, Boston,1964)pp.181-206. On its attitude to white-collar workers see C.D.Snyder White-collar workers and the U.A.W. (Univ.of Illinois Press,Urbana, Ill.,1973).

47. Serrin op.cit., pp.298-99. See also B.J.Widick 'Black city, Black unions' pp.120-32 in Howe (ed). op.cit. (note 19): 'the G.M. strike turned out to be a form of controllable social unrest, making little dent on the consciousness of the auto workers or the people of Detroit' (p.126).

48. See Aronowitz op.cit. (note 10)pp.21-50; B.Garson 'A strike for humanism' pp.203-13 in S.Lynd (ed.) American labor radicalism (Wiley, N.Y.,1973); article orig.publ. in Harpers Magazine, 1972. See also Work in America op.cit., p.19.

49. R.Hyman Strikes (Fontana-Collins,London,1972)pp.75-82.

50. Except where otherwise stated, all the results reported in this section will relate to this group of 17 'two-digit' manufacturing industries, for the period 1955-69. This particular spread of years was chosen for the discussion of collective bargaining coverage in section four, but it is unlikely that taking a different period would significantly alter the results here. The discussion is restricted to manufacturing industry because of the lack of comparable data on all series for the non-manufacturing sector. I am therefore making the (reasonable) assumption that manufacturing can be treated as a separate category from other industries.

51. P.S.Florence Economics and sociology of industry (C.A. Watts, London, 2nd edn,1969)pp.268-69.

52. C.F.Eisele 'Organisation size, technology and frequency of strikes' Ind. & Lab.Rels Rev., 27,pp.560-71 (1974).

53. M.Cass 'The relationship between size of firm and strike activity' Monthly Lab.Rev., 80,pp.1330-34 (1957). It is assumed, for example, that all strikes involving less

than 20 workers are restricted to one plant.

54. M.Roomkin 'Union structure, internal control and strike activity' Ind. & Lab.Rels Rev., 29,pp.198-217 (1976).

55. Thus we can examine: whether a particular industry distorts the overall figures for a given category of bargaining coverage; differences between industries; and the broad effects of a high, medium or low level of coverage, rather than assuming that a linear relationship holds.

56. L.Woodcock 'U.S.A.' pp.199-218 in C.Levinson (ed.) Industry's democratic revolution (George Allen & Unwin, London,1974) esp. pp.199, 205-07.

57. Apart from the intra-union violence associated with the challenge to President Boyle of the Miners, several violent incidents connected with labour relations were reported. See, for example, Labor month in Review Monthly Lab.Rev., 83, nos. I and 2 (Jan. and Feb.1960),87,no.3 (March 1964).

58. P.Taft 'Violence in American labor disputes' Annals of the Amer.Acad.of Pol. & Soc.Sci.,364,pp.127-40 (1966)at p.128.

59. See S.Petro The Kohler strike (Henry Regnery Co., Chicago,1961); J.G.Dunne Delano: the story of the California grape strike (Farrar,Strauss & Giroux,N.Y., 1967); R.W.Hurd 'Organizing the poor - the California grape strike experience' Rev.of Radical Pol.Econs, 6,no. I,pp.50-75 (1974).

60. H.Blankenhorn The strike for union (H.W.Wilson Co., N.Y., 1924); M.Coleman Men and coal (Farrar & Rinehart, N.Y., 1943).

61. On technological change in the industry see H.Barger & S.H.Schurr The mining industries, 1899-1939 (National Bureau of Economic Research, N.Y.,1944)pp.103-20, 163-76, 184-87.

62. The industries are chosen to represent a range of positions regarding technology, bargaining coverage and so on.

63. O.Ashenfelter & G.E.Johnson 'Bargaining theory, trade unions and industrial strike activity' Amer.Econ.Rev., 59,pp.35-49 (1969).

64. Lipsky and Farber op.cit. (note 6)pp.397-401.

65. See Table A-22.

65a. Several studies suggest that strikes may be concentrated in the largest and most important plants in 'backward' industries. See, for example, L.Pope Millhands and preachers (Yale Univ.Press, New Haven, Conn.,1942).

66. On these estimates see J.C.Ullman 'How accurate are estimated of State and local unemployment?' Ind. & Lab. Rels Rev.,16,pp.434-52(1963).

67. Predicting to D/E using the independent variables of the second equation of the Table gives an R^2 of 0.46. Significant positive coefficients for the wage and unemployment variables were obtained.

68. D.Gilbert 'A statistical analysis of the right-to-work law conflict' Ind. & Lab. Rels Rev., 19 pp.533-37 (1966); cf. two comments on this by L.G.Sgontz & G.C.Fethke, and D.N.Gujarati Ind. & Lab. Rels Rev., 20, pp.447-48 and 448-49 (1967). See also F.Meyers 'Effects of "right-to-work" laws: a study of the Texas Act' Ind. & Lab. Rels Rev. 9,pp.77-84 (1955); B.D. Mabry Labor relations and collective bargaining (Ronald Press Co., N.Y.,1966)pp.149-71.

69. See S.P.Manor 'Geographical changes in U.S. employment from 1950 to 1960' Monthly Lab.Rev., 86,pp.1-10(1963). Cf. 'Regional shifts in industry and population, 1899-1949' Monthly Lab.Rev., 71,pp.106-08 (1950).

70. Note also that no association was found between the size of strikes and the two independent variables of establishment size and value added per head; this contrasts sharply with the inter-industry results.

71. The Lordstown case has already been mentioned. On unrest at General Motors' plant at Norwood, Ohio, see 'Developments in industrial relations' Monthly Lab.Rev., 96,no. 2,pp.66-67 (1973).

72. Note that conglomerate ownership is different from the level of concentration in individual industries, which I considered in section three; the growth of conglomerates affects concentration at the level of the whole economy. I consider conglomerate and multi-national firms here because their development is important to the background character of American industry. In other words, their growth is a general factor which must be borne in mind when conclusions are drawn from the earlier sections of the chapter, in which factors having a more direct impact on strike activity were considered.

73. S.Weir 'Class forces in the 1970's Radical America,6,no.3, pp.31-77 (1972) at pp.54-59; R.Sobel The age of giant corporations (Greenwood Press Inc., Westport, Conn.,1972) pp.196-234; Sweezy and Magdoff op.cit. (note 5)pp.68-86, 97-100.

74. C.Craypo 'Collective bargaining in the conglomerate, multinational firm: Litton's shutdown of Royal Typewriter' Ind. & Lab. Rels Rev., 29, pp.3-25(1975).

75. W.N.Chernish Coalition bargaining (Univ.of Pennsylvania Press, Philadelphia,1969) pp.5-8.

76. Ibid., pp.262-63.

77. See Ibid pp 175-201; A.H. Raskin 'A kind of economic holy war' pp.245-59 in Dubofsky (ed.) op.cit.(note 16); article orig.publ. in New York Times Magazine, Feb.,1968.

78. J.T.Dunlop 'Structure of collective bargaining' pp.10-18 in G.G.Somers (ed.) The next 25 years of industrial relations (Ind.Rels Research Assoc., Madison, Wisc.,1973) esp. pp.15-16.

79. E.Shorter & C.Tilly Strikes in France,1830-1968 (Cambridge Univ.Press, London, 1974) esp. p.103; and see chapter two, above.

CHAPTER EIGHT

CONCLUSION: AMERICAN STRIKE TRENDS RECONSIDERED

In the previous chapters, I have not sought to present an historical account of strikes in America. Instead, I have concentrated on testing a set of theories which deal with the institutionalisation of industrial conflict. In section one, below, I summarise my findings insofar as they relate to these theories. The discussion of previous chapters has been organised around particular themes, but in the following discussion I focus on each version of the institutionalisation theory in turn and present the findings which are relevant to it. As I said at the end of chapter two, my aim has been to examine critically the institutionalisation theory; I have not sought to impose an interpretation on the strike data but have tested the theory against these data as carefully as possible.

It is possible, of course, to advance explanations different from those of the theory I have chosen to examine. But I have tried to avoid the danger of developing a model and applying it without giving adequate consideration to other models. As I have said several times, various models can be constructed and, in our present state of knowledge about the 'parameters of conflict', it is more important to explore their applicability than to impose one account on the data. However, it is possible to try to account for the more general aspects of American strike experience and sections two to four, below, therefore consider how the overall pattern of strikes can be explained. Section two examines various attempts to account for America's high strike-proneness, compared with other countries. These accounts provide some valuable insights but also have several important weaknesses. In attempting to develop their arguments, I suggest that a clear

conceptual framework is required; we must recognise that structural influences on strikes are mediated by the actors directly involved. Hence, section three discusses a model of the parties to conflict, giving particular attention to the roles of employers, the government and the public. With this framework, I turn, in section four, to a re-consideration of American strike activity.

1. Summary of the argument

Before we can analyse official statistics on strikes, we must consider the question of their usability. Hence, chapter one examines the argument that all official statistics are unsuitable for sociological use. The argument does not apply to strikes. There is a considerable overlap of meanings as to what constitutes a strike, so that the category is not being imposed on the participants. Although there is an unavoidable element in the definition of the strike concerned with actors' intentions, this presents few real problems; the concept of a stoppage of work 'to express a grievance or enforce a demand' is broad enough to permit events to be classified as strikes without giving detailed attention to actors' meanings. The statistics do not attempt to aggregate meanings but record the frequency with which labour-management disputes develop into stoppages of work.

It is true that strike statistics are the product of bureaucratic procedures, but this raises problems of practise and not of principle. Thus, the number of strikes recorded will depend on official rules on what constitutes a distinct stoppage, but if the same rules are always applied we can study trends in strike frequency. Section three of chapter one discusses such practical problems and shows that they are not insuperable. Section four shows that American recording agencies have followed substantially similar practices in counting strikes, so that long-term trends

can safely be examined.

On the question of the relevance of strike statistics for studying conflict in general, I argue in chapter one that strikes cannot be used as 'indices of unrest'. Unrest is revealed in many things other than strikes; and strikes are influenced by such things as the organising ability of the workers and the attitudes of the employers as well as underlying discontents. Strikes are the most complete and overt forms of industrial conflict and are of interest in their own right. Because they are collective actions they reflect the amount of organised conflict in industry, even though they do not measure 'unrest'.

Chapter two discusses the theory of the institutionalisation of industrial conflict. The 'conventional' version of the theory argues that there are trends apparent in industry towards accommodation between the parties to conflict and that orderly relations will replace disorderly and unregulated ones. The strongest argument is that these trends occur naturally and are able to outweigh counter-trends, but a weaker view is that institutionalisation is contingent on economic and other environmental circumstances. Two main sources of changing patterns of conflict are identified; the 'shock' of industrialisation and the subsequent re-establishment of stability; and the growth of collective bargaining. A stress on one does not rule out the importance of the other, but the separation of the two sources is analytically useful. The work of Shorter and Tilly is considered in section three of chapter two; it represents an important variant of the conventional theory, particularly since it considers the development from 'early' to 'modern' patterns of strike activity in terms of broad political factors as well as a more limited stress on industrial relations systems. Section four considers

the 'radical' alternative to the conventional approach. It stresses the power of the capitalist system to incorporate the challenge to it from the unions and the willingness of union leaders to co-operate with employers. Thus it differs from the conventional theory more in the implications it draws from the process of institutionalisation, particularly as regards the possibility of radical challenges to an apparently stable system, than in the analysis of the process itself.

Section five of chapter two derives specific predictions about strike activity from the institutionalisation theory. I shall not repeat that discussion here, except to remind the reader that the consideration of these predictions in the later chapters is influenced by the nature of the material; that is, the substantive chapters deal with certain topics and do not take the predictions of each version of the theory together. In the rest of this section, I shall summarise the findings as they relate to each version of the theory in turn; I shall begin with the conventional approach in its general form and then turn to the argument that industrialisation is the key influence on patterns of conflict. Shorter and Tilly's model will then be discussed and finally the findings which relate specifically to 'radical' writers presented.

The central weakness of the conventional theory, around which all others turn, is the failure of strike activity to decline in the manner predicted. The numbers of strikes and workers involved, in relation to the size of the work force, have shown no clear tendency to fall (see Tables 3-1, A-1, A-2, Charts 3-1, 3-2). The mean duration of strikes has not been reduced (Tables 3-2, A-4). Another way of putting this is to say that the 'shape' of strikes (Charts 3-3, 3-4) has not altered; any change came at the end of the First World War and cannot be related to the growth of

collective bargaining. The 'proprietorship' of the strike gained by the trade unions (Tables 3-4, A-3) indicates that, from the workers' side, disputes have been brought under institutional control, but this does not mean that the strike-proneness of unionists has been reduced relative to that of non-unionists (Table A-5); indirect evidence suggests that union members have had an increasing relative strike-proneness. On strike issues (Tables 3-5, A-7), the rise in the proportion of recognition disputes during the 1930's, and its subsequent decline, fits 'conventional' arguments, but these disputes have not disappeared.

One defence of the conventional approach is the argument that institutionalisation may be limited to certain industries: there are variations in the extent to which conflict is institutionalised, and only where a high level of institutionalisation exists will effects on the level of conflict be apparent. However, an examination of trends in several industries (Chart A-1) reveals that this argument does not hold. Although the clothing industry follows the predicted pattern, with a high level of conflict during the establishment of collective bargaining followed by a sharp decline, other industries do not fit the pattern. For example, in coal there is no link between the extent of institutionalisation and the amount of conflict.[1] Thus institutionalisation is not sufficient to reduce strike activity; and the low level of activity in the textile industry, where institutional control is weak, shows that it is not a necessary condition. Cross-sectional analysis of industries by bargaining coverage (Table 7-20) supports this conclusion. A high level of coverage of the workers of an industry by collective agreements is associated with a high rate of strike activity.

'Weak' versions of the conventional approach argue that the

effects of institutionalisation are contingent on economic conditions. Throughout chapters four to seven, there is evidence that economic factors affect strikes, both over time and between industries. But, in itself, this gives no more support to the institutionalisation theory than to other explanations; the theory must argue that the economic parameters of conflict have changed. Comparison of the 1946-72 period with earlier years (Tables 4-2, 4-5) indicates that the parameters have altered, but the direction of the change cannot be explained by the theory. The change, between 1900-39 and 1946-72, in the effects on strikes of previous high levels of economic activity can be seen as the result of a change in employer policies: since the Second World War, employers have not attacked the unions after a boom, as they did in the past, and the influence of past booms is therefore inverse instead of direct. But the change in the structure of the economic model as a whole cannot be dealt with by the institutionalisation theory. The theory does little more than state that economic conditions are important; it does not specify in what ways they will operate or how they will change, and there are limits on the extent to which one can derive implications about them from its general formulations. However, chapters four to seven reveal those factors which are important and thus help in the specification of a more precise statement of the parameters of conflict.

It should not be thought that every result goes against the conventional approach; if it did, the approach would not be worth serious consideration. Thus, the growth of compromise solutions to strikes (Table 3-6) and the decline in the variability of activity (Table 4-7) fit its expectations. More generally, a contrast can be drawn between the workings of the institutionalised system and the less stable relationships of earlier periods.

Labour relations have been brought under institutional control and such things as the decline in the violence of strikes can be related to this. However, the conventional approach gives insufficient attention to the causes of these developments and to possible counter-trends; I shall return to this in section four, below.

I turn now to the view that industrialisation is the key to strike patterns: conflict will reach a peak in the relatively early stages of the process and then decline. The data on the overall trends of activity, which I have already mentioned, suggest that this view, at its most general, does not hold for America; strikes do not disappear as workers recover from the 'shock' of industrialisation. Within the period of rapid industrialisation up to 1910, a measure of the proportion of the work force industrialised does not have significant effects on strike activity (Table 5-2). This suggests that the alternative view to the one I have mentioned, namely that industrialisation and strike activity move together, is also unfounded. The changing parameters of conflict over time (Tables 4-2, 4-5, 4-6) and between industries (Tables 5-17, 5-18, 6-11, 6-13) suggest that there may be a broad change in the patterns of activity as a society moves out of the 'early' stages of industrialisation. But this change occurs only within the context of the overall level of activity, the trends of which do not support the industrialisation arguments. And, as I observed in relation to the conventional approach, it is one thing to suggest that patterns of activity may change and another to explain them.

The detailed discussion of strikes during 'early' industrialisation in chapter five gives little support to the arguments under consideration. No clear trends are apparent towards a greater

'sophistication' of strikes in the aggregate (Table 5-4) or in relation to strike issues (Table 5-5). Between industries, indices of sophistication are not systematically related to the state of technical advance (Tables 5-8 to 5-10). Within industries, changes in strike patterns do not closely reflect changes in the use of mechanised operations (Tables 5-13, 5-14). It is true that there is a broad association between the level of strike activity (rather than its sophistication) and technical advance; activity is greatest in the least advanced sectors (Tables 5-16, 5-18). This is consistent with the view that the effects of industrialisation will be greatest where craft skills are being eroded; the aggregate data also suggest that strikes were becoming dominated by the problems of skilled men (Tables 5-3, 5-4). But the consideration of the strike patterns of different occupational groups (Tables 5-19, A-16) suggests that patterns of response are highly complex and that very general arguments about the impact of the coming of industry cannot do justice to these patterns.

There is some evidence that regional patterns of activity reflect the effect of industrialisation. Thus the high strike rate in the Mountain region at the end of the nineteenth century suggests that the coming of industry disrupts pre-existing social structures; as industry becomes accepted, the strike rate comes closer to that in other regions (Tables 3-10, A-10). But this conclusion does not hold for other regions; and the detailed data on strike sophistication between regions (Tables 5-21, 5-22) do not indicate any systematic differences. Between States, a high level of urbanisation encourages strikes (Table 5-23), but there is no tendency for large cities to be the most strike-prone (Tables 6-16, 6-17).[2] And, in the period since the Second World War, the proportion of the total work force employed in industry exerts a

negative effect on strike activity (Table 7-25). In any event, the industrialisation thesis would need to be specified in much greater detail than has been the case so far before it could be accepted. For example, it is necessary to distinguish between the impact of industry on workers already in a region and the importing of strike-prone industries from outside; that is, the question of whether strikes are a response to industry by workers new to it or a reflection of the industry itself, irrespective of the composition of its work force, has to be considered.

It will be clear from the above discussion that I agree with many of the criticisms of the industrialisation argument advanced by Shorter and Tilly.[3] In particular, it is far too vague to cope with the complexities of workers' reactions to industry and implies that only one type of response is possible. But Shorter and Tilly's own approach has several difficulties. In relation to industrialisation, it is clear that their three forms of craft adaptation (discussed at the start of section six of chapter five) do not subsume all the patterns of response which are available (Tables 5-19, A-16). Shorter and Tilly are correct in arguing that strikes are not concentrated in the advanced sectors and that industrialisation does not have automatic effects on the amount and character of protest, but do not go far enough in recognising the many types of response which are available.

Shorter and Tilly apply an 'organisational-political' model to strikes in France. According to this, being brought together in masses in large plants and cities provides workers with the means to strike effectively. Union organisation is a necessary factor mediating between discontents and the expression of protest. And strikes become demonstrations aimed at the political arena. My findings do not suggest that this general model applies to America.

Shorter and Tilly are right to criticise the view that a rapid rate of urbanisation leads to strikes, but large cities are not more strike-prone than small ones (Tables 6-15, 6-16). I have consistently found that there is an inverse link between the mean size of plants in an industry and the strike rate (Tables 5-16, 5-17, 5-23, 6-13, 7-19). Thus the aspect of the model relating large masses of workers to strike activity does not hold in America.

On the role of unions, we must note at the outset that it is impossible in one case study to establish that they are a necessary factor in the strike movement. The time series analysis shows that union density is positively correlated with strike activity (Table 4-11), but the role of density in the subsequent regression equations is less important than that of economic conditions (Table 4-12). In some cases the coefficient of the density variable is negative, in contrast to the encouragement to strikes which Shorter and Tilly expect from the growth of unions. Between industries, the coefficient of the density variable is generally positive but often fails to attain significant levels of association with strike activity (Tables 5-17, 5-18, 6-12, 7-13, 7-16, 7-19). At best, it appears that the role of union organisation has been exaggerated. There are, in any event, great difficulties with the time-series data because it is impossible to treat union density as prior to strike activity; the results of strikes often exert powerful influences on the subsequent state of the unions.

On the political aspects of the Shorter-Tilly model, it is clear that an approach through political crises is not appropriate for the United States. Although France was marked by severe and obvious crises, the events which one might choose in America are less certain and the concept of a crisis is not really appropriate. The years in which strike waves have occurred in America do not

bear any clear relationship to times of political unrest (Table A-21). Although the waves before the First World War could be related to the political influence of Socialism, those after the two World Wars do not reflect political crises.[4] Even the joint timing of political and strike crises would not establish the causal importance of the former for the latter. Thus one might suggest that the political system was under challenge at the start of the Depression and that the New Deal was a response to this crisis, but it does not follow that the crisis caused a rise in strike activity; both can be seen as responses to the Depression.

Snyder has extended the Shorter-Tilly analysis of strikes in America; he suggests that political parameters were important up to the Second World War, and economic parameters thereafter.[5] Taken alone, Snyder's political variables have some success in explaining strike activity, but they are about as successful for the years after the War as they are for the period before it (Table 4-13). When measures of the business cycle are added (Table 4-14), it is apparent that there is no simple shift from political to economic parameters; when three periods are considered, instead of Snyder's two, it is clear that changes in the parameters of conflict have been neither sudden nor complete. These findings, together with those of the final model relating to Snyder's argument (Table 4-15), suggest that some change of parameters has occurred but that this is not complete enough to require us to abandon the simpler economic model. Comparison of the economic model (Table 4-5) with the political one (Table 4-13) reveals that the former performs better than the latter, even for the period before the Second World War, when political factors are supposed to be the most important.

These findings do more than show that a model which applies to France does not work in the United States. Patterns of craft

response to mechanisation and mass production are likely to be common to countries having similar craft divisions of labour and undergoing similar technical and organisational change. And the argument for the necessity of union organisation in the mobilisation of workers' discontents is clearly a general one. Shorter and Tilly also make an explicit attempt to apply their model to America. They recognise that the shape of strikes has not altered and explain this contrast with other countries in terms of the way in which the American labour movement has been related to the polity. I shall return to this in more detail in section four, when I attempt to develop a different explanation of 'American exceptionalism'. What is important here is that not only is America different from France but also that the more general aspects of the Shorter-Tilly model do not apply.

Finally in this section, I turn to the 'radical' critique of the conventional approach to institutionalisation. Radical writers do not constitute a school in the same way that conventional writers represent the orthodox position of industrial relations analysts; and, as chapter two suggests, there are considerable differences of approach between radicals. The conclusions which one can draw about their approach are therefore less firm that those relating to the conventional view. Thus radicals can take the relationship between unions and strikes as indicating that unions collaborate with employers to reduce conflict or that they serve to mobilise the workers; any observed relationship can be made to fit one of these arguments. Some conclusions are possible, however. The importance of strikes over work conditions (Tables 3-5, A-7, A-15) suggests that discontents based on the work place continue to challenge any institutionalised system. Similarly, the presence of strikes during the term of contracts indicates that the system

in operation since 1945 has been unable to limit strikes to dispute over formal union-management bargaining (Table 7-5).

Specific tests on the radical line indicate that several predictions are at fault. Thus the use of a variable measuring the difference between the rates of change of wages and productivity (Table 4-8) did not suggest that this index of employer well-being developed by Mandel was an important factor in strike activity. The findings on employer well-being in the post-1945 period (Table 7-2) do not suggest that a crisis in American capitalism has contributed to a 'hard line' by employers and a consequent increase in strike activity. The more general findings for the 1960's (Tables 7-4 to 7-7, 7-12, A-23, A-24) show that the extent of the 'labor revolt' of the period has been exaggerated by radical writers. The case of the automobile industry, in particular, suggests that the revolt was contained by the system and that the challenge it presented was very limited.

The radical approach is valuable in stressing the limits to institutionalisation and giving detailed attention to the processes by which particular relationships develop. For example, the discussion of the steel industry in chapters five and six draws on the approach in pointing to the interests of employers in destroying the unions at the end of the nineteenth century and in containing them during the 1930's. This emphasis is not, of course, peculiar to the radical approach; but it marks it off from the more general statements of the conventional view. Similarly, the stress on the conflicting desires of union leaders and the rank and file and on the interests of the government in maintaining the capitalist system as a whole makes for a potentially more sophisticated discussion than that provided by many conventional writers.

I shall return to the contribution of radical writers to the

institutionalisation theory in section four, when I give a more general re-consideration to the theory. We have seen here how the four versions of the theory which I have identified stand up to the test against the American strike data. It is now necessary to place these findings in a wider context, by considering American strikes in comparison with those in other countries.

2. Alternative explanations of 'American exceptionalism'

As Shorter and Tilly and Ross and Hartman have pointed out, strike activity in America follows a different pattern from that in Europe.[6] Strikes are relatively long and involve the loss of a large number of working days per employee; there has been no tendency for strikes to 'wither away'; and the shape of strikes has remained more or less constant, whereas most European countries experienced a change of shape during the 1930's. But America also has a labour movement which is among the least radically inclined, and a work force which is among the most conservative. If we can discover the reasons for these differences from other countries, we will be in a better position to interpret the trends in activity which we have observed.

Clegg has recently argued that differences in the behaviour of trade unions between countries can be explained by the nature of collective bargaining in each country.[7] He identifies several dimensions of bargaining. Most obvious is the extent of bargaining, the proportion of employees covered by bargaining. This is followed by the level of bargaining, with countries being distinguished by the relative weight they place on local, regional, industry and national bargains. Four other dimensions are identified but the details of these do not concern us here. Clegg examines six countries and uses their relative positions on the various dimensions of collective bargaining to explain aspects of

the behaviour of their trade unions. He takes this as his main task, but also suggests that the nature of bargaining can be explained by the attitudes of management and employers' associations.

On strikes, Clegg notes that the United States has much the highest strike volume of his six countries, but suggests that frequency may be lower than elsewhere.[8] But, as he admits, recording practices differ so much that the latter conclusion cannot be stated with any confidence. Clegg also notes the large size of American strikes and the tendency for stoppages to be legal and constitutional. He explains these aspects of American strike activity by reference to the level of bargaining and the indirect effect of bargaining through factional competition within unions. Agreements at the plant level are much more important in America than in the other five countries and consequently an official and constitutional strike may be called at much less cost to the members as a whole than would be the case elsewhere. If this explains the preponderance of official and constitutional strikes in America, why is strike <u>frequency</u> higher than in other countries (such as Sweden and West Germany) when American unions are as committed as any to their 'no strike' agreements and formal disputes procedures? The answer, according to Clegg, is that American unions are 'faction-ridden': unofficial strikes are a powerful weapon in factional conflict and are thus more frequent in America than in countries with similar disputes procedures.[9]

As Clegg has stated it, this theory offers some valuable insights, but it is also seriously incomplete. Firstly, it does not explain why the volume of disputes is greater in America than elsewhere. We may deal with this by considering in turn the three dimensions of volume: the frequency, size and duration of

disputes. Clegg's theory of strike frequency is that it will be inversely related to the degree of coverage and effectiveness of disputes procedures; thus in America there are well-established disputes procedures and strikes are less frequent than in Britain, France and Australia. From this, and the comparison with Sweden and Germany which I have mentioned, we have a plausible account of American strike frequency. But the size and duration of disputes are not explained. Other things equal, one would expect plant agreements to be associated with relatively small strikes because, as Clegg himself stresses, stoppages can be called in one plant without involving the whole of a union's members. The great length of American strikes is hardly mentioned.

Even the account of strike frequency is of limited value. Clegg's stress on unofficial strikes as instruments of factional struggle does not take account of the importance of work place conditions in the 'labor revolt' of the 1960's or consider the other reasons for the rebellions which Clegg sees as 'factionalism'. He might argue that he is concerned merely with the influence of collective bargaining on strikes and not with more detailed matters. But to analyse unofficial strikes as a product of factionalism is far from illuminating.

As second major flaw in Clegg's argument is that it is static. It explains union behaviour in terms of the nature of bargaining, which is in turn related to the attitudes of employers and the government. This makes no allowance for the shaping of present structures by past developments. Clegg recognises this in relation to union structure and argues that collective bargaining is compatible with any structure; when bargaining is accepted by employers, the structure then in existence is legitimised.[10] But he does not stress historical factors in relation to other aspects of

union behaviour; for example, the possibility that behaviour in the past may affect the current structure of bargaining is ignored.

In the case of strikes, it may be more important to relate the consistently high proneness of the United States to continuing factors in the country's union and management history rather than to its bargaining structure. Clegg explains current strike activity by current bargaining structures but does not deal with the origins of either. Again, he could argue that he is concerned solely with international differences but his account is, at best, incomplete because it does not deal with the origins of these differences. The central role given to the attitudes of employers and the government has not been shown to be correct.

A third difficulty with Clegg's account is that it does not work for comparisons within America. Although it is tested against international differences, the theory is stated in general terms and can reasonably be expected to apply to inter-industry differences. On the level of bargaining, Table 7-13 shows that the clearest line of division is not between single and multi-plant coverage but between industries with agreements limited to one firm and those with multi-employer bargaining. It is true that the direction of association with strike activity is as Clegg would expect, with multi-employer bargaining being associated with low strike frequency, volume and size. But the fact that the distinction between single and multi-plant bargains is not the most important one seriously weakens Clegg's case, which rests on the view that strikes limited to one plant are less costly than more widespread ones; multi-plant bargains within one firm do not fit this argument. Secondly, Tables 7-16 to 7-18 show that bargaining structure is not the most important determinant of differences in strike activity. On the role of disputes

procedures in reducing strike frequency, we may take the findings on the link between strikes and the proportion of agreements containing clauses banning strikes as an index of the extent of procedures between industries. Table 7-17 shows that the presence of agreements banning strikes encourages activity. In other words, the link between the degree of control of collective agreements and strikes is contrary to Clegg's expecations.

The fourth problem with Clegg's approach which is relevant here is the failure to state which of the several dimensions of bargaining is the most important. It is, in principle, possible to rescue the approach from the criticisms of the previous paragraph by suggesting that there are inter-industry differences on those dimensions which I have not mentioned and that these differences counteract the tendencies I have identified. But the status of such an argument would be uncertain because we do not know which dimensions of bargaining are the most important or how they interact. In this sense, Clegg's book can be seen as a prolegomenon to a theory rather than the theory itself; it specifies the dimensions to be considered and indicates how they affect the dependent variable but does not establish the relative importance of the explanatory factors. Similarly, we need to know if there are particular clusters of positions on the dimensions or whether the dimensions are independent.

Clegg's theory does not begin to account for inter-industry variations, to mention only the most salient omission. Nor is Shorter and Tilly's analysis of international comparisons any more satisfactory. At the end of their chapter on the role of unions in strikes, Shorter and Tilly suggest that unionisation at first increased industrial conflict in America and France; but, after the 1930's, a new form of American unionism reduced strikes.[11] The

unions obtained considerable job control for the workers and ceded to the political parties the protection of the workers' political interests. Strikes lost their political significance and their frequency therefore fell. The assertion that strike activity fell is very strange since Shorter and Tilly later stress that American strike shapes have not changed and that it is this relative constancy of activity which marks the country off from Europe. Neither can their first statement be taken as a very loose expression of the view that the association between union density and strikes in America altered from a direct to an inverse link, for they produce no evidence to this effect.

A further confusion is apparent in Shorter and Tilly's account. They argue that in Europe the winning of political power by the working class meant that the government would henceforth use its influence directly to aid the workers in their shop-floor struggles. In America, traditions of non-intervention meant that this did not occur and, therefore, workers continued to be engaged in direct battles with their employers. But it is then said that 'admission to the polity need not automatically lead to the withering away of the strike'.[12] What constitutes admission to the polity is never made clear. Moreover, admission is treated as a homogeneous phenomenon; Shorter and Tilly do not argue that the particular character of the admission in America influenced strike activity but that other factors such as national traditions were at work.

These problems, and also the failure of Shorter and Tilly to document their claim that American strikes were as much political as economic before the New Deal, indicate that an adequate account of the differences from other countries has not been produced.[13] I do not deny that political factors may be important or that there

are advantages in moving away from a focus on the structure of bargaining to a consideration of the causes of the structure. But we do not need to adopt Shorter and Tilly's explanation. As Kassalow has argued, bargaining in the United States, compared with that elsewhere,[14]

> 'inevitably evokes more tension in industrial relations and often leads to more serious strikes. This is because so much is packed into an American collective agreement and because progress along a legislative route to a social objective is so often a much slower, more tortuous, and much less certain process'.

Thus two forces are at work. On the one hand, American collective bargaining covers many subjects and therefore there is a high probability that conflict will occur over the terms of an agreement; on the other, political solutions have proved unsatisfactory. There is no need to argue that the political side is paramount or that the aims of strikes were once explicitly political. The dominant strand in the American labour movement since at least the 1890's has stressed economic action and avoided political involvement; this is not a phenomenon of the years since the New Deal. Even if we admit that political matters were not ignored, we can still point out that strikes have rarely been aimed directly at influencing affairs in the political arena. The character of America's political system may have affected the tendency of unions to focus on economic weapons, but it was not the sole influence. We can see the stress on bargaining and the unions' attitude to the political system as being dialectically related; neither can be treated in isolation.

We have seen that neither the focus on bargaining, nor that on the political system, is satisfactory alone. We must now go

further and consider the effect of values in the wider society on the unique nature of American strikes. The best-known attempt to relate societal values to union behaviour is that of Lipset.[15] He suggests that the two values of equality and individual achievement hold the key to union activities. For example, the stress on achievement leads to a stress on ends rather than means; hence corruption and racketeering are more likely than they are in Europe. Lipset also attempts to relate the length and bitterness of strikes to these values. Clearly, additional hypotheses are necessary, since an interest in individual achievement is unlikely to encourage workers to join in collective struggles. Even a general belief in equality need not mean that men will be prepared to put the belief into action. Thus we need to suppose that the belief in individualism is not complete and that men will be prepared to act together when they recognise that they have interests in common; in other words, the ultimate aim may be individual success but collective means may be used to achieve it.

The difficulties with inferring behaviour from values are large and well-known. We need to mention here only that general values have to be interpreted in practice, so that there is no automatic link between beliefs and actions, and that actors have to select among values which may be opposed to each other. However, Lipset's approach enables us to deal with the 'paradox' of high strike activity among conservative workers with which I introduced this section. If workers believe in achievement, and are not concerned about the means to this end, they will be prepared to strike if they believe that this will lead them towards their goal. But, because they are individualistic, they will not join in long-term collective movements. If they join

unions, they will not treat membership as a 'central life interest' but will remain in membership only insofar as the unions advance their individual interests. When strikes break out, the conflict will be intense because workers will stress the new end of defeating the employer, and will be prepared to use whatever means are available. The struggle will be long because the employer, too, will believe in achievement and will not be willing to give way; he is particularly likely to stress the individualistic side of American values and to oppose collective struggles. Thus there is no reason why conservatism and individualism cannot go together with militancy and short-term collective actions. In other words, the 'paradox' of militancy and conservatism is a false one; the two elements in it are not necessarily opposed.

Lipset's approach is also valuable in linking industrial conflict with the wider society. Of particular importance here is the influence of values on the behaviour of employers. American employers have been widely seen as capitalists par excellence. They have doggedly defended the 'right to manage' and have refused to bargain with their employees except when forced to; any acceptance of the union has been grudging and has not involved full recognition of the union's legitimacy. In strikes, they stressed the 'right to work' of those who refused to follow the union and attempted to keep their plants open by the use of strike-breakers.[16] These characteristics can be related to the employers' adherence to an extreme laisser-faire attitude.[17] Such deep-seated beliefs naturally led to an extreme hostility towards unions, which was encouraged by reports of the radicalism or corruption of the labour movement.[18]

However, antipathy to the unions cannot be inferred solely

from a belief in individualism, even if such a belief could be treated as independent from other aspects of the society. For example, a stress on individual achievement does not mean that people will necessarily act violently. The ideological opposition to unions reflects more than the employers' individualism. In addition to the social values mentioned by Lipset, we must remember that there are important constraints on behaviour; although the violence of American strikes reflects the achievement orientation of society, forces are also at work which define when it is legitimate to use violence and in what direction violent acts may be directed. Lipset would be among the first to suggest that behaviour is conditioned by values and norms and that such things as violence do not reflect the total breakdown of rules of behaviour.[19] This is not the place to go further into these points, but it is clear that an emphasis on particular sets of values does not explain everything about the character of the union movement or about strikes. Moreover, linking strikes to constant features of the American value system does not deal with the question of changes in strike patterns. In particular, the marked decline in the violence of strikes since the New Deal cannot be explained by social values.[20]

Thus Lipset's approach, like the two previous approaches, is incomplete. As we have seen, each approach has a number of advantages. The examination of the structure of collective bargaining enables us to point to features of the American system which increase the chance of conflict over the terms of collective agreements. The approaches through politics and values link patterns of industrial conflict with affairs in the wider society and avoid the lack of historical reference which is a problem with

the bargaining approach. But the argument from politics is imprecise and does not explain why, if the nature of labour's political position has changed since the New Deal, strike activity has retained its traditional pattern. The approach through values points to certain important background features of American society but is seriously incomplete, as well as having problems with the relationship between values and behaviour. To consider these three approaches further, we must give systematic attention to the various parties to industrial conflict. Instead of concentrating on bargaining, politics or values at a general level we must focus on the parties themselves to see what factors influence their actions.

3. The parties to industrial conflict

The discussion here must necessarily be at a general level. I cannot deal with all the forces acting on the parties to conflict. or with the details of particular cases. The aim is to examine strikes in terms of the identifiable groups which mediate structural influences on the amount of conflict. I shall consider a model of five parties which has been proposed by Bloch.[21] These parties are the union members, the union leaders, employers, the government and the public. Since I have considered the roles of union members and leaders at length in previous chapters, I shall concentrate on the other three parties, beginning with the employers.

It is easy to assume that managerial attitudes are fairly homogeneous. But there are several identifiable approaches to labour relations with very different characteristics. For example, Selekman distinguishes between eight varieties of labour relations.[22] Each variety may work only in context; the well-known

policy of General Electric, in which the company makes an offer which it considers fair at the start of negotiations and then refuses to move, may not work in other settings.[23] These differences of approach have had a long history. They are reflected in, for example, the marked gap between the National Association of Manufacturers and the National Civic Federation; the former represented the smaller firms and, in the early twentieth century, took an extremely hostile approach towards unions of all types, while the latter was far more conciliatory.[24]

These differences may help to explain why the 'employer well-being' model achieves satisfactory results neither over time (Tables 6-5, 7-2) nor between industries (Tables 6-13, 7-18). The general lack of effect on strike duration is particularly notable; one might not expect employers to be able to exert much of an effect on whether or not their workers decide to strike, but they might be expected to influence the length of stoppages. The freedom of action which management enjoys can explain this; managerial decisions obviously affect the length of strikes but these decisions are not closely related to economic circumstances. Or, more precisely, each decision may reflect economic conditions but different managements will react to these conditions in different ways. To take the case of steel discussed in chapter six, U.S. Steel decided in 1937 that the best way to take advantage of the opportunities for profit which were then becoming apparent was to recognise the Steel Workers, whereas the 'Little Steel' companies felt that their long-term position would be threatened by granting recognition. However, managerial freedom of action is clearly far from complete. The economic enviornment means, for example, that union wage demands cannot freely be granted. All

firms are concerned to maintain their profitability. But the precise policy adopted to achieve this end can vary considerably.

By considering firms' actions in terms of this constrained freedom, we can explain the lack of any direct association between employer well-being and strikes without having to assume that managers are completely free agents. They are concerned with control over their firms' operations and do not willingly give this up. Despite the diversity of practice, employers have always insisted on managerial prerogatives and the 'right' to run their plants as they see fit. It is true that the definition of this right has changed from being more or less absolute to being dependent on the processes of collective bargaining; but management has resisted union 'encroachment' on those areas which it defines as its own. In particular, matters of pricing and production have been kept out of the collective bargaining arena. Moreover, as Chamberlain says, 'management acts, the union reacts';[25] management makes the initial decision to introduce a new process, for example, and the union responds to this. The union does not, and indeed cannot, introduce a change in the methods of operation. This emphasis may seem strange in view of the argument put forward by Chamberlain himself, that the union is a powerful challenge to managerial control.[26] This is true in one sense but not in another. Management has been forced to admit the union into the determination of wages and the conditions of employment; in attempting to widen the bounds of bargaining, the union poses a continuing challenge. But in the planning of day-to-day operations and of longer term changes management retains the initiative. This is inevitable given the union's tacit acceptance of the view that 'management must manage'.[27] Although unions have challenged managerial prerogatives,

the notion of reserved managerial rights retains considerable power.

Although a change in managerial attitudes to unions cannot be denied, employers have retained the desire to control their plants. As Yellen puts it, they are in conflict with unions over property rights and the exercise of power; unions challenge the idea that legal ownership of property entitles the owner to exercise unlimited discretion over its use, while employers seek to retain their power.[28] This underlying conflict is clearly important for such overt forms of conflict as the strike. The basic clash of interests is constantly present and makes itself felt when strikes occur. Thus it has been argued that the more the employer clings to his absolute rights, the more likely it will be that conflict will become manifest.[29]

I do not want to go into details about the reasons for the varying extent to which employers may cling to their 'rights'. More important here is the fact that employers have considerable freedom of choice within the broad constraints of their position. The basic conflict of interest with unions does not mean that open struggles are continuous or that means of avoiding such struggles cannot be found. In other words, a conflict of interest is mediated by the interpretations which actors place on it and cannot be seen as the cause of trends in the amount of open conflict. However, its background importance is considerable: I shall suggest in the following section that one reason for America's unique strike pattern is a constant tension between employers and unions and workers which has taken a more overt form than the similar tensions in other countries.

In suggesting that the conflict of interest between unions and

employer is a background influence on strike activity I do not want to imply that the employer is unimportant. He is clearly central to industrial relations and can directly affect the course of a strike, as well as having more indirect effects on his workers' willingness to strike through the use of such things as grievance procedures and welfare policies. But, for two sorts of reasons, the employer's role in strike trends is less direct than may seem. Firstly, and most obviously, there are other forces at work. The employer may be the agent through which structural factors such as technical change are introduced, but these factors are independent from him and his freedom of choice regarding their implementation often limited by competition. Secondly, the chain of causation running from the basic conflict with the union to strike activity is a long one. The conflict has to be brought into the open and made a source of explicit disagreement; that disagreement has to be focussed on a particular issue; and the dispute has to reach deadlock before a strike can occur. Even then, the link with strike <u>activity</u> has not been established. This chain relates only to each strike in isolation and we are concerned with overall trends in activity. Although basic conflicts of interest may be located at the root of every strike, this does not mean that, when we look at things from the other direction, the overall amount of strike activity is closely associated with such conflicts.

I have suggested, then, that although the employer is central to industrial relations his impact on the overall amount of conflict is less direct than might be imagined. In particular cases, he has considerable freedom of action but, in the aggregate, employer policies do not determine strike patterns. The clearest example of this is the comparison between strike activity before

and after the New Deal; although employers' attitudes have been much more moderate since the New Deal than they were before it, strike activity has not declined and, in particular, strikes have become no shorter. On the character of conflict, the employer's role is clearer. As the conventional institutionalisation theory argues, the growth of reason and moderation is possible only when both sides are prepared to accept the legitimacy of the other.[30] For example, when firms decide not to operate their plants during strikes, the possibilities for violence are much reduced.

I now turn to the role of the government. In view of arguments about the importance of political factors in explaining American strike activity, I shall concentrate on the government's direct intervention in labour relations. It is well-known that, until the New Deal, the Executive branch did not become formally involved on a large scale; the Norris-La Guardia anti-injunction Act of 1932 marked the beginning of active intervention against the rulings of the judiciary.[31] But the policy of leaving things to the courts did not mean that the government was not concerned about the directions taken by labour relations.[32]

> 'No government ever has adopted a complete hands-off policy in labor disputes'.

Leaving matters to the courts implied that the government accepted their approach as being the most appropriate way of dealing with industrial unrest.

As well as making the 'non-decision' to rely on the courts, the government took a more positive approach in several important cases. It was prepared to use troops whenever 'public order' seemed to be threatened by strikes and became closely involved in such important stoppages as the Pullman strike of 1894.[33] In addition to

these direct interventions, the government appointed several special commissions of inquiry into industrial relations and made attempts to find peaceful settlements in disputes which appeared to be particularly important.[34] But no formal policy was established and intervention remained on an ad hoc basis.

During both World Wars, the Executive branch was closely involved in labour relations, but its power to act depended on the emergency legislation introduced for war-time.[35] It was not until after the Second World War that formal peace-time intervention became accepted. The Taft-Hartley Act of 1947 empowered the government to order a cooling-off period in a dispute which it felt endangered public health or safety. During the first year of its operation, the Act was used seven times, to order cooling-off periods in a variety of industries.[36] But there has subsequently been a tendency to concentrate on those sectors where a direct effect on the national economy can be identified; the East Coast longshore industry alone was involved in eight injunctions up to 1972.

This involvement marks a new development in government policy, but one cannot conclude that it has been particularly effective. On the one hand, it has been suggested that many strikes which are classified as emergencies do not in fact threaten the national economy to a very great extent; in other words, intervention has been unnecessary.[37] On the other hand, the effectiveness of the procedures themselves has been questioned. The cooling-off period does not prevent the dispute from developing into a strike once the government's injunction banning strikes has expired. Neither does the use of an injunction help to ensure that a settlement is reached. Indeed, it has been suggested that the parties adapt themselves to governmental interference and make few real attempts

to reach a settlement.[38] These problems were recognised by the Administration in 1970, when President Nixon put forward a scheme to extend the coverage of Taft-Hartley and to require the parties to engage in bargaining. The explicit aim was to encourage unions and management to adopt a flexible approach, since at present they state their positions firmly and await governmental involvement.[39] They know that such involvement will occur and that a board of inquiry into the dispute is likely to adopt a formula which involves 'splitting the difference' between the two sides. There is everything to gain, and little to lose, from taking an extreme position and keeping to it.

There have been many other forms of government intervention in strikes. Direct involvement is exemplified by the declaration of a state of emergency during the 1970 postal strike, which affected most of the Eastern States; troops were ordered to move the mails.[40] Less direct action has occurred with the establishment of special boards of inquiry; for example, a whole series of boards and commissions has been appointed to deal with the continuing disputes in the railroad industry over manning arrangements.[41] And, of course, the government has had a formal interest in labour relations through the National Labor Relations Board and the Federal Mediation and Conciliation Service. Other aspects of government policy have impinged on labour relations. In particular, economic management and attempts to control inflation through wages policy have altered the traditional pattern of relations.

All this points to two important features of governmental intervention. Firstly, the extent of involvement since the Second World War means that, in one important sense, the institutional isolation of industrial conflict has not occurred; the Executive

has had a constant interest in labour disputes and has become an important party to them. This does not mean that the argument for the isolation of conflict is necessarily wrong.[42] It is still possible that economic and political matters are kept separate; although the government is involved in economic disputes, it acts through certain agencies which are independent from other departments of state. That is, economic conflict is conceptually separated from political affairs and is not allowed to influence matters in the political arena, Thus, strikes have been restricted to economic aims and have been directed at the employer; they have not been used to put direct pressure on the polity, even when such matters of concern to the workers as State medical care have been under discussion. This view has a good deal to commend it. Although the simplistic argument that industrial conflict has lost political significance is incorrect, a more fundamental isolation remains. Governments are careful to stress that unions have a 'proper sphere of operation' and that they must not trespass on political discussion.

The second feature of intervention is its lack of success. It has not reduced the amount of conflict in the areas where it has been employed and may even have made the situation worse by encouraging the parties to harden their attitudes. In a number of cases intervention by the Executive has been attacked by the courts. For example, an attempt by the President to seize the steel mills during the 1952 steel strike had to be abandoned when the Supreme Court declared that this was not legal; it was not until 1959, in connection with another steel strike, that the Taft-Hartley procedures were declared constitutional.[43] Thus, despite the obvious power of the government, its ability to impose

its will on the other parties to conflict has been severely restricted. As I have noted in relation to the employers, changes in attitudes have not been marked by a significant change in the amount of conflict.

We must now turn to the role of the 'public' in strikes. Chamberlain defines a public as a group of individuals 'having something in common which significantly associates them under given circumstances'.[44] For industrial conflict, a public consists of those who are not parties to a specific relationship but who are <u>conscious</u> of being affected by it. For Chamberlain, the most important publics are the buyers of the products of a strike-affected firm and other firms in the same industry, who will often attempt to keep the firm to an agreed line to prevent 'whip-sawing' tactics by a union. But publics cannot exert sufficient pressure on the parties directly involved to force them to act in particular ways.[45]

'Public opinion' in the wider sense may be important in certain cases. Thus the image of longshore strikes holding up the nation's commerce is a very powerful one which is liable to be employed whatever the 'facts' of the case. As I have shown in previous chapters, strikes in the transport industries have always been short and it seems reasonable to relate this to the pressures of the 'public'. Transport strikes are highly visible and their effects are immediate; although the measurable economic losses may not be very great, the amount of inconvenience experienced may be considerable. The contrast between industries such as transport, where the public is immediately affected by strikes, and other sectors has been neatly pointed out by Dubofsky.[46] In New York at the beginning of the twentieth century the climate of opinion

contributed to the unionisation of several groups, particularly the clothing workers. There was widespread sympathy for the women who worked in the clothing shops and condemnation of the conditions under which they worked. Considerable support, both moral and financial, was given to them in their strikes. But at the same time transport workers, whose conditions were little different from those of the clothing workers, were denied sympathy; they were seen as self-interested men who were prepared to place their own advantage above the convenience and well-being of others. Largely as a result of this, the transport strikes failed.

Public opinion has to be formed and mobilised. Individuals do not react to events in isolation but interpret them in the light of information they receive. It is moulded by the press and other sources and thus cannot be treated as a totally independent force on industrial conflict. There are cases where public attitudes were deliberately played on, with fears of shortages being aroused;[47] this did not always mean that opinion was always turned against the strikers, but it indicates that the dispute was being viewed in particular terms, with the apparent effects of the strike being given precedence over the 'objective' features of the situation. In the example from Dubofsky, it is possible that there was an 'interaction effect' between employers and public opinion. Clothiers operated on a relatively small scale and were more open to pressure than were the large transit companies; and the important cultural ties with their workers made them sympathetic to demands for improved conditions. These feelings may have rubbed off on public opinion, whereas in the case of the transport workers the employers' hostility encouraged similar feelings of antipathy among the public.

Opinion is not always manipulated in favour of the employers. In the final section of chapter five, I noted that, at the end of the nineteenth century, there was considerable opposition to the large corporations and that this was sometimes expressed in support for workers during a strike. Community support was an important aid to strikers, which operated despite the corporations' attempts to brand them as radicals who threatened public order. However, it is often possible for employers to enlist public support for an apparently reasonable demand which in fact threatens the workers' position. For example, the suggestion that there be a return to work while grievances are discussed appears to be sensible, but, if followed, it may lead to the breakdown of strike solidarity and consequent distrust between the strike leaders and their followers. Similarly, when a strike is marked by violence, the employer can turn the situation to his advantage by appealing to the need to restore public order before grievances can be considered. Even in cases where 'objective' analysis suggests that the violence was the responsibility of the employer or police, public opinion can be led to focus on the issues of public order with the result that effective support for the strikers is not forthcoming.[48]

Public opinion can operate in ways which one might not have expected, but, because it has to be mobilised and directed at particular issues, it is rarely independent of the policies of the other parties to conflict. Employers and the government have far more influence than do trade unions over the forces which mould opinion and they are therefore able to use it to support their own arguments. Even when direct control of the mass media is not possible, they are able, by making 'reasonable' suggestions, to obtain public support; at the very least, the public will be

interested in the ending of the dispute and this overlap with the interests of the employers will make support likely for demands to end the strike.

I have suggested in this section that the attitudes of employers the government and the public can be crucial to the outcome of a strike. In discussing strike trends, we must be aware of the independent role which these parties can play; their actions are not determined solely by 'objective' conditions and are influenced by the ability of the parties to choose the approach to adopt. However, these choices are constrained. For the employer, his competitive position is crucial; for the government, there are limits on what is politically feasible; and, for the public, there are powerful forces shaping how a strike is perceived.

I have also argued that the general attitudes of employers and the government towards organised labour exert a less direct effect on the amount of conflict than one might suppose. Although the employer is obviously a central party to industrial relations, his freedom to act is limited and he may be unable to prevent the operation of other forces which affect the amount of conflict present. His indirect influence may be considerable. For example, the domination of their plants which employers in mass production enjoyed during the 1920's ensured that strikes would be no more than brief and infrequent protests. But this power could be exercised so firmly only because of such things as the weakness of the unions and the favourable attitude of the government to the employers.[49] In other words, employers appeared to control the amount of conflict only because factors which might counteract their influence were not operating. In the following section, I shall consider how America's overall strike pattern can be related to the

interaction of the parties to industrial conflict.

4. American strike patterns reconsidered

In this section, I shall attempt to develop an explanation of American strike patterns which avoids the difficulties of the approaches I have considered in section two. The most convenient starting-point is the institutionalisation theory. Section one has summarised the results of testing the theory against strike data. Although it has several important weaknesses, the theory is correct in pointing out that forces are present which tend to control industrial conflict and bring it under the management of institutional arrangements. It is also right to suggest that conflict itself tends to become an institution, with established patterns of activity becoming accepted by the parties involved, as they move away from complete hostility to an understanding of their opponent's position. However, this is more an ideal-typical model of developments than a description of actual behaviour. I have shown in chapter five that relations between employers and their workers at the end of the nineteenth century were not marked by total hostility; and, in general, industrial relations in any period stem from pre-existing arrangements and do not lack rules of behaviour.

If we take institutionalisation as a model, we can see that varying degrees of institutional control are possible and that there may also be forces of de-institutionalisation at work. In principle, these points could be accepted by the 'conventional' theory, but in practice little attention is given to them. Writers have concentrated on trends towards increased institutionalisation and have tended to see these trends as irreversible. An associated weakness has been the failure to realise that the character of an

institutionalised system is problematic; we need to know how and why a particular system emerged and how it operates. These questions are blurred by a focus on 'natural' tendencies towards accommodation and understanding. The nature of the system and the distribution of power within it are largely ignored.

These problems of the conventional approach can be avoided if we utilise some of the arguments of radical writers. Three of these require particular attention. They are the view that the system exerts hegemonic power over its members, the stress on the potential challenge from the rank and file union members and the focus on conflicts between union leaders and members. The hegemony argument reminds us that the character of an institutionalised system of industrial relations depends on affairs in the wider society. The capitalist system employs a powerful cultural apparatus to disarm potential challenges; these are incorporated into the system and prevented from exerting a fundamental challenge to the system as a whole. Thus the institutionalised relations analysed by the conventional approach are based on a fundamental inequality of power and can be understood only in this light. Although the power of unions seems to have been made approximately equal to that of employers, the terms of this equality are set by the system as a whole; unions cannot alter the nature of the system or even exert pressure for significant changes because they are bound up in its operations.

The hegemony argument provides an important corrective to Shorter and Tilly's view of labour's political involvement. In 'conventional' style, Shorter and Tilly see this involvement in terms of a breakthrough of the working class to political recognition; labour is one group in a pluralist society and has

had to fight for recognition but, once this has been achieved, it stands on more or less equal terms with other groups.[50] This ignores the ability of the government and employers to determine the terms on which political recognition is given to labour and other groups; as Marcuse puts it, society may be made up of groups with countervailing powers, but there is no countervailing power to the system as a whole.[51] This raises questions about Shorter and Tilly's explanations of strike patterns in Europe since it suggests that labour has not achieved genuine political participation and that, therefore, changes in the shape of strikes cannot be related to political matters without considerable qualification. Its importance for the United States will be taken up further below.

The second strand of the radical line concerns the role of the rank and file. It is argued that matters of work conditions have always been central to workers on the shop floor; thus, in chapter six, we saw the importance of these concerns during the New Deal and, in chapter seven, their significance in the 1960's, while arguments also exist for their crucial role in earlier periods.[52] 'Work conditions' covers far more, of course, than the physical conditions in which work is performed; it includes, in particular, the degree of control over the job which workers are able to exercise.[53] The struggle for job control is continuous and cannot be institutionalised in the same way as demands for improved wages or union recognition. Control is the outcome of struggles 'at the point of production' and thus cannot be made the subject of formal union-management agreements. It has to be won by the workers themselves and is always liable to be eroded by new managerial attacks. Thus, radicals point out, there are limits to the operation of institutionalisation; and an institutionalised system is always

liable to challenge from the emergence of a new wave of job control strikes.

This emphasis is valuable but it has difficulties. Thus, as we saw in chapter seven, the rise in strike activity during the 1960's cannot be emplained solely in terms of strikes over job control. More fundamentally, radicals draw the implication from such strikes that rank and file unionists are liable to develop self-conscious attempts to establish complete control over the production process. But the wider significance of struggles for job control is in doubt. The militancy of these battles has to be reconciled with the well-known conservatism of American workers and their failure to adopt programmes of radical social change. The potential threat of fights for job control to any= institutionalised system cannot be questioned, but their implications are less certain. The final problem with the radical line is a failure to explain when job control struggles will become significant; their causes are located in fundamental tensions within the capitalist mode of production, but for the explanation of strike patterns we need to know when these tensions will come to the surface. I shall suggest some reasons for the movement of job control strikes when I have considered the third element of the radical line.

This third argument concerns conflicts between union leaders and the rank and file. In concentrating on the institutionalisation of unions, conventional writers ignore the conflict of interest which is likely to arise between leaders and followers. The former will be concerned with establishing the position of the union through union security agreements and the like; and thoughts of personal advantage may not be far beneath the surface. The latter,

while recognising the material advantage of a 'good' contract, will be concerned about shop floor matters which a large and bureaucratic union will be increasingly unable and unwilling to deal with. Thus, there is the constant possibility of intra-union struggles; in turn, these will threaten the stability of relations with the employer. In the terms of the 'parties to conflict' model of section three, the two parties of union leaders and members will not be in agreement and hence conflict will always be possible.

We have seen, then, that there are important limits on the ability of an institutionalised system to cope with all forms of industrial conflict; job control struggles are, by their nature, continuous and incapable of being resolved away from the shop floor. There are also forces of de-institutionalisation at work; for example intra-union conflicts threaten union-employer relations. We are now in a position to try to explain America's strike pattern, employing the insights derived from the radical approach and the model of the parties to industrial conflict.

I begin with the 'party' of the workers. As I have mentioned, American workers are noted for their lack of radicalism. This is related to such well-known features of American society as ethnic divisions within the working class, the expansionist nature of American capitalism and the belief in individual achievement; I do not need to go into these and other reasons for the weakness of Socialism.[54] But this does not mean that discontent has been low. Indeed, rapid industrial progress and a desire for success are likely to produce a large amound of dissatisfaction. As Bell puts it:[55]

> 'The worker has not wanted revolution, but a place in society; and even when he has given vent to violence -

> for example, in the mining camps and timber forests - its form and direction have been more characteristic of the blind resentments of the Jacquerie than of the ideological formulations of the intelligentsia. The search for security has been the chief drive of the industrial worker. What elsd could it be when the costs of social change...have been borne largely by him'.

Although we may question whether workers responded 'blindly' to events, we may agree that strikes have not necessarily reflected general ideological concerns. Workers have been concerned with the security of their incomes, jobs and status and have been prepared to strike when they have felt under threat.

Bell's argument contains two points which are important here. Firstly, the 'search for security' is continuous; security is a relative concept and the achievement of particular gains does not mean that it ceases to be a problem. In other words, there is, from the side of the workers, a constant pressure for increased security which is likely to be reflected in strikes. Secondly, revolts have been similar to the Jacquerie in form. When discontents have become severe enough, workers have been prepared to overlook the ethnic and other differences which normally divide them and have co-operated in large and militant strikes. But these strikes have not developed into a more self-conscious movement; although American workers have displayed surprising amounts of solidarity, they have not been able to build upon this.

This discussion does not show why the search for security in America has led to more strike activity than elsewhere, or why a movement has not grown out of separate strikes. To answer these questions, we must consider the other parties to conflict and some

structural features of American society. The failure of strikes to become a wider movement can be explained by the actions of union leaders, employers and the government. The mainstream of the union movement has adhered to the policies of 'business unionism' and has been prepared to use the workers' militancy to gain agreements with the employers, but has not been interested in the militancy for its own sake. Those unions which have taken a more radical line have faced internal difficulties of disputes over tactics and the like and have been firmly opposed by more conservative unionists. But equally important has been the opposition of the employers, who have consistently fought all radical union movements with a powerful battery of weapons. They have also acted more directly against strikes, even those run by business unions, by using strike-breakers, armed guards and the like and by seeking court injunctions against the strikers. Finally, the government has sought to preserve law and order. Until the New Deal, it usually intervened on the side of the employers. Subsequently, its actions have been less clearly directed against strikers, but the force of the challenge from strikes has been less than in the past. In any event, a concern with public order is, as we saw in section three, likely to lead the government into a course of action which is opposed to the workers' interests, even though the intent may have been merely to uphold the law. For all these reasons, then, militancy has not been translated into a general radical movement.

If we turn to the employers, we can consider another constant source of tension in industry, in addition to the workers' search for security. As we saw in section three, American employers have long been notable for their extreme hostility to unions and to any attempt to attack their 'rights'. Even in the years since the New

Deal, they have not granted the unions legitimacy and have been prepared to work with them only when forced to. It is true that attempts at co-operation have been made, but these have rarely been the result of free choice and have often stemmed from difficulties facing the employers; for example, the attempts of the steel industry in the 1960's to improve its industrial relations reflected competitive problems faced by the industry and a desire to end the long and inconclusive strikes of the 1950's.[56]

Even if we grant that there has been a change in the employers' attitudes since the New Deal, it remains true that hostility towards the unions has always been greater than in that other countries. It is hard to measure the extent of this, but the determination with which unions have been fought and the desire of employers completely to eliminate the union challenge suggests that the opposition has been more marked than elsewhere. And, as I suggested in discussing the work of Lipset, the violence of strikes reflects the attitudes of employers as much as those of workers. American employers have been particularly prone to argue that only they know how to run their own plants. Associated with this is the belief that industrial relations can be run on a personal basis, even in large enterprises: the union is thus seen as an intruder which seeks to mislead workmen and which operates against their best interests. Although these attitudes have been considerably moderated, the stress on the view that 'management must manage' remains stronger than elsewhere.

These attitudes of employers are not abstract beliefs but are part of day-to-day practice. The view that the owner of a plant knows best how to run it comes into particularly sharp conflict with the workers' desire for security. As we have seen, a large

part of this desire centres on control of the job; it is just this control which the employer is unwilling to yield. Thus we can explain such things as the determined destruction of nineteenth craft unions in terms of the employers' desire to re-establish control of the details of work operations. It might be suggested that, although this says something about American strike patterns, it does not explain why the conflict over job control has been particularly bitter. It is reasonable to suggest that part of the explanation lies in the greater stress in America than in Europe on the unlimited exercise of property rights. The lack of the traditions of more settled societies has meant that men have asserted their rights in an extreme form and been unwilling to accept limitations on these rights. To the extent that workers feel that they have property rights in their jobs, they are subject to the same feelings as employers.

This is admittedly a very general argument; we must avoid the problem which I raised in the discussion of Lipset of locating specific actions in very general societal values. I would suggest that values can be important, but that they must be related to structural features of society. In relation to industrial conflict, two features stand out. The first is the extreme form which capitalism has taken in America; it is the most 'advanced' capitalist country and profits are sought with greater determination than elsewhere. The advanced nature of American capitalism can be measured by such well-known features of the country as its high wage rate and living standards; the fact that capitalism is more unrestrained than in other countries is not in doubt. What is in doubt is the effect of this on industrial conflict. Being highly advanced does not in itself mean that there will be a high strike

rate; if it did, one would expect activity to increase in all countries and the strike-proneness of countries such as West Germany to be very high rather than very low. The advanced nature of American capitalism is important not in itself but because it is associated with a drive for profits and a 'hard line' by the employers; in other words, its effects are mediated through the party of the employers. The intensity of the profit motivation can be related, in turn, to the American value of individual achievement. It does not matter here whether the stress on achievement preceded capitalist developments; all that we need to establish is that there has been an interaction between capitalism and the value placed on achievement, with developments in the former increasing the stress on the latter.

One reason for the extreme form of American capitalism may be the absence of feudal and other traditions; capitalism was free to develop in a pure and unhindered form. While there is something in this argument, we must also consider an interesting inversion of it. Aronowitz argues that the genius of American capitalism lies precisely in the development of feudal traditions where none existed previously; such traditions were necessary to induce loyalty to the system from the working class, for without such loyalty the stability of the system would be extremely fragile.[57] Such values as 'Americanism' were created to replace the more traditional loyalties of the European worker. The importance of this argument here is that it gives a reason for the determination of American employers to establish control over their plants. They could not rely on traditional loyalties among the skilled men to moderate the discontents of these workers. Elsewhere, such loyalties helped to prevent the generalisation of work-based

discontents into political action,[58] but American capitalists were unable to rely on this. Since a crucial threat lay in the extent of job control exercised by skilled men in the nineteenth century, a prime aim was to destroy this control. Once the employer had asserted his own power over the workers in his plants, he could turn to the development of feelings of loyalty through welfare plans and the like. Thus, as we saw in detail in chapter five, strikes were concentrated on the discontents of the skilled men and were most frequent in the industries where workers retained a measure of job control.

I mentioned above that two structural features of American society need to be considered. In addition to the unrestricted nature of capitalism, there is the rapid rate of technical change which has characterised American industry. These two factors are not independent, of course, but technical change warrants discussion in its own right. Changes in the method of operation exert direct effects on the ability of workers to control their jobs. It was technical change which was the factor directly responsible for the destruction of craft skills at the end of the nineteenth century. New modes of operation also meant that mass-production industries could grow up without having to rely on craft skills; the automobile industry is the classic example. But the significance of technology is not limited to the ending of craft methods. Changes have been introduced throughout the twentieth century and have posed a continuing challenge to the power of workers and unions. The nature of the effect has changed, of course, but the source of the challenge is the same. Thus, as I noted in chapter seven, automation is the most recent manifestation of the threat posed by technical change; its role in several long and important strikes in

the 1960's seems clear.

We must now pause to consider what has been said about the forces acting on employers and workers, before bringing in the parties of the union leaders and the government. It might be argued that several of the factors I have mentioned operate in other countries, so that they cannot be cited as causes of America's unique strike patterns. It is true that such things as technical change have universal importance, but we must also consider the interaction between the factors mentioned above. Technical change is not significant in itself, but in its effects on the actions of employers and workers. Thus, it was useful to employers because it enabled them to establish control of their plants; this control was more important to them than to other employers because of the lack of traditional loyalties and because the drive for profit was more intense in America than elsewhere. The desire for profit reflects the advanced nature of capitalism and the effect of pre-existing values, which were adapted to the needs of an industrial society. I do not want to suggest that the factors which I have mentioned are the only ones which are important; for example, the profit drive has many sources. But the factors mentioned are among the most important and, in the explanation of industrial conflict, we can take some things as exogenous. Thus I have sought to show that the interaction of American values and more 'objective' factors can explain the attitudes of employers to their workers; in turn, these attitudes are part of the explanation of patterns of conflict.

From the workers' side, the general search for security is of central importance. It is true that this search is not confined to American workers, but again the interaction of several

forces makes the American case stand out. Thus the intensity of the employers' desire for control of their plants has meant that the job-related aspects of security have been under threat and that workers have had to give particular attention to them. Interacting with this have been the values of achievement and equality. The former means that workers have stressed material ends, so that those aspects of security not related directly to the job have not been ignored. The value of equality can be related to the workers' desire for status on and off the job; a feeling that he is as worthy of respect as anyone else will make him keen to establish himself securely. Thus the fight for security has been more intense than elsewhere.

The other aspect of the search for security concerns the form of protest actions. Because the worker concentrates on his own position and is uninterested in general social change, he is unwilling to engage in long-term collective movements. Collective action is restricted to matters directly related to the worker's own interests.[59] Thus, individual strikes can be lengthy battles and workers will be prepared to engage in continuing struggles when these reflect their immediate concerns; as we saw in chapter five, several fights for job control were long drawn-out affairs. But solidarity is limited to the immediate group. This does not mean that large national strikes cannot emerge, but that such strikes reflect the temporary alliance of separate groups of workers for a particular cause, with divisions between them becoming apparent with the end of the disputes.[60]

From this consideration of workers and employers, we already have an important reason for the concentration of American strikes on economic matters. Since the struggle for job control has been

particularly intense, there has been no room for wider concerns to enter. The limited solidarity of American workers has also meant that national political interests have not exerted an effect on strikes; workers have concentrated on more immediate matters. These forces have been assisted by developments in the trade unions and the polity. Unions have concentrated on economic struggles and, although this does not mean that they have lacked any concern with politics, this has helped to restrict strikes to economic demands.[61] Some of the reasons for the shunning of direct political involvement can be found in the structure of the political system. The division of power between Federal and State governments has limited the effectiveness of attempts to improve the workers' position through legislation. The courts have been able and willing to refuse to accept legislation on labour affairs which they have felt to be unconstitutional. And the two-party system has been able to respond to particular demands placed upon it; unions have thus felt that a policy of 'rewarding their friends and punishing their enemies' was preferable to attempts to form a third party and explicit allegiance to one existing party. For all these reasons, strikes have retained an economic focus.

It will be recalled that Shorter and Tilly attribute the failure of American strikes to change shape to the way in which labour has been given political power. In section two, I suggested that their formulation of this argument is unsatisfactory, but its more general significance must be considered here. It is true that labour has had political representation since the New Deal on an unprecedented scale and that the unions have developed an increasingly firm allegiance to the Democratic Party. But there is no reason to expect that these changes will affect the character of <u>strikes</u> and therefore

no problem to solve. The problem arises only when political factors are taken as the determining ones for the nature of industrial conflict. The struggle for job control has not been resolved in the years since 1945 and unions have not sought to use strikes for political ends; thus powerful forces for the limitations of strikes to economic demands are still at work. Although pressure on the Federal government is more feasible and more likely to be successful than in the past, it does not follow that strikes will become political demonstrations; crucial matters still have to be settled by economic means.

As we saw in section two, the structure of collective bargaining has been seen as the main reason for the importance of economic disputes in America: the content of bargaining ensures that there is a great deal to strike about, while the level of bargaining makes for long stoppages. This explanation provides some valuable insights, but does not explain why bargaining has taken its present form. From the preceding discussion, we can see that the desires of the parties to conflict ensured that, when the present bargaining structure was being worked out under the New Deal, it took its particular form. Workers and unions feared that taking the determination of wages and conditions away from collective bargaining would weaken their ability to gain improvements in their contracts; and, in any case, workers were concerned with shop floor matters which are not open to solution in the political arena. Employers were similarly unwilling to give up their rights over their plants; having to negotiate with a union directly was at least tolerable, but handing over the determination of conditions to political actors was unacceptable. And the government had enough difficulty in persuading the courts to accept the constitutionality

of its legislation without seeking to take over the determination of working conditions.

Thus it is not surprising that collective contracts have contained such a great deal. Current strike patterns can be related to the content of bargaining, but this does not explain everything about these patterns. The fact that there is a great deal to strike about does not necessarily mean that workers will choose to strike or that their stoppages will be long. We must also consider the views of workers, unions and employers. For the workers, not only are there many reasons for striking, but these are important for the achievement of particular ends. The contents of collective agreements are vital for the workers' security in many areas and thus there are good reasons to expect strikes over bargaining demands; in addition, of course, there are the job-related sources of discontent which cannot be dealt with through collective agreements. In other words, the content of bargaining does not cover the whole range of reasons why workers choose to strike. For the unions, bargaining provides the opportunity to retain their members' loyalty by obtaining improved terms. For the employers, strikes have to be resisted because they threaten profits and the control of the enterprise which they have developed.

As we have seen, Clegg attributes the length of American strikes to the prevalence of plant agreements. However, this is only one factor in the explanation, for it shows why unions can afford to hold long stoppages but not why they choose to do so. To complete the account, we must also consider other features of industrial conflict. The determination of employers to resist union demands means that strikes will not be settled as quickly as they are in other countries; that is, the long-standing opposition of employers to

challenges to their authority continues to exercise an influence on the length of strikes. This hostility encourages unions and workers to believe that employers are conducting a campaign to weaken or destroy union opposition; hence, strikes tend to be seen as crucial battles, which must not be lost, in a campaign which goes beyond the immediate issue in dispute. Thus each side influences the other to believe that much more is at stake than is immeidately apparent; the result is a determination not to give way. In countries where resistance to unionism has not been so intense or continuous, strikes are likely to be settled more rapidly, even when important economic matters are in dispute, because the parties can concentrate on the matter in hand.

I have argued in this section that strikes must be examined in terms of the interests of the parties to industrial conflict. When we focus on the parties, we can see that the explanation of American strike patterns lies in the interaction of several forces and not in any one structural factor such as the nature of collective bargaining. Thus the fight for control of the job between workers and employers led to an initial focus on issues directly related to the work place; this weakened the interest in political matters. The nature of the polity already discouraged political action and this interacted with the concentration on economic issues to make the use of strikes for political ends even less likely. Events during the New Deal period formalised this state of affairs; a collective agreement with management remained the main interest of the unions.[62] Hence, labour's political involvement since the Second World War has not disturbed existing patterns of collective action.

I have also suggested that certain conflicts of interest have exerted a continuing pressure towards overt conflict. This does not

mean that the nature of strikes has remained the same; there are obvious differences between modern bargaining disputes and earlier forms of protest. But we are concerned with the amount of conflict and not with its character. Conflicts of interest still develop into strikes even though the form of these strikes has changed. We can agree with the institutionalisation theory that institutions designed to control conflict have altered its character. But the form of institutionalisation adopted by America has not affected the amount of conflict.

American strike activity has always been high because of the intensity of the conflict between workers and employers for job control. This conflict reflects the determination of employers to run their plants as they see fit and the workers' search for security. Employers' attitudes have been influenced by American values of individualism and the advanced nature of American capitalism; also important in the early years was the need to build up the loyalty of workers to the firm. Workers have faced the challenge of technical change and have also been influenced by the value of individual achievement. In this environment, it is not surprising that strikes have had an economic focus, but this tendency has been strengthened by the attitudes of unions and the government. Unions have been able to survive only when they have stressed economic improvement for the workers. The initial development of this policy can be explained by the hostility of the American environment to unions and the workers' pre-existing concern with their immediate interests; but, after a time, the belief in business unionism developed a logic of its own and strengthened the focus on economic matters. When the government had to develop a formal labour policy the attitudes of unions and

employers pre-disposed it to institutionalise economic bargaining rather than take the determination of conditions into the political arena. Moreover, its own traditions of non-intervention in the details of bargains meant that it was unwilling to take on new functions.

The great length of American strikes is partly due to the failure of strikes to become political demonstrations, as Shorter and Tilly and Ross and Hartman suggest. But it is also due to the nature of economic battles, with much more being at stake than the ostensible issues. Neither side has been willing to admit defeat because of the fears of the consequences of doing so; again, this can be related to the employers' determination to uphold the 'right to manage' and the unions' desire to resist anything that might develop into a concerted attack from the employers. In accepting that it is proper for unions and employers to wage battles of economic strength, except in cases of 'national emergency', the government has helped to maintain this pattern of action. It remains to be seen whether the critique of collective bargaining which developed during the 1960's, to the effect that strikes are no longer genuine battles and that the parties directly involved must not be allowed to settle their differences at the expense of the public, will lead to attempts to reduce the length of strikes. But the tradition of holding long battles has become firmly established and it is unlikely that it can be reversed without fundamental changes in the pattern of industrial relations.

5. Conclusions

In this section, I shall consider the approach taken in chapters three to seven in the light of the discussion of the parties to industrial conflict. It might be thought that, in stressing the

roles of social actors, I am implicitly denying the relevance of the aggregate statistical analysis. However, the discussion of the parties to conflict has been of an ideal-typical kind and I have not attempted to explain patterns of conflict solely by reference to their attitudes; the approach through the parties has provided a useful model with which to consider American strikes and does not in itself deny the validity of the statistical analysis.

From the other side of the picture, the statistical approach does not deny the importance of actors' interpretations. It seeks to establish the external forces which affect strike activity and recognises that these forces have to be mediated by actors' perceptions. In this respect it is interesting to compare the findings of the analysis of intra-industry trends of activity (Tables 7-21 to 7-24) with those relating to aggregate trends. The association with economic variables is much weaker in the intra-industry case than it is in the aggregate. The implication is that, in the aggregate, the effects of particular mediating factors are cancelled out, whereas, within individual industries, they reduce the power of economic variables to influence strike activity.

Ingham has recently argued that we must give particular attention to the institutions which mediate economic influences. In comparing Sweden and Britain, he suggests that the Swedish institutions of industrial relations are able to control the impact of economic changes, whereas those in Britain are weaker and therefore the link between strikes and the economic climate is stronger.[63] The analysis of strikes given by economists is inadequate, says Ingham, because it is behaviouristic and ignores these mediating institutions. However, I would suggest, there is nothing wrong with a behaviouristic approach, as long as one is

aware of its limitations. It is perfectly valid to investigate whether strikes are associated with economic conditions and whether the character of the association has changed. The problem comes when economists attempt to rationalise their findings at the 'macro' level in terms of a micro-economic model of behaviour. As I suggested in chapter four, there is a large gap between the aggregate results and the conclusion that they fit some pre-existing model of behaviour. Although the more recent economists' approaches do not assume that strikes are, or should be, rational actions, they still see strikes as bargaining weapons and as very little more.[64]

On Ingham's point about the importance of mediating institutions, I shall merely point out that statistical analysis can take account of institutaional factors. In comparing different periods in chapter four, and in applying various models to inter-industry data in chapters five to seven, I was able to assess indirectly the effect of differing institutional arrangements. It is true that detailed studies of institutions may be required, but this does not invalidate a statistical approach; it can show the effects of economic and other parameters and cannot be rejected for its behaviourist bias. It provides a way of looking at strikes which is, as I hope previous chapters have shown, a very useful one.

There is nothing in the statistical approach which is opposed to an analysis of the parties to conflict, either in general or through case studies. It has the advantage of dealing with overall patterns of activity and establishing their causes. It does not deal directly with the 'fundamental' causes of strikes, but in many ways this is an advantage. There is the danger, in seeking to uncover the 'basic' discontents which lead workers to strike, of assuming that these are more important than other factors and that

the more proximate influences can be ignored. But discontent has to be made manifest and directed at a specific object before it can lead to a strike. And in studying strike patterns it is not very useful to know the 'deep' discontents of specific groups of workers. To deal with patterns and the way they change, we can use an aggregate statistical approach and take for granted the presence of fundamental discontents.

In conclusion, I must stress that the discussion of section four of this chapter cannot explain all the features of American strikes which I have noted in earlier chapters. However, it provides a framework within which several developments can be incorporated. For example, the rise in strike activity in the 1960's can be seen in terms of workers' fears for their security: not only was job security threatened by technical change but economic security was under challenge from inflation. In addition, unions responded to rank and file unrest by putting pressure on employers in collective bargaining. Employers, themselves under challenge from foreign competition and a slowing in the growth rate of the economy, reacted strongly.

Previous chapters have analysed the parameters of conflict at a very general level. As I have suggested at several points, this discussion needs to be supplemented by more detailed studies. For example, the findings relating to the concentration of strikes in 'disadvantaged' sectors can be extended and refined by taking samples of plants within certain key industries; similarly, the suggestion that cities on the edges of the main industrial areas may be particularly strike-prone requires detailed studies of these cities before it can be accepted.[65] But, at a more general level, I hope I have been able to show how patterns of strike activity in America have altered in the long term.

Notes:

1. Note the difficulties of measuring the extent of institutionalisation, which I discuss in the final section of chapter two. For the coal industry, we can take institutionalised periods as being those in which joint conferences operated over the majority of fields, and non-institutionalised periods as the times when these conferences broke down.
2. Note also that the rate of urbanisation, which is seen as particularly important by industrialisation argument, is not related to strike activity.
3. E. Shorter and C. Tilly Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974) esp. chap. 8.
4. The Presidential vote of the Socialist Party peaked in 1912. For various aspects of Socialism in America see J.H.M. Laslett Labor and the Left (Basic Books, N.Y., 1970); W.M. Dick Labor and Socialism in America: the Gompers era (Kennikat Press, Port Washington, N.Y., 1972); J. Weinstein The decline of Socialism in America, 1912-25 (Monthly Review Press, N.Y., 1967); D. Bell 'The background and development of Marxian Socialism in the United States' pp. 213-405 in D.D. Egbert & S. Persons (eds) Socialism and American life, Vol. 1 (Princeton Univ. Press, Princeton, N.J., 1952).
5. D. Snyder 'Institutional setting and industrial conflict: comparative analyses of France, Italy and the United States' Amer. Sociol. Rev., 40, pp. 259-78 (1975). See above, chapter four, section six.
6. Shorter & Tilly op.cit., esp. p. 329; A.M. Ross & P.T. Hartman Changing patterns of industrial conflict (Wiley, N.Y., 1960) pp. 161-69.
7. H.A. Clegg Trade unionism under collective bargaining: a theory based on comparisons of six countries (Blackwell, Oxford, 1976) pp. 8-10.
8. Ibid., p. 70.
9. Ibid., pp. 75-76, 79-80.
10. Ibid., pp. 29-39.
11. Shorter & Tilly op.cit., p. 193.
12. Ibid., pp. 329-30; quotation from p. 330.
13. To support the claim that 'before the Depression collective action was as much political as economic' (p. 329), Shorter and Tilly cite Laslett op.cit.; J.D. Greenstone Labor in American politics (Vintage Books edn., N.Y., 1970); and S.M. Lipset 'Trade unions and social structure' Ind. Rels, 1, no. 1, pp. 75-89 (1961) & 1, no. 2, pp. 89-110 (1962). But they do not show how these works support their own argument. It is one thing to suggest that the traditional view of American unions (that they are solely interested in economic matters) is overstated and another to imply that collective action was as much political as economic.

14. E.M. Kassalow Trade unions and industrial relations: an international comparison (Random House, N.Y., 1969) p. 136. See also D.C. Bok & J.T. Dunlop Labor and the American community (Simon & Schuster, N.Y., 1970) pp. 234-35; M. Derber 'Collective bargaining in Great Britain and the United States' Quart. Rev. of Econs & Business, 8, no. 4, pp. 55-66 (1968) esp. p. 62; J.W. Garbarino 'Managing conflict in industrial relations: United States experience and current issues in Britain' Brit. J. Ind. Rels, 7, pp. 317-35 (1969); P.F. Brissenden 'The settlement of labour disputes over interests in the United States' J. Ind. Rels, 6, pp. 20-35 (1964). The unique nature of American collective bargaining is also noted in several text books; see, for example, L.G. Reynolds Labor economics and labor relations (Prentice-Hall, Englewood Cliffs, N.J., 6th edn 1974) p. 360.

15. Lipset op.cit. esp. pp. 78-84. See also R.M. Williams American society: a sociological interpretation (A.A. Knopf, N.Y., 1951) pp. 185-90, 390-440.

16. B.M. Selekman Labor relations and human relations (McGraw-Hill, N.Y., 1947) p. 187; D.C. Miller & W.H. Form Industrial sociology (Harper & Row, N.Y., 2nd edn 1964) p. 420; D.V. Brown & C.A. Myers 'The changing industrial relations philosophy of American management' Ind. Rels Research Assoc. Proceedings of the 9th annual meeting, 1956 pp. 84-99; N.W. Chamberlain 'The philosophy of American management toward labor' pp. 171-84 in W. Haber (ed.) Labor in a changing America (Basic Books, N.Y., 1966). On strike-breaking see E. Levinson I break strikes: the technique of Pearl L. Bergoff (R.M. McBride & Co., N.Y., 1935).

17. See S. Fine Laissez-faire and the General-welfare State: a study of conflict in American thought, 1865-1901 (Univ. of Michigan Press, Ann Arbor, Mich., 1956); R. Bendix Work and authority in industry (Harper & Row, N.Y., 1963).

18. On corruption see H. Seidman Labor czars: a history of labor racketeering (Liveright Publishing Corp., N.Y., 1938); P. Taft Corruption and racketeering in the labor movement (New York State School of Ind. & Lab. Rels, Cornell Univ., Bulletin no. 38, 2nd edn 1970).

19. For Lipset's views on the importance of values in society as a whole see The first new nation (Heinemann, London, 1964).

20. The usual explanation for the decline of violence is that strikes have ceased to be battles over the survival of the union. Union recognition meant that employers had little to gain from trying to keep plants open. See P. Taft and P. Ross 'American labor violence: its causes, character and outcome' pp. 221-301 in H.D. Graham & T.R. Gurr (eds) Violence in America (U.S.G.P.O., Washington, D.C., 1969); J. Barbash Labor unions in action (Harper & Row, N.Y., 1948) pp. 134-37. For the view that strike violence is related to social values see J.A. Garraty The New Commonwealth, 1877-90 (Harper & Row, N.Y., 1968) p. 156.

21. J.W. Bloch 'The strike and discontent' Monthly Lab. Rev., 86, pp. 645-51 (1963).

22. B.M. Selekman 'Varieties of labor relations' pp. 386-408 in J. Shister (ed.) Readings in labor economics and industrial relations (J.B. Lippincott Co., Chicago, 2nd edn 1956). See also Selekman 'Cynicism and union relations' pp. 209-13 and R.M. McMurry 'War and peace in labor relations' pp. 197-202 in E.W. Bakke, C. Kerr & C.W. Anrod (eds) Unions, management and the public (Harcourt, Brace & Co., N.Y., 2nd edn 1960).

23. P. Seitz 'Changes in management's philosophy of industrial relations' Ind. Rels Research Assoc. Proceedings of the 9th annual meeting, 1956 pp. 100-08. On General Electric policy, known as Boulwarism, after its inventor Lemuel Boulware, see H.R. Northrup 'The case for Boulwarism' pp. 397-419 in R.A. Lester (ed.) Labor: readings on major issues (Random House, N.Y., 1965).

24. On the N.A.M. see A.K. Steigerwalt The National Association of Manufacturers, 1895-1914 (Bureau of Business Research, Univ. of Michigan, 1964); N.A.M. 'Declaration of principles, 1903' and 'Industrial relations policy, 1959' and D.M. Parry 'President's report to the N.A.M. 1903' respectively pp. 213, 214-15 and 187-90 in Bakke et.al. (eds) op.cit. On the N.C.F. see J. Weinstein The corporate ideal in the Liberal State, 1900-18 (Beacon Press, Boston, 1968); J. Zerzan 'Understanding the anti-radicalism of the National Civic Federation' Internat. Rev. of Soc. Hist., 19, pp. 194-210 (1974).

25. N.W. Chamberlain 'Collective bargaining in the private sector' pp. 19-26 in G.G. Somers (ed.) The next 25 years of industrial relations (Ind. Rels Research Assoc., Madison, Wisc., 1973) at p. 19.

26. N.W. Chamberlain 'The union challenge to management control' Ind. & Lab. Rels Rev., 16, pp. 184-92 (1963). See also S.H. Slichter, J.J. Healy & E.R. Livernash The impact of collective bargaining on management (Brookings Instit., Washington, D.C., 1960).

27. See A.J. Goldberg 'Management's reserved rights: a labor view' pp. 225-28 in Bakke et.al. (eds) op.cit.

28. S. Yellen American labor struggles (SA. Russell, N.Y., 1956; orig. publ. 1936) pp. xii-xiii. Note that Yellen also argues that the importance of private property and freedom of contract to the government, as well as employers, will mean that the government will become involved in strikes whenever property and contract seem to be under threat.

29. P. Taft 'Ideologies and industrial conflict' pp. 257-65 in A. Kornhauser, R. Dubin & A.M. Ross (eds) Industrial conflict (McGraw-Hill, N.Y., 1954) at p. 265. See also R. Dubin 'A theory of conflict and power in union-management relations' Ind. & Lab. Rels Rev., 13, pp. 501-18 (1960).

30. But note that agreeing to work with a union does not mean that an employer has granted it full legitimacy; he may still see it as an intruder and be unwilling to widen the boundaries of collective bargaining. See note 16, above.

31. See C.O. Gregory Labor and the law (W.W. Norton & Co., N.Y., 2nd edn 1958) pp. 184-91.

32. E.E. Witte The government in labor disputes (McGraw-Hill, N.Y., 1932) p. 6. See also note 28, above.

33. A. Lindsey The Pullman strike (Univ. of Chicago Press, Chicago, 1942) pp. 147-80, 274-75. Since railroad strikes most clearly threatened public order, it was here that Federal intervention was most obvious; see G.G. Eggert Railroad labor disputes: the beginnings of Federal strike policy (Univ. of Michigan Press, Ann Arbor, Mich., 1967).

34. See, for example, G. Adams Age of industrial violence, 1910-15 (Columbia Univ. Press, N.Y., 1966) and M. Derber The American idea of industrial democracy, 1865-1965 (Univ. of Illinois Press, Urbana, Ill., 1970) pp. 118-21 for consideration of the role of the Commission on Industrial Relations of 1913-15.

35. See A.M. Bing War-time strikes and their adjustment (E.P. Dutton & Co., N.Y., 1921); G.D. Nash 'Franklin D. Roosevelt and labor: the World War 1 origins of early New Deal policy' Labor Hist., 1, pp. 39-52 (1960).

36. National emergency disputes under the Labor Management Relations (Taft-Hartley) Act, 1947-65 (Dept. of Labor Bulletin no. 1482, U.S.G.P.O., Washington, D.C., 1966).

37. I. Bernstein & H.G. Lovell 'Are coal strikes national emergencies?' Ind. & Lab. Rels Rev., 6, pp. 352-67 (1953); 'Impact of longshore strikes on the national economy' Monthly Lab. Rev., 93, no. 3, pp. 51-53 (1970). See also I. Bernstein, H.L. Enarson & R.W. Fleming (eds) Emergency disputes and national policy (Harper & Bros., N.Y., 1955); H.R. Northrup Compulsory arbitration and government intervention in labor disputes (Labor Policy Assoc., Washington, D.C., 1966).

38. This was particularly clear in the case of steel during the immediate post-war period and of longshoring throughout the years since 1945. See F.H. Harbison & R.C. Spencer 'The politics of collective bargaining; the postwar record in steel' Amer. Pol. Sci. Rev., 48, pp. 705-20 (1954); B.J. Bernstein 'The Truman Administration and the steel strike of 1946' J. Amer. Hist., 52, pp. 791-803 (1966); V.H. Jensen Strife on the waterfront: the port of New York since 1945 (Cornell Univ. Press, Ithaca, N.Y., 1974) esp. pp. 439-46.

39. 'Labor month in review' Monthly Lab. Rev., 93, no. 4 (1970) p.2

40. 'Developments in industrial relations' Monthly Lab. Rev., 93, no. 5 (1970) pp. 77-78.

41. See M. Cimini 'Government intervention in railroad disputes' Monthly Lab. Rev., 94, no. 12 (1971) pp. 27-34; P. Arnow 'Findings of the Presidential Railroad Commission' Ind. Rels Research Assoc., Proceedings of the Spring Meeting, 1963 (reprinted in Lab. Law J., Aug. 1963) pp. 677-85; B.M. Burgoon 'The railway industry' Ind. Rels Research Assoc., Proceedings of the Spring Meeting, 1970 (Lab. Law J., Aug. 1970) pp. 491-98

42. See R. Dahrendorf Class and class conflict in industrial society (Routledge & Kegan Paul, London, 1959) pp. 267-72. Cf. above p. 61.

43. See 'Work stoppages in 1952' Monthly Lab. Rev., 76, pp. 506-07 (1953); National emergency disputes...., op.cit., pp. 31-33.

44. N.W. Chamberlain Social responsibility and strikes (Harper & Bros., N.Y., 1953) p. 25.

45. Ibid., pp. 146-249; see also N.W. Chamberlain & J.M. Schilling The impact of strikes (Harper & Bros., N.Y., 1954). On the numerous attempts by firms in industries particularly susceptible to whip-sawing, such as railroads and airlines, to strengthen themselves with strike insurance plans see H. Foster 'Employers' strike insurance' Labor Hist., 12, pp. 483-529 (1971) V.M. Briggs 'The strike insurance plan of the railroad industry' Ind. Rels, 6, pp. 205-12 (1967); S.H. Unterberger & E.C. Koziara 'Airline strike insurance: a study in escalation' Ind. & Lab. Rels Rev., 29, pp. 26-45 (1975).

46. M. Dubofsky When workers organize: New York City in the Progressive Era (Univ. of Massachusetts Press, Amherst, Mass., 1968) esp. pp. 103-25, 148-50. See also J.J. McGinley Labor relations in the New York Rapid Transit Systems, 1904-44 (King's Crown Press, Columbia Univ., N.Y., 1949).

47. This was particularly true of coal strikes. For the effects of strikes in the relatively small anthracite fields see R.J. Cornell The anthracite coal strike of 1902 (Catholic Univ. of America Press, Washington, D.C., 1957); H.K. Kanarek 'The Pennsylvania anthracite strike of 1922' Pennsylvania Magazine of Hist. & Biog., 99,pp. 207-25 (1975).

48. For examples from the steel industry see the Supplementary Reports of the Investigators of the Interchurch World Movement Public opinion and the steel strike (Harcourt, Brace & Co., N.Y., 1921), relating to the 1919 strike; and, for the 1937 strikes, D.G. Sofchalk 'The Chicago Memoraial Day incident: an episode in mass action' Labor Hist., 6, pp. 3-43 (1965).

49. For discussion of the low rate of strike activity in the 1920's see Witte op.cit., p. 5; H.M. Douty 'The trend of industrial disputes, 1922-1930' J. Amer. Statistical Assoc., 27, pp. 168-72 (1932); A. Bimba The history of the American working class (Martin Lawrence, London, 2nd edn 1934) p. 293. For the difference between American trends and those elsewhere see K. Forchheimer 'Some international aspects of the strike movement' Bull. of the Oxford Univ. Instit. of Stats, 10, pp. 9-24 & 294-304 (1948); at p. 13 Forchheimer notes that international forces accounted for the rise in activity which occurred in most countries during the 1920's.

50. Shorter & Tilly op.cit., e.g. pp. 328-30.

51. Marcuse One dimensional man (Abacus edn, London, 1972) p. 53.

52. D. Montgomery 'Workers' control of machine production in the nineteenth century' Labor. Hist., 17, pp. 485-509 (1976) esp. pp. 496-500; Montgomery 'The "New Unionism" and the transformation of workers' consciousness in America, 1909-22' J. Social Hist., 7, pp. 509-29 (1974) esp. pp. 511-16; B. Palmer 'Class, conception and conflict: the thrust for efficiency, managerial views of labor and the working class rebellion, 1903-22' Rev. of Radical Pol. Econs, 7, no. 2, pp. 31-49 (1975) pp. 41-42.

53. R. Herding Job control and union structure (Rotterdam Univ. Press, Rotterdam, 1972) esp. pp. 2, 17.

54. See W. Sombart Why is there no Socialism in the United States? (Macmillan, London, 1976; orig. publ. 1906); W. Galenson 'Why the American labor movement is not Socialist' Univ. of California at Berkeley Inst. of Ind. Rels Reprint no. 168 (1961); S. Aronowitz False promises (McGraw-Hill, N.Y., 1973) pp. 136-208; and refs in note 4.

55. D. Bell 'The workers' search for security' Monthly Lab. Rev., 86, pp. 614-17 (1963) at p. 614.

56. See C.C. Killingsworth 'Co-operative approaches to problems of technological change' pp. 61-94 in G.G. Somers et.al. (eds) Adjusting to technological change (Harper & Row, N.Y., 1963) at pp. 71-77; S. Lynd 'Two steel contracts' Radical America, 5, no. 5, pp. 41-62 (1971); 'The steel study: summary and conclusions' Monthly Lab. Rev., 84, pp. 113-21 (1961).

57. Aronowitz op.cit., p. 183.

58. See, for example, G.V. Rimlinger 'The legitimation of protest: a comparative study in labor history' Compar. Studs in Soc. & Hist., 2, pp. 329-43 (1960); R. Moore Pit-men, preachers and politics (Cambridge Univ. Press, Cambridge, 1974).

59. Note that Wiebe has recently produced an account of social values which is consistent with the stress here on the limitation of solidarity to the immediate group. He argues that America is a 'segmented society' in which social integration has been possible only through the recognition of the interests of each segment; these interests have always been given primary emphasis. See R.H. Wiebe The segmented society: an introduction to the meaning of America (Oxford Univ. Press, N.Y., 1975) esp. pp. 42-46, 90-91.

60. Examples of skilled-unskilled and native-immigrant co-operation are to be found in the coal and steel industries; see chapter five, above. For united white-Negro action see R.W. Shugg 'The New Orleans general strike of 1892' Louisiana Hist. Quart., 21, pp. 547-60 (1938); but cf. H.B. Hammett 'Labor and race: the Georgia railroad strike of 1909' Labor Hist., 16, pp. 470-84 (1975); C. Wollenberg 'Working on El Traque: the Pacific Electric strike of 1903' Pacific Hist. Rev., 42, pp. 358-69 (1973).

61. I do not deny that the unions' political interests have, at times, been considerable, Particularly at the State level, there has been consistent involvement: see I. Yellowitz Labor and the Progressive Movement in New York State, 1897-1916 (Cornell Univ. Press, Ithaca, N.Y., 1965); P. Taft Labor politics American style: the California State Federation of Labor (Harvard Univ. Press, Cambridge, Mass., 1968); K.L. Bryant 'Labor in politics: the Oklahoma State Federation of Labor during the age of reform' Labor Hist., 11, pp. 259-76 (1970). However, this interest has not, in general, been such that strikes have been used for 'political' ends. They have certainly had political consequences, but their causes may be sought in non-political matters.

62. On the importance of formal collective agreements in America see B.L. Adell The legal status of collective agreements in England, the United States and Canada (Industrial Relations Centre, Queen's Univ., Kingston, Ontario, 1970) esp. pp. 59-70, 234. It is interesting that Adell attributes American unions' willingness to use legal procedures to the recognition that they owe much of their present strength to the law. Since the Wagner Act stressed above all the importance of collective bargaining, we have the interesting paradox that political involvement in labour relations served to strengthen the parties' concentration on economic matters.

63. G.K. Ingham Strikes and industrial conflict: Britain and Scandinavia (Macmillan, London, 1974) pp. 35-37.

64. For general criticisms of the assumptions of economics see R. Hyman & I. Brough Social values and industrial relations (Blackwell, Oxford, 1975) esp. chap. 7; H. Albert 'The neglect of sociology in economic science' pp. 21-35 in K.W. Rothschild (ed.) Power in economics (Penguin, Harmondsworth, 1971); E. Nell 'Economics: the revival of political economy' pp. 76-95 in R. Blackburn (ed.) Ideology in social science (Fontana, London, 1972).

65. See, respectively, the discussions at the ends of section five and section six of chapter seven.

APPENDIX ONE

SOURCES AND METHODS

Section A of this Appendix lists the sources of data not specifically acknowledged. It also indicates the methods I have used in estimating consistent series. It is not possible to detail every case in which two or more pieces of information have been used together to create one long-run series. In general, where information on a series is not available for the whole period with which I am concerned, I have linked together two series in the conventional fashion; that is, where the series overlap, one has been estimated in terms of the other and these estimates used to put the series on a consistent basis.

Section B gives details of the industrial classification employed, while section C briefly considers the nature of the employment data I have used. Section D outlines the strike indices employed.

A. Sources of data

In this section, I list the sources of all data which are not mentioned specifically in footnotes. Pieces of information are listed according to the order in which they first appear in the text; table numbers are also used for ease of reference. Abbreviations used in this section are:

Hist. Stats — Historical statistics of the United States, Colonial times to 1957 (U.S. Bureau of the Census, Washington, D.C., 1960).

Stats Abstr. — Statistical abstract of the United States (U.S. Bureau of the Census, Washington, D.C., annual).

1. Annual strike data. 1881-1905: Annual reports of the Commissioner of Labor (U.S.G.P.O., Washington, D.C.):

Third report,	1887	Published 1888
Tenth	1894	1896
Sixteenth	1901	1901
Twenty-first	1906	1907

1906-15: J.I. Griffin Strikes: a study in quantitative economics Columbia Univ. Press, N.Y., 1939) pp. 38, 43.

1916-36: F. Peterson Strikes in the United States, 1880-1936 (Dept. of Labor Bulletin, no. 651, Washington, D.C., 1938); annual article on 'Strikes and lockouts' or 'Work stoppages' in Monthly Lab. Rev., usually May or June number.

1937-58: Annual article in Monthly Lab. Rev.; reports in Stats Abstr.

1959-72: Annual Dept. of Labor bulletins Analysis of work stoppages:

Bull. No.	For year	Published	Bull.	Year	Publ.
1278	1959	1960	1573	1966	1968
1302	1960	1961	1611	1967	1969
1339	1961	1962	1646	1968	1970
1381	1962	1963	1687	1969	1971
1420	1963	1964	1727	1970	1972
1460	1964	1965	1777	1971	1973
1525	1965	1966	1813	1972	1974

2. Employment. Unless otherwise stated, figures for employment are for civilian non-agricultural employment (see Section C, below):

1881-96: Data in Griffin op.cit., p. 61 on total gainful employment, multiplied by the proportion of non-agricultural employment in the total in 1897-1900. These estimates show a very similar trend to those in J.G. Williamson Late nineteenth century American development (Cambridge Univ. Press, Cambridge, 1974)

1897-1920: Calculated from figures in L. Troy Trade union membership, 1897-1962 (National Bureau of Economic Research, N.Y., 1965) p. 2, giving union membership as a % of non agricultural employment.

1921-72: B.L.S. figures given in Hist. Stats p. 73 and Stats Abstr.

3. Union membership. 1881-96: Griffin op.cit., p. 107.

1897-1930: Troy loc.cit. Note that all figures up to 1930 include Canadian members of American unions.

1931-72: B.L.S. figures in Hist. Stats p. 98 and Stats Abstr.

4. Employment by industry. (Chart A-1). 1881-1905: calculated from Census of Manufactures data for 1880, 1890 and 1900, given in Stats Abstr. (1903 edn) pp. 511-26. For non-manufacturing data are from S. Lebergott Manpower in economic growth: the American record since 1800 (McGraw-Hill, N.Y., 1964) pp. 510-512. I have also used S. Fabricant Employment in manufacturing, 1899-1939 (National Bureau of Economic Research, N.Y., 1942) as a check on the estimates for manufacturing industry. See also section B of this Appendix, for a description of the industrial classification which I have constructed.

1907-26: for the coal industry, Lebergott loc.cit.

1927-72: To 1939, biennial Census data given in Stats Abstr., intervening years estimated by interpolation. From 1939, annual data in Stats Abstr. For non-manufacturing, data on gainfully employed workers in Hist. Stats p. 73 and Stats Abstr.

5. Strike data by industry. (Chart A-1). As specified in section A-1, above, except:

Clothing, 1906-13: Griffin op.cit., p. 166 gives figures for strikes in the New York industry. National figures are estimated on the assumption that the percentage rise from 1901-05 in New York was repeated nationally. This seems reasonable in view of the heavy concentration of the industry in New York: as late as the 1930's 75% of the industry was located in New York State. See H. Harris American labor (Yale Univ. Press, New Haven, Conn., 1939) p. 220.

Coal, 1906-26: In the years in which the B.L.S. did not collect strike data, the U.S. Geological Survey reported on coal strikes . Their data are given in the Stats Abstr., see especially 1921 edn (p. 348) 1930 edn (p. 715), 1936 edn (p.718) These reports also distinguish between the anthracite and bituminous sections of the industry.

6. Population and employment by region. Population: Hist. Stats pp. 12-13 and Stats Abstr.

Employment: Stats Abstr.

7. Unemployment. 1881-99: Williamson Late nineteenth century American development p. 304, corrected to be consistent with B.L.S. figures.

1900-72: B.L.S. figures, given in Hist. Stats p. 73 and Stats Abstr. The peak and trough series and the periods of the business cycle (Table 4-3) are derived from the unemployment data.

8. Wages. Annual earnings: Hist. Stats pp. 91-92, 95 and Stats Abstr. Hourly earnings: 1890-1957 H.G. Lewis Unionism and relative wages in the United States (Univ. of Chicago Press, Chicago, 1963) pp. 75-76; see also figures given by A. Rees in E.W. Bakke, C. Kerr & C.W. Anrod (eds) Unions, management and the public (Harcourt, Brace & Co., N.Y., 2nd edn 1960) pp. 526-27. Hourly earnings: 1958-72 B.L.S. figures in Stats Abstr.

9. Consumer Price Index. 1890-1926: Rees in Bakke et.al. (eds) loc.cit. 1927-57: Hist Stats p. 125.

1958-72: Stats Abstr.

Series with different base years have been linked to give a consistent series with 1947-49 set at 100.

10. Productivity. J.W. Kendrick Productivity trends in the United States (N.B.E.R., Princeton Univ. Press, Princeton, N.J., 1961) Table A-22; Kendrick Postwar productivity trends in the United States, 1948-69 (N.B.E.R., N.Y., 1973) Table A-19.

11. Quarterly data, 1962-72. All figures compiled from monthly B.L.S. data given in Monthly Lab. Rev. Figures for wages and employment do not give a consistent series because they are revised by the B.L.S. to new bench-marks. I have tried to cope with this by linking several series together.

12. Quarterly data, 1919-41. All series from Monthly Lab. Rev. Figures for wages obtained by dividing a payroll index by an employment index.

13. Political variables. Presidential Party and % of Congress Democrat from Hist. Stats, pp. 682-83, 691 and Stats Abstr. Note that the '% Democrat' figure is calculated as the proportion of the total number of seats held by Democrats and Repulicans, third parties being excluded.

14. Industrial employment as % total. (Table 5-2). Williamson op.cit. p. 295.

15. Immigration. Hist. Stats pp. 56-57, 60-61.

16. Employment by industry, 1881-1905. Census data, see section A-4 above. Note that for several categories the information is incomplete, so estimates have been made by interpolation or by assuming that the proportionate change in the figures for parts of an industry where data are not available was the same as in the figures for the parts for which we have data.

The strike data are for four sub-periods: 1881-86, 1887-94, 1894-1900 and 1901-05. The employment data for 1880, 1890 and 1900 have thus been adjusted by interpolation to give figures for employment in the year before the start of each period: i.e. 1880, 1886, 1893 and 1900.

17. Establishments, capital and wages, by industry. Census data: see section A-4 above. From these I have calculated figures for establishment size, capital per head, wages per head etc.

18. Ratio of hand to machine cost. (Table 5-16) Thirteenth Annual report of the Commissioner of Labor, 1898 (U.S.G.P.O., Washington, D.C., 1899) on 'Hand and Machine Labor'.

19. Union members by industry. (Table 5-17) L. Wolman The growth of American trade unions, 1880-1923 (N.B.E.R., N.Y., 1924), Appendix.

20. Horse power employed. (Table 5-18) H.U. Faulkner The decline of laissez faire, 1897-1917 (Rinehart & Co., N.Y., 1951) p. 119.

21. Regional data, 1881-1905. (Tables 5-21 and 5-23) No. of establishments: Census data in Stats Abstr. (1903) pp. 527-29. Employment: Calculated from figures in Faulkner op.cit., p. 136. Wage level: Census data.

    % Democrat: Popular vote for President in 1900 and 1904, from Hist. Stats p. 687.

    % urban: R. Higgs The transformation of the American economy, 1865-1914 (Wiley, N.Y., 1971) p. 63.

22. Employer well-being, 1930-41. (Table 6-5) Productivity: Kendrick, see section A-10 above. Profits: Profit rate, at book value after tax: G.J. Stigler Capital and rates of return in manufacturing industries (N.B.E.R., Princeton Univ. Press, Princeton, N.J., 1963) errata statement, p. 8. Wholesale Price Index: Hist. Stats p. 116.

23. Tables 6-6 to 6-9: Strike data from annual articles in Monthly Lab. Rev. Employment data from Stats Abstr.: see section A-4, above.

24. Tables 6-11 to 6-13: Establishment, value added, wage and horse-power data from Stats Abstr. Union membership: R.R.R. Brooks When labor organizes (Yale Univ. Press, New Haven, Conn., 1937) p. 342. Profits: Stigler op.cit., p. 95 and errata statement pp. 4-5. Unemployment: D.L. Kaplan 'Unemployment by industry'

pp. 281-323 in National Bureau of Economic research The measurement and behavior of unemployment (Princeton Univ. Press, Princeton, N.J., 1957) at pp. 316-20.

25. State and industry model. (Table 6-14). Strike data from Peterson Strikes in the United States, Table 33. Employment data: Employment and earnings, States and areas, 1939-69 (Dept. of Labor Bulletin 1370-7, Washington, D.C., 1970). This gives figures for 1947; their use may bias the estimated for strike frequency for 1927-36, but 1947 is the earliest data for which adequate figures exist. The bias is probably not too serious.

26. City population and employment. (Tables 6-15 & 6-16). Population characteristics from Stats Abstr. (1932). Employment: 1947 from Bulletin 1370-7; 1937 from Stats Abstr. (1944-45), with estimates for cities not mentioned.

27. N.L.R.B. cases. (Table A-18). Handbook of labor statistics, 1968 (Dept. of Labor Bulletin 1600, Washington, D.C., 1968) pp. 318-19.

28. Trend of large strikes. (Table 7-1). Bulletin 1813, p. 11; see section A-1, above.

29. Employer well-being, 1948-72. Productivity: Kendrick, see section A-10, above; and B.L.S. figures, reported in Stats Abstr., corrected to be consistent with Kendrick. Profits Stigler op.cit., errata statement p. 8; B.L.S. figures since 1961 corrected to be consistent with Stigler (reported in Stats Abstr.). Wholesale Price Index: Hist. Stats p. 116 and Stats Abstr.

30. Industry characteristics, 1955-69. (Tables 7-13 et seqq). Figures of wages, union membership, employment and number of establishments for 1960 from Stats Abstr. Concentration ratio: Figures for 1954 from H.J. Sherman Profits in the United States (Cornell Univ. Press, Ithaca, N.Y., 1968) p. 85. Agreements with strike bans: Calculated from Major collective bargaining agreements: arbitration procedures (Dept. of Labor Bulletin 1425-6, Washington, 1966) pp. 7, 84. Bargaining structure: Handbook of labor statistics op.cit., p. 316. Production: non-production workers; G.E. Delehanty Nonproduction workers in U.S. manufacturing (North-Holland, Amsterdam, 1968) Table A-4. Technology and rank scores: P.S. Florence Economics and sociology of industry (C.A. Watts, London, 2nd edn 1969) pp. 268-69.

31. Collective bargaining coverage: F. Peterson American labor unions (Harper & Row, N.Y., 2nd edn 1963) p. 150.

32. Coal industry, 1908-56. (Table 7-21). Days worked: H. Barger & S.H. Schurr The mining industries, 1899-1939 (N.B.E.R., N.Y., 1939) p. 346; Hist. Stats pp. 356-59. Employment and earnings: Lewis Unionism and relative wages pp. 75-76. Coal mechanically cut: Barger & Schurr op.cit., p. 174. Union members: L. Wolman Ebb and flow in trade unionism (N.B.E.R, N.Y., 1936) Appendix. Production: Hist. Stats pp. 356-59.

33. Wages by industry. (Table 7-24). Figures for hourly earnings of production workers, given in Stats Abstr.

34. Regional characteristics. (Table 7-25) Figures for employment, unemployment, union members, value added and number of establishments from Stats Abstr. (1962). Index of legal attitudes from B.D. Mabry Labor relations and collective bargaining (Ronald Press Co., N.Y., 1966) p. 148.

35. Additional note. It has been necessary in several cases to estimate one or two figures which are missing from a series. It is not practicable to list every example of this. Neither is it possible to list detailed references to series which have been taken from long runs of the Stats Abstr. But the above sections should provide a reasonable guide to the sources I have used to build up the data used in the analysis.

B. The industrial classification used

I have been concerned with broad changes in the industrial parameters of conflict and thus, for reasons of comparability, I have used fairly broad industrial groupings. Thus for the most recent period I have not gone beyond the general 'two-digit' classification of the recording agencies. But, since data on strikes and several relevant characteristics are published for more detailed breakdowns, it would be possible, given the time and resources, to study the industrial distribution of activity at a much more detailed level. This task is yet to be undertaken.

Recent industrial classifications differ from those used in the 1930's, but the differences are not generally serious. I have thus been able to establish reasonably consistent classifications. The difficulties are greater for the end of the nineteenth century, but it has been possible to amalgamate industrial groups into fairly homogeneous categories. I list below the categories I have used

and the detailed industries from which they were derived. It will be remembered that the Commissioner of Labor used one classification from 1886 to 1900 (referred to here as the '1886' one) and a new one in 1906.

Category	1886 classification	1906 classification
Boot and shoe	Boot and shoe	Boot and shoe
Brewing	Brewing	Brewing
Brick	Brick and tile	Brick and tile
Building	Building	Building
Clothing	Clothing	Clothing, gloves, hats and hoisery, millinery
Coal	Coal and coke	Coal and coke, mining
Cooperage	Cooperage	Cooperage
Food	Food	Bakery, canning, confectionary, flour milling, slaughtering and meat packing
Glass	Glass	Glass
Leather	Leather	Harness, leather
Lumber	Lumber	Lumber, planing mill prods
Machinery	Agric. implements, machinery	Agric. implements, gas & electric apparatus, foundry prods.
Metals: Tin and steel	-	Iron & steel, tin & sheet metal
Stove and furnace	-	Stove & furnace
Other	-	Blacksmith, brass, cutlery, hardware, ironware & jewellery, metal goods, smelting
Printing & publishing	Printing & publishing	Lithography, printing and publishing
Public ways and works	Public ways, public works	As 188
Rubber	Rubber	Rubber

Category	1886 classification	1906 classification
Stone and clay	Pottery and stone	Lime & cement, pottery, stone
Tobacco	Tobacco	Tobacco
Transport: railroad	-	Railroad
other	-	Street railway, telegraphy, water transport

Note: In 1886 all metals industries were given together, as were all transport and communication industries.

The above listing does not include every sub-category used by the Commissioner; for example, men's and women's clothing were listed separately and the total number of categories used in 1906 ran to over seventy. But the above list indicates how the industrial classification used in chapter five was derived.

C. Employment data

As I mention in section A on sources, above, figures for employment in the time-series analysis are for civilian non-agricultural employment. Other series could, of course, be used, but this gives data which are most meaningful when strikes are considered; it is usual to exclude employment in agriculture because of the special conditions there.

For individual industries, I have used wherever possible figures for the employment of production workers (i.e. those directly engaged in production). For non-manufacturing it is necessary to rely on the number of people gainfully employed; this tends to bias employment figures upwards, when compared with manufacturing, and thus calculations of strike rates are biased downwards. It is hard to assess the extent of this effect because the meaning of being a production worker differs between manufacturing and non-manufact-

uring, which is why data on the number of production workers in non-manufacturing are not available in the first place. But the effect is unlikely to destroy the comparability of the figures since the great majority of workers are engaged in production directly. For the years 1881-1905 I have used figures for the number of 'wage earners' in each industry, which are the closest approximation to the later series on 'production workers'.

D. Strike indices

Section one of chapter three gives a brief introduction to the most commonly used strike indices. Not only do different writers use different indices, but they also call them by different names: for example, the 'extensity' and 'intensity' of Britt and Galle. It is preferable to use fairly simple indices unless there is any good reason to do otherwise. Thus, in relation to the three basic measures of the number of strikes (N), the number of workers involved (W) and the number of 'days lost' (D), I employ three measures throughout this study. These are the size of strikes (W/N), the number of days lost per striker (D/W) and, less frequently, the loss per strike (D/N). All these have a fairly straightforward meaning. For measures relative to the size of the work force, we must introduce the number of non-agricultural employees (E). This gives us strike frequency (N/E), worker involvement (W/E) and strike volume (D/E). These terms are used throughout the discussion. (Note that I also use the symbol E for employment within a given industry, so that the meaning of such terms as 'strike frequency' is the same as in the discussion of the aggregate data.)

In discussing the overall 'shape' of strikes (see chapter three, section three) I follow the method of Shorter and Tilly

rather than that of Knowles (cf. Shorter and Tilly Strikes in France, pp. 46-56, Knowles Strikes pp. 152-53). We need a meaningful measure of strike volume which Knowles' identity-statement does not give. In its form as given by Knowles the statement is:

$$D \equiv N \times \frac{W}{N} \times \frac{D}{W}$$

Clearly, this can be made into an expression for strike volume by dividing each side by employment, E:

$$\frac{D}{E} \equiv \frac{N}{E} \times \frac{W}{N} \times \frac{D}{W}$$

Although this expresses volume in terms of the two important elements of strike frequency and size, the value of the third element, D/W, is less clear. As I mention in chapter three (see note 5 to the chapter), D/W is not an unbiased estimate of strike duration. I have preferred to use direct measures of duration, since these relate to the length of the average strike and not to the number of days lost per striker. The latter measure, although having some value, is heavily affected by the largest disputes; more important is the trend in the duration of the average strike, since this indicates the speed of settlement of disputes, which is, in turn, of particular interest to the institutionalisation theory. In addition, of course, data on the number of days lost in strikes are not available for the period before 1927. Thus, for the analysis of long-term trends, it is preferable to concentrate on mean duration.

APPENDIX TWO:

ADDITIONAL TABLES

This Appendix contains Tables A-1 to A-25. The order of the Tables is determined by the order in which they are mentioned in the text, with the exception of Table A-25, which is of methodological rather than substantive importance and which, therefore, follows the other Tables. The Tables are followed by Chart A-1, which shows the long-term trend of worker involvement in strikes for nine industry groups.

Table A-I: Strike indices, I88I-I973.

	W/N (no.)	D/N ('000's)	D/W (no.)	W/T (x I000)	D/T (no.)	N/E (x Im.)	W/E (x I000)	D/E (no.)
I88I-85	334			II50		58.3	I9.5	
I886-89	287			580		I25	35.7	
I890-93	I92			822		I4I	27.0	
I894-97	365			I230		97.3	35.5	
I898-I90I	235			588		I39	32.6	
I902-05	205			3I9		I68	34.5	
I906-08	II7			I79		I62	I9.0	
I909-II	I98			254		I35	26.7	
I9I2-I5	270			336		I44	38.9	
I9I6-I8	35I			437		I53	53.5	
I9I9-22	79I			463		I02	80.4	
I923-26	422			I53		45.I	I9.0	
I927-29	38I	I9.8	4I.8	89.I	4.22	24.7	I0.3	0.489
I930-33	506	9.43	I8.6	I67	3.II	38.9	I9.7	0.367
I934-37	485	7.I8	I4.8	3I6	4.68	96.3	46.7	0.69I
I938-4I	394	4.66	II.8	I74	2.05	95.5	37.6	0.445
I942-45	5I2	3.92	7.67	I85	I.42	I0I	5I.4	0.394
I946-49	748	I5.0	20.0	2I4	4.28	9I.0	68.2	I.36
I950-53	534	7.54	I4.I	I74	2.45	I03	55.0	0.777
I954-57	489	6.57	I3.4	II5	I.55	74.3	36.4	0.490
I958-6I	476	9.82	I9.I	I09	2.08	66.I	3I.5	0.602
I962-65	367	8.7I	I5.I	79.7	I.20	62.9	23.I	0.349
I966-69	504	9.58	I6.0	I34	2.I4	73.6	37.2	0.594
I970-73	497	7.97	I6.0	I35	2.I7	68.4	34.0	0.545

Table A-2: Strike indices I88I-I973 (I927-29: I00)

	W/N	D/N	D/W	W/T	D/T	N/E	W/E	D/E
I88I-85	87.7			I29I		236	I89	
I886-89	75.3			65I		506	347	
I890-93	50.4			923		57I	262	
I894-97	95.8			I380		394	345	
I898-I90I	6I.7			660		563	3I7	
I902-05	53.8			358		680	335	
I906-08	30.7			20I		656	I84	
I909-II	52.0			285		547	259	
I9I2-I5	70.9			377		583	378	
I9I6-I8	92.I			490		6I9	520	
I9I9-22	208			520		4I3	78I	
I923-26	III			I72		I83	I85	
I927-29	I00	I00	I00	I00	I00	I00	I00	I00
I930-33	I33	47.6	44.5	I87	73.7	I58	I9I	75.I
I934-37	I27	36.3	35.4	355	III	390	453	I4I
I938-4I	I03	23.5	28.2	I95	48.6	387	365	9I.0
I942-45	I34	I9.8	I8.4	208	33.7	409	499	80.6
I946-49	I96	75.8	47.8	240	I0I	368	622	278
I950-53	I40	38.I	33.7	I95	58.I	4I7	534	I59
I954-57	I28	33.2	32.I	I29	36.7	30I	353	I00
I958-6I	I25	49.6	45.7	I22	49.3	268	306	I23
I962-65	96.3	44.0	36.I	89.5	28.4	255	224	7I.4
I966-69	I32	48.4	38.3	I50	50.7	298	36I	I2I
I970-73	I30	40.3	38.3	I52	5I.4	277	330	III

Table A-3: Trade union involvement in strikes, 1916-72.

a. % of strikes with given association with a union.

	Connected with union		Not connected with union		Organised after strike begun		Union and non-union members	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1916-18	85.5	58.4	12.8	8.8	1.9	1.3	-	-
1919-22	94.5	70.4	4.8	3.6	0.6	0.5	-	-
1923-26	88.1	81.3	8.1	7.4	1.4	1.3	2.4	2.2

Column (1): as % strikes where association with union reported.
(2): as % all strikes.

	A.F.L.	C.I.O.	Other union	No union
1927-29	68.5		19.2	12.4
1930-33	59.2		22.9	17.9
1934-36	79.5		12.7	7.8
1937-41	52.4	35.3	8.7	3.5
1942-45	39.4	38.0	18.1	4.5
1946-49	52.0	30.3	16.0	1.8
1950-55	51.5	27.2	20.0	1.1

	A.F.L.-C.I.O.	Other union	Different affiliations	No union
1961-63	75.2	22.5	1.3	1.0
1964-66	77.2	20.3	1.4	1.2
1967-69	69.4	27.6	1.2	1.7
1970-72	60.6	36.2	1.3	1.9

Table A-3: (cont.)

b. % of workers involved in strikes with given association with a union.

	A.F.L.	C.I.O.	Other union	No union
I927-29	73.0		20.9	6.I
I930-33	65.4		27.3	7.4
I934-36	84.7		I2.5	2.8
I937-4I	3I.0	60.9	6.8	I.4
I942-45	22.4	48.4	28.2	I.0
I946-49	29.0	36.8	34.0	0.3
I950-55	32.6	45.3	2I.8	0.3

	A.F.L.-C.I.O.	Other union	Different affiliations	No union
I96I-63	85.4	I2.4	2.0	0.I
I964-66	83.7	I3.I	2.9	0.3
I967-69	7I.4	22.6	5.6	0.4
I970-72	59.I	3I.3	9.I	0.5

Table A-3: (cont.)

c. % of striker-days in strikes with given association with a union.

	A.F.L.	C.I.O.	Other union	No union
I927-29	84.0		I4.3	I.7
I930-33	74.4		22.6	3.0
I934-36	86.3		I2.5	I.3
I937-4I	32.7	6I.3	5.4	0.7
I942-45	23.7	33.2	42.6	0.6
I946-49	23.9	49.6	26.5	0.I
I950-55	3I.6	46.6	2I.8	0.I

	A.F.L.-C.I.O.	Other union	Different affiliations	No union
I96I-63	87.I	8.7	4.I	..
I964-66	86.2	9.4	4.3	0.I
I967-69	72.2	I3.3	I4.4	0.I
I970-72	52.7	36.3	I0.8	0.I

Note: .. signifies less than 0.05 %.

Table A-3: (cont.)

d. Strike-proneness of unions, by affiliation

	A.F.L.	C.I.O.	Other union
	Number of strikes per million members		
I937-4I	44I	564	399
I942-45	242	455	426
I946-49	252	278	307
I950-55	239	287	44I
I942-45 as % of I937-4I	54.9	80.7	I07.0
	Number of workers involved per hundred members		
I937-4I	I0.4	38.8	I2.4
I942-45	6.73	28.4	32.7
I946-49	I0.8	26.I	50.4
I950-55	8.I2	25.6	25.8
I942-45 as % of I937-4I	64.7	73.2	264.0
	Number of striker-days per hundred members		
I937-4I	I43	509	I29
I942-45	45.6	I25	3I6
I946-49	I79	706	790
I950-55	I06	357	348
I942-45 as % of I937-4I	3I.9	24.6	245.0

Table A-4: Strike duration, I88I-I972.

a. % of 'cessations' with given number of days' duration.

	I	2-3	4-6	7-I4	I5-29	30-59	60-89	90 and over	N
I88I	I3.6	I7.6	I0.0	27.I	I3.4	9.8	4.3	4.4	632
I882	I2.7	I6.4	I0.8	2I.7	I2.9	I3.0	4.7	7.8	59I
I883	9.8	I5.6	8.4	28.3	I2.5	I2.0	5.3	8.I	642
I884	I2.2	I4.0	9.5	24.2	I0.8	II.0	6.7	II.6	629
I885	6.5	I2.5	7.7	26.5	I2.5	I7.3	6.2	II.0	875
I886	I0.7	I3.6	9.4	29.0	I5.8	I2.3	3.6	5.6	2393
I887	I2.7	2I.3	I5.4	23.4	II.6	9.0	3.5	3.I	I497
I888	I2.0	22.7	I4.5	24.4	I0.5	7.7	2.8	5.4	943
I889	I2.3	22.6	I5.5	22.5	I3.4	7.4	2.9	3.3	I034
I890	I2.7	22.7	I7.4	24.6	I0.0	7.9	2.I	2.7	I895
I89I	II.2	22.4	I5.5	22.I	I3.2	9.3	3.I	3.2	I779
I892	I0.3	24.7	I5.I	22.6	II.6	7.9	3.3	4.6	I348
I893	I2.3	22.5	I3.9	23.3	I2.0	8.5	3.5	3.9	I375
I894	II.8	23.2	II.9	24.4	I2.7	7.8	4.6	3.6	927

Note: I894 figures for first six months only.

N refers to number of cessations in year.

For meaning of term 'cessation' see chapter I, section 4.

Table A-41 (cont.).

b. % of strikes with given number of days' duration.

	Under I	I	2-3	4-6	7-14	15-31	32-62	63-93	94 and over
1916-18	4.0	9.3	16.2	15.4	23.2	16.9	8.2	2.5	4.3
1919-22	2.2	4.1	8.4	10.1	19.2	19.2	16.7	7.4	12.8
1923-25	3.4	6.8	12.7	13.4	23.1	19.7	10.5	3.8	6.7
1926	-	7.4	12.9	13.9	27.2	17.9	13.5	3.3	4.3

	I	2-3	4-6	7-14	15-29	30-59	60-89	90 and over
1927-29		35.1		22.7	17.2	14.5	5.0	5.6
1930-33		40.1		21.5	17.7	14.2	4.3	2.2
1934-37		36.4		22.2	18.5	14.4	4.8	3.7
1938-41		38.5		23.3	17.6	12.5	3.9	4.3
1942-45	19.4	31.0	20.1	17.1	7.8	3.4	0.8	0.5
1946-49	9.6	14.9	14.1	20.9	17.0	13.2	5.0	5.4
1950-53	12.8	17.7	15.1	21.1	15.0	10.9	3.9	3.6
1954-57	13.0	15.7	14.5	21.2	16.2	11.5	4.1	3.7
1958-61	11.3	15.6	14.1	21.0	16.0	12.3	4.5	5.3
1962-65	11.2	15.0	14.8	21.4	15.4	11.7	4.7	5.8
1966-69	12.0	14.4	14.1	20.7	16.0	12.9	5.1	5.0
1970-72	13.9	14.0	12.8	17.6	15.3	13.7	6.2	6.4

Note: For 1927-41, figures under '2-3 days' are for all strikes lasting less than 7 days; further breakdowns not available.

Table A-41 (cont.)

c. % of workers involved in strikes with given number of days' duration.

	I	2-3	4-6	7-I4	I5-29	30-59	60-89	90 and over
I927-29		26.5		I4.5	I8.I	9.I	3.8	28.0
I930-33		23.9		23.2	23.4	I8.5	5.8	5.2
I934-37		35.8		I6.9	22.0	I4.7	6.4	4.3
I938-4I		36.9		I8.6	I6.5	23.3	2.6	I.9
I942-45	II.9	28.9	20.9	I7.I	I5.3	5.0	0.4	0.3
I946-49	6.4	II.3	7.8	22.7	I2.4	27.4	3.8	8.I
I950-53	8.6	I5.3	I4.4	I9.8	I5.0	I5.3	4.8	6.7
I954-57	8.3	I8.I	I4.4	20.2	I4.3	I6.5	4.4	3.8
I958-6I	7.7	II.I	II.5	I8.2	2I.5	I4.3	3.7	I2.I
I962-65	II.0	I2.7	II.8	I9.6	I7.I	I8.0	5.6	4.I
I966-69	9.I	I5.7	I2.0	I7.9	I2.9	I9.9	6.9	5.5
I970-72	I3.2	I6.0	I0.5	I8.4	I6.0	I2.9	5.4	7.7

Note: For I927-4I, figures under '2-3 days' are for all strikes lasting less than 7 days.

Table A-4: (cont.)

d. % of striker-days in strikes with given number of days' duration.

	1	2-3	4-6	7-14	15-29	30-59	60-89	90 and over
1927-29		1.6		2.6	5.5	6.3	5.0	79.0
1930-33		4.0		10.7	17.0	26.8	14.6	27.0
1934-37		7.3		7.9	19.7	28.7	16.3	20.1
1938-41		6.9		10.4	15.6	42.7	8.8	15.6
1942-45	1.9	9.3	7.4	18.0	37.0	18.0	5.0	3.5
1946-49	0.3	1.1	1.3	6.8	8.5	39.5	9.0	33.7
1950-53	0.6	2.0	3.2	7.6	12.2	31.2	13.7	29.6
1954-57	0.6	2.3	3.5	8.4	14.0	32.3	15.4	23.6
1958-61	0.4	1.2	2.0	6.0	13.3	17.6	8.7	50.8
1962-65	0.7	1.8	2.7	8.6	15.0	30.3	15.4	25.5
1966-69	0.6	1.8	2.5	7.3	11.2	28.8	19.0	28.8
1970-72	0.7	1.7	2.0	5.9	11.1	18.6	13.2	46.8

Note: For 1927-41, figures under '2-3 days' are for all strikes lasting less than 7 days.

Table A-5: Indices of union involvement in strikes, I88I-I972.

	% of union members involved in strikes $\frac{L}{T} \times 100$	Relative union propensity to strike $\frac{S}{N-S} \times \frac{E-T}{T}$	Relative propensity for unionists to be involved in strikes $\frac{L}{N-L} \times \frac{E-T}{T}$
I88I-85	72.7	2I40	3860
I886-90	47.2	I530	2700
I89I-95	85.2	3860	8I00
I896-I900	54.0	2560	5550
I90I-05	28.8	20I0	3790
I9I6-2I	n.a.	2I80	n.a.
I923-26	n.a.	5700	n.a.
I927-29	8.99	5950	I2900
I930-33	I5.0	3330	9230
I934-36	30.7	7980	23400
I937-4I	I5.4	7350	20800
I942-45	I6.0	4590	2I400
I946-49	20.3	II630	66900
I950-55	I5.2	I5300	66900
I959-60	9.35	2[illegible]600	I07000
I96I-63	7.32	23400	236000
I964-66	9.86	20800	[illegible]3800
I967-69	I4.I	I4900	64300
I970-72	I4.2	I3900	5[illegible]500

Note: For the second and third columns, a figure of I00 would indicate equality between union and non-union strikes.

For other notes, see next page.

Notes to Table A-5 (cont.): For details of the three indices see chapter 3, section 4. The definitions of the terms in columns 2 and 3 are given in note 20 to that chapter.

For columns 2 and 3, the figures for 1881-1921 are taken from P.H.Douglas 'An analysis of strike statistics' J.Amer.Statistical Assoc., 18, pp.866-77 (1923) at pp. 875-76. All other figures have been calculated from the official data.

Table A-6: Estimates of union density: membership as % of non-agricultural work force, 1870-1970.

	(1)	(2)	(3)	(4)
1870-72	9.1			
1880	3.8			
1890	5.0			
1900	8.4	6.1		
1904		12.3		
1910		10.2	10.0	
1916		11.2		
1920		19.5	18.9	
1930		11.5	10.7	11.6
1935			13.3	13.2
1940			21.8	26.9
1945			29.9	35.5
1950			31.2	31.5
1955			31.7	33.2
1960			28.6	31.4
1965				28.4
1970				27.4

Sources: Col (1) L.Ulman The rise of the national trade union (Harvard Univ.Press,Cambridge,Mass.,1955)p.19.

(2) L.Troy Trade union membership,1897-1962 (National Bureau of Economic Research,N.Y.,1965)p.2. Figures include Canadian members of United States unions.

(3) Ibid., Figures exclude Canadian members.

(4) Historical Statistics of the United States, Colonial times to 1957 (U.S.Bureau of the Census, Washington, D.C.,1960); Statistical Abstract of the United States (U.S.Bureau of the Census, Washington,D.C., various years).

Table A-7: Strike issues, I88I-I972.

a. % of workers involved in strikes with given issue.

	Wages and hours	Wages, hours and union recognition	Union recognition and security	Other work conditions	Inter/ intra union	Other
I88I-85	84.0	I.4	5.6			9.0
I886-89	68.0	3.0	I2.0			I7.0
I890-93	63.5	4.2	I2.5			I9.8
I894-97	72.0	4.5	4.9			I8.5
I898-I90I	53.6	I4.7	I4.8			I6.9
I902-05	48.5	I7.0	I5.8			I8.6
I927-29	5I.3	I0.3	I5.7		4.7	I8.0
I930-33	50.4	22.0	I4.5		3.7	9.4
I934-37	32.4	30.0	I9.3		4.8	I3.6
I938-4I	40.5	I0.I	27.3		5.5	I6.4
I942-45	47.4	4.8	I3.7	29.0	5.2	
I946-49	60.2	I2.0	3.0	2I.0	3.8	
I950-53	52.7	8.3	3.7	29.6	5.8	
I954-47	62.9	3.7	3.7	24.4	5.2	
I958-60	62.5	6.3	2.8	26.4	2.0	
I96I-65	49.I		7.8	38.I	5.0	
I966-69	63.4		6.I	26.4	4.2	
I970-72	69.0		4.6	22.7	3.7	

Table A-7: (cont.)

b. % of striker-days in strikes with given issue

	Wages and hours	Wages, hours and union recognition	Union recognition and security	Other work conditions	Inter/ intra union	Other
I927-29	84.2	4.5	5.3		I.I	4.8
I930-33	5I.9	25.3	I4.5		2.8	5.4
I934-37	25.6	42.I	22.8		2.3	7.2
I938-4I	34.9	I5.0	38.6		5.3	6.2
I942-45	52.6	8.0	I4.5	I8.7	6.I	
I946-49	74.7	I5.3	2.6	5.9	I.4	
I950-53	6I.7	2I.5	3.6	II.I	2.2	
I954-57	70.5	I2.I	5.4	I0.4	I.7	
I958-60	80.5	7.0	2.7	9.2	0.5	
I96I-65	59.4		I0.9	28.0	I.7	
I966-69	73.I		I3.3	II.9	I.6	
I970-72	82.3		8.3	7.9	I.6	

Table A-81 Summary of information on known strikes, I74I-I880.

	Number	Issues		Results		
		Wages	Other	Won	Compromise	Lost
I74I-I879	678	472	I33	I47	69	356
I880	8I3	6I7	I45	I69	85	227
Total	I49I	I089	278	3I6	I54	583

	% of strikes where issue reported		% of strikes where result reported		
	Wages	Other	Won	Compromise	Lost
I74I-I879	78.0	22.0	25.7	I2.I	62.2
I880	8I.0	I9.0	35.I	I7.7	47.2
Total	79.7	20.3	30.0	I4.6	55.4

Source: Third annual report of the Commissioner of Labor, I887 (U.S. Government Printing Office, Washington, D.C., I888) pp.II07-08.

Table A-9: Result by issue, I88I-I905 and I927-4I

a. % of establishments with given result and issue, I88I-I905.

Issue	Result	I88I-85	I886-90	I89I-95	I896-I900	I90I-05
Wage increase	Won	65.9	54.9	38.8	47.8	48.8
	Comp.	7.I	I0.4	I6.I	29.8	2I.9
	Lost	27.0	34.7	45.I	23.5	29.4
Hours	Won	47.0	43.0	62.2	73.2	38.I
	Comp.	I2.6	I7.3	II.9	I3.4	24.5
	Lost	40.3	39.8	25.9	I3.5	37.4
Union recog. and rules	Won	43.2	46.0	50.9	6I.5	39.3
	Comp.	I8.4	I2.I	4.I	9.9	I8.0
	Lost	38.4	4I.9	45.0	28.6	42.7
Fines, work conditions, etc.	Won	46.7	39.5	63.6	38.5	25.6
	Comp.	0.6	I4.4	2.6	39.6	37.6
	Lost	52.8	46.I	33.8	2I.8	36.9

Note: 'Comp.' means 'compromised'.

Table A-9: (cont.)

b. Result by issue for strikes and workers involved

Issue	Result	1927-29	1930-33	1934-37	1938-41
		% of strikes with given result and issue			
Wages and hours	Won	23.5	31.5	45.5	44.1
	Comp.	38.0	24.2	31.4	43.3
	Lost	38.5	44.4	23.2	12.7
Wages, hours and union recognition	Won	33.9	39.1	50.5	52.5
	Comp.	31.1	34.9	33.1	30.8
	Lost	35.0	26.1	16.5	16.8
Union recog. and security	Won	38.9	35.2	43.5	42.1
	Comp.	11.3	15.0	21.5	31.4
	Lost	49.8	49.8	35.0	26.6
		% of workers involved in strikes with given result and issue			
Wages and hours	Won	11.7	33.0	51.8	35.4
	Comp.	29.4	38.2	34.7	50.5
	Lost	58.9	28.7	13.5	14.1
Wages, hours and union recognition	Won	29.4	37.8	35.0	43.5
	Comp.	54.8	54.0	56.1	47.2
	Lost	15.8	8.1	8.9	9.2
Union recog. and security	Won	60.1	18.4	45.8	53.9
	Comp.	15.7	47.8	30.8	38.2
	Lost	24.1	33.8	23.4	8.0

Note: 'Comp.' means 'compromised'.

Table A-IO: Regional strike-proneness, I927-72.

a. Number of strikes per million non-agricultural employees.

	I927-4I	I942-57	I958-72
New England	68.2	8I.4	64.2
Mid Atlantic	87.9	I06	82.9
East North Central	50.0	I06	82.2
West " "	35.9	62.5	6I.4
South Atlantic	26.7	60.2	50.5
East South Central	36.9	I33	74.I
West South Central	20.9	4I.I	36.0
Mountain	3I.3	62.3	62.5
Pacific	60.2	48.8	45.7
All	54.4	82.8	65.2

b. Number of workers involved in strikes per thousand non-agricultural employees.

	I927-4I	I942-57	I958-72
New England	22.6	26.6	20.6
Mid Atlantic	37.0	54.0	35.0
East North Central	26.4	69.8	43.0
West North Central	I0.5	27.2	26.2
South Atlantic	I6.3	3I.2	I9.2
East South Central	22.4	7I.8	3I.I
West South Central	4.74	I7.5	I3.9
Mountain	9.24	23.9	22.9
Pacific	20.8	26.4	2I.8
All	23.5	44.I	28.6

Table A-I0: (cont.)

c. Number of days lost in strikes per thousand non-agricultural workers.

	I927-4I	I942-57	I958-72
New England	403	456	363
Mid Atlantic	534	807	564
East North Central	506	920	750
West North Central	I96	392	48I
South Atlantic	235	459	252
East South Central	407	883	494
West South Central	78.2	270	247
Mountain	I68	400	504
Pacific	393	482	358
All	389	678	478

Note: Regions are defined in note to Table 3-9.

Figures are annual averages, based on employment in I940, I960 and I970.

Table A-11: Results of regression equations, 1890-1972.

Dependent variable	Independent variables					R^2	D-W
	U	CH.H/P	T/E	Trough	Peak		
N/E (1900-72)	Neg 5%					0.04	0.35
N/E (1900-72)		Pos NS				-0.01	0.35
N/E (1900-72)	Neg 1%	Pos NS	Neg 1%			0.13	0.45
N/E (1900-72)		Pos NS	Neg 1%	Neg NS	Pos NS	0.05	0.43

	Independent variables				
	U_{t-1}	$(CH.H/P)_{t-1}$	$(T/E)_{t-1}$	R^2	D-W
$(N/E)_t$ (1890-1972)	Neg 1%	Pos NS	Neg 1%	0.16	0.46

	Independent variables			
	$(U_t - U_{t-1})$	$(H/P)_t - (H/P)_{t-1}$	R^2	D-W
N_t (1900-72)	Neg NS	Pos 1%	0.12	0.36

Note: 't' denotes value of variable in current year and 't-1' value the previous year.

Table A-12: Results of regression equations, 1928-51.

Dependent variable	Independent variables				R^2	D-W
	U	H/P	CH.H/P	War		
N/E	Pos 5%	Pos 1%	Neg NS		0.51	1.54
N/E	Pos 5%	Pos. 1%	Neg NS	Pos NS	0.51	1.83
W/E	Pos NS	Pos 1%	Neg NS		0.34	1.82
W/E	Pos NS	Pos 1%	Neg NS	Neg NS	0.31	1.82

Note: 'War' is a dummy variable, taking the value 1 for the years 1942-45, and 0 for other years.

Table A-13: Comparative explanatory power of unemployment rate and 'peak' and 'trough' variables.

Dependent variable	Independent variables					R^2	D-W
	U	Trough	Peak	H	T		
N/E	Pos			Neg	Pos	0.32	0.77
(1900-39)	NS			1%	5%		
"		Pos	Pos	Neg	Pos	0.52	1.00
		1%	1%	1%	NS		

	Independent variables						
	$(U/E)_{t-1}$	Trough		$(N/E)_{t-1}$	$(A/P)_{t-1}$		
$(N/E)_t$	Neg			Pos	Pos	0.15	1.78
(1890-1915)	NS			1%	NS		
"		Neg		Pos	Pos	0.29	1.63
		5%		5%	5%		
$(N/E)_t$	Pos			Pos	Neg	0.70	2.17
(1900-39)	5%			1%	1%		
"		Pos		Pos	Neg	0.71	2.10
		5%		1%	1%		

Notes: The suffix 't-1' indicates lagging the variable by one year; see Table 4-6.

For other results comparing U/E with 'peak' and 'trough' see Table 5-2.

Table A-14: Regression results, predicting worker involvement from strike frequency.

Dependent variable	Independent variables			R^2	D-W
	N/E	N	U		
W/E (1881-1915)	Pos 1%			0.29	1.37
W/E (1916-39)	Pos 1%			0.41	2.03
W (1952-72)		Pos 1%	Neg NS	0.63	2.15

Table A-15: Work conditions strikes, 1881-1905.

	'Pure' work conditions and rules strikes(1)		All work conditions and rules strikes(2)	
	Number	Strikers ('000's)	Number	Strikers ('000's)
1881-85	87	13.3	106	20.0
1886-90	200	17.9	259	31.2
1891-95	160	28.7	208	52.4
1896-1900	150	22.6	205	38.5
1901-05	325	30.2	419	72.3
	As a percentage of all strikes/strikers			
1881-85	3.3	2.0	4.0	2.9
1886-90	2.8	1.2	3.7	2.1
1891-95	2.2	1.9	2.9	3.5
1896-1900	2.2	1.5	3.0	2.6
1901-05	2.2	1.3	2.9	3.1

Notes: (1) i.e. strikes in which work conditions and rules were the only issues.

(2) i.e. all strikes in which conditions and rules were mentioned as an issue.

Table A-16: 'Cessations' by industry and occupational group, 1881-94.

All eight industries[1]

	Number	% with given issue			% ordered by union	% won[2]	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
(i) 1881-86	2032	79.2	12.8	7.9	50.4	43.6	25.5	145	43.5
(ii) 1887-94	2848	60.5	23.9	15.6	53.1	32.1	19.3	148	22.4

Notes: (1) i.e. the metals industry, of Table 5-19, and the seven industries of parts 'a' to 'g' of this table.

(2) Throughout this table '% won' refers to the percentage of strikes won and lost accounted for by the 'won' category (i.e. compromises are ignored).

Table A-16: 'Cessations' by industry and occupational group, 1881-94.

a. Printing & publishing

	Number	% with given issue			% ordered by union	% won	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
(i) 1881-86									
Compositors	135	60.0	23.0	17.0	81.5	42.0	25.8	20.5	51.3
Other	23	95.7	0	4.3	69.6	45.4	44.0	124	47.2
All	158	65.2	19.6	15.2	79.7	42.5	28.4	35.6	49.1
(ii) 1887-94									
Compositors	204	37.3	34.3	28.4	78.9	26.8	21.1	25.9	28.4
Pressmen	38	63.2	21.1	15.8	71.1	41.7	17.1	25.9	10.7
Bookbinders	21	52.4	28.6	19.0	95.2	40.0	29.4	26.7	20.8
Other	54	51.9	33.3	14.2	77.8	29.4	20.6	68.1	33.4
All	317	43.8	32.2	24.0	78.9	30.2	21.1	33.2	25.4

Table A-16: (continued)

b. Machines and machinery

	Number	% with given issue			% ordered by union	% won	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
(i) 1881-86									
Boilermakers	33	87.9	3.0	9.1	84.8	52.0	29.6	80.5	37.5
Molders	17	58.8	17.6	23.5	58.8	50.0	23.5	50.7	31.7
Other trades	21	95.2	4.8	0	81.0	44.4	23.8	10.3	4.6
Railroad shop workers	24	75.0	12.5	12.5	66.7	63.6	47.6	299	84.5
Other employees	53	90.6	5.7	3.8	69.8	26.1	17.3	147	78.6
All	148	84.5	7.4	8.1	73.0	43.3	21.3	126	56.8
(ii) 1887-94									
Boilermakers	29	58.6	31.0	10.3	58.6	37.0	24.6	162	15.9
Molders	28	53.6	28.6	17.9	92.9	29.2	43.1	41.8	20.1
Machinists	26	53.8	42.3	3.8	42.3	7.7	20.4	79.7	35.7
Other trades	37	62.2	18.9	18.9	59.5	22.6	22.4	31.7	5.0
Employees	17	64.7	11.8	23.5	47.1	68.8	13.5	269	89.3
All	137	58.4	27.0	1.46	61.3	29.8	25.6	99.9	19.7

Table A-16: (continued)

c. Glass

	Number	% with given issue			% ordered	% won	Mean	Mean	ST./B
		Wage & hour	Conditions	Union	by union		duration	size	
1881-94									
Flint glass blowers	25	40.0	32.0	28.0	96.0	30.0	75.0	65.8	28.0
Green " "	19	36.8	42.1	21.1	89.5	21.1	49.1	76.6	36.7
Bottle " "	17	64.7	23.5	11.8	94.1	70.6	107	47.0	24.2
Other flint workers	25	72.0	12.0	16.0	60.0	44.0	69.4	181	31.5
" green "	13	76.9	15.4	7.7	15.4	25.0	20.3	127	27.3
" bottle "	15	73.3	26.7	0	40.0	35.7	33.3	49.6	35.9
Other: skilled workers	33	51.5	33.3	15.2	60.6	37.9	55.2	113	39.4
" unskilled "	30	80.0	20.0	0	6.7	13.8	6.3	58.9	19.0
" employees	26	61.5	23.1	15.4	53.8	33.3	58.3	160	65.9
Window glass workers	24	83.3	12.5	4.2	70.8	63.6	74.7	91.3	40.0
All	227	63.4	24.2	12.3	58.6	36.8	54.6	99.8	34.6

Table A-16: (continued).

d. Boot and shoe

	Number	% with given issue			% ordered by union	% won	Mean duration	Mean size	ST./B
		Wage & hour	Conditions	Union					
(i) 1881-86.									
Lasters	63	79.0	11.3	9.7	84.1	54.4	34.1	44.5	11.9
Cutters, stitchers etc	42	71.4	26.2	2.4	81.0	63.3	21.6	44.8	17.8
Employees	71	69.0	14.1	16.9	87.3	45.5	44.9	151	63.8
All	176	73.1	16.0	10.9	84.7	52.8	35.3	87.2	30.4
(ii) 1887-94.									
Lasters	156	59.6	23.7	16.7	80.4	31.2	12.1	26.0	10.8
Cutters	52	67.3	13.5	19.2	73.1	48.9	16.7	30.0	11.6
Bottomers	38	50.0	31.6	18.4	76.3	51.4	18.6	66.4	20.9
Stitchers	26	73.1	11.5	15.4	57.7	57.9	17.1	58.4	20.0
Shoemakers & hand sewers	20	75.0	10.0	15.0	80.0	64.7	22.9	34.3	23.0
Other	30	70.0	16.7	13.3	70.0	39.1	7.6	25.9	11.4
Employees	62	61.3	24.2	14.5	77.4	46.3	24.9	225	74.0
All	384	62.5	21.1	16.4	76.3	41.9	16.0	65.4	25.2

Table A-16: (continued).

e. Cotton, silk and woollen goods

	Number	% with given issue			% ordered	% won	Mean	Mean	ST./B
		Wage & hour	Conditions	Union	by union		duration	size	
(i) 1881-86									
Weavers	130	74.6	23.1	2.3	11.5	33.3	21.1	85.6	23.1
Spinners	30	80.0	20.0	0	10.0	36.7	13.0	33.8	5.2
Employees	48	68.8	27.1	4.2	35.4	25.6	31.0	270	48.3
Other	31	90.3	6.5	3.2	3.2	54.8	5.8	86.8	16.6
All	239	76.2	21.3	2.5	15.1	35.4	20.1	116	25.1
(ii) 1887-94									
Weavers	242	70.2	25.6	4.1	39.3	33.2	15.9	149	24.8
Spinners	46	76.1	21.1	2.2	10.9	24.4	9.5	79.3	19.0
Mule spinners	40	22.5	77.5	0	22.5	60.5	10.3	27.0	4.7
Employees	57	71.9	22.8	5.3	31.6	27.1	21.8	339	57.1
Other	95	77.9	21.1	1.1	7.4	17.0	11.6	38.2	5.4
All	480	68.5	28.3	3.1	27.9	30.7	14.6	133	22.1

Table A-16: (continued).

f. Transportation

	Number	% with given issue			% ordered	% won	Mean	Mean	ST./B
		Wage & hour	Conditions	Union	by union		duration	size	
(i) 1881-94									
Engineers & firemen	22	45.5	18.2	36.4	68.2	42.1	4.23	212	8.57
Railroad employees (excl. Pullman strike)	24	58.3	16.7	25.0	66.7	45.5	20.3	1983	35.9
(ii) 1881-86									
Street railroad	59	74.6	15.3	10.2	72.9	68.0	9.08	861	93.7
Brakemen etc.	28	67.9	32.1	0	14.3	50.0	6.39	76.8	36.5
Yard and switch workers	40	77.5	7.5	15.0	37.5	40.0	11.2	101	80.0
Laborers etc.	85	94.1	3.5	2.4	11.8	27.5	8.53	190	47.4
Longshoremen etc.	116	90.5	1.7	7.8	17.2	48.7	4.54	143	98.0
Other	19	73.7	0	26.3	63.2	53.3	15.5	777	37.5
All	347	84.4	7.5	8.1	30.0	45.7	7.81	253	56.5

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Table A-16: (continued).

f. Transportation (continued)

	Number	% with given issue			% ordered	% won	Mean	Mean	ST./B
		Wage & hour	Conditions	Union	by union		duration	size	
(iii) 1887-94									
Street railroad	76	61.8	35.5	2.6	57.9	37.7	6.49	204	73.3
Brakemen etc.	53	62.3	34.0	3.8	20.8	41.5	4.68	121	8.1
Yard & switch workers	92	58.7	33.7	7.6	38.0	21.3	5.03	72.5	2.9
Laborers etc.	101	74.3	13.9	11.9	24.8	34.1	8.07	186	55.8
Longshoremen etc.	53	67.9	20.8	11.3	58.5	28.3	8.70	534	75.2
Engineers & firemen	18	38.9	22.2	38.9	72.2	40.0	4.17	248	8.2
Railroad employees	12	50.0	33.3	16.7	75.0	41.7	20.0	2775	35.4
Railroad shop employees	37	67.6	21.6	10.8	54.1	31.4	28.4	193	18.7
Telegraphers	10	60.0	10.0	30.0	70.0	30.0	5.5	115	2.1
Pullman strike	50	0	0	100.0	96.0	0	13.8	717	13.2
All	502	57.6	23.5	18.9	48.4	28.5	9.4	314	17.2

Table A-16: (continued).

g. Public ways and works construction

	Number	% with given issue			% ordered by union	% won	Mean duration	Mean size	ST./B
		Wage & hours	Conditions	Union					
(i) 1881-86									
Laborers	67	92.5	7.5	0	10.4	35.0	5.40	155	57.6[1]
Others	26	92.3	7.7	0	15.4	39.1	5.19	407	66.8
All	93	92.5	7.5	0	11.8	36.1	5.34	225	61.9
(ii) 1887-94									
Laborers	182	89.6	9.3	1.1	6.6	43.6	3.97	172	64.7
Teamsters	19	84.2	10.5	5.3	26.3	62.5	3.95	66.7	39.9
Pavers	19	42.1	21.1	36.8	73.7	47.4	15.1[2]	36.4	18.9
Others	17	64.7	5.9	29.4	64.7	66.7	5.76	47.1	41.1
All	237	83.5	10.1	6.3	17.7	46.9	4.99	143	59.6

Notes: (1) excluding one exceptional case, figure is 74.9

(2) " " " " " " 3.26.

Table A-I7: Methods of negotiation of strike settlements, I935-46.

	% of strikes with given method			% of workers involved in strikes with given method		
	(I)	(2)	(3)	(I)	(2)	(3)
I935	43.9	3I.4	22.9	26.3	59.3	I3.2
I936	48.8	29.9	I8.3	44.6	4I.3	II.3
I937	48.6	36.0	I2.9	40.2	42.3	I3.6
I938	45.6	37.0	I6.4	34.9	52.3	I0.0
I939	42.6	38.I	I7.4	2I.2	6I.5	I5.6
I940	4I.2	42.8	I4.7	35.4	58.6	5.I
I94I	35.7	52.8	I.7	24.6	72.I	3.2
I942	27.3	62.0	9.2	22.8	70.9	5.4
I943	24.I	69.8	5.6	I3.9	82.2	3.7
I944	33.4	59.4	7.0	23.0	73.2	3.7
I945	32.4	59.6	7.4	I8.8	7I.8	9.3
I946	34.0	53.6	I2.4	20.9	74.3	4.8

Note: (I) Employers and workers directly (including representatives of employers and workers).

(2) Government officials and boards.

(3) No formal agreement.

Figures do not add to I00 because of a small number of settlements by private conciliation and arbitration, the employer going out of business etc.

Table A-I8: National Labor Relations Board cases, fiscal years, I936-50.

	Total number of cases filed	% of cases concerned with: Representation	Unfair labor practices
I936	I068	I9.0	8I.0
I937	4068	28.2	7I.2
I938	I0430	34.7	65.3
I939	6904	33.I	66.9
I940	6I77	36.3	63.6
I94I	9I5I	47.4	52.6
I942	I0977	54.8	45.2
I943	9544	64.2	35.7
I944	9I76	72.0	28.0
I945	9738	75.I	24.9
I946	I2260	68.9	3I.2
I947	I4909	7I.6	28.4
I948	36735	90.2	9.8
I949	25874	79.5	20.5
I950	2I632	73.I	26.9

Table A-I9: Strike indices, by industry, I9I6-26.

	% of all strikes accounted for by each industry, I9I6-26.	Number of strikes per million employees I9I9-22	I923-26
Building	I5.0	40I	I72
Clothing	I2.3	592	547
Coal and other mining	7.7	I24	II5
Metals: iron and steel	I.3	47	8
other	II.4	n.a	n.a
Printing and publishing	3.2	6I0	43
Slaughtering and meat packing	I.2	3I4	64
Ships	I.7	636	32
Stone	I.I	367	II8
Textiles	6.9	I63	99
Tobacco	I.2	2II	85
Transport	5.I	37	4
Lumber and wood	3.4	63	5I
Leather	0.8	8I	29
Paper	I.I	I77	43
All above industries	73.5	I6I(I)	8I(I)
All industries	I00	I02	45

Note: (I) excluding other metals

Table A-20: Percentage of all strikes accounted for by each industry, 1927-40.

	1927-29	1930-33	1934-37	1938-40
Boot and shoe	4.3	3.0	2.0	I.I
Building	27.9	20.5	8.6	I3.2
Clothing	I4.5	I6.9	I2.6	I5.9
Coal	I0.4	9.2	3.5	2.I
Food	2.9	4.7	6.4	6.6
Machinery: non-electrical	I.7	I.8	3.4	3.I
electrical	0.3	0.3	I.I	I.I
Metals: basic steel	0.3	0.7	0.8	0.6
other iron and steel	2.0	2.4	3.6	3.I
other	0.7	I.2	2.4	I.7
Printing and publishing	I.4	I.8	I.3	I.I
Stone, clay and glass	I.I	I.6	2.2	2.2
Textiles	II.6	II.7	8.I	4.I
Tobacco	0.3	I.0	0.5	0.3
Transport	3.3	4.2	9.2	9.0
Transport equip.: locos, cars and ships	0.2	0.4	0.6	0.6
other	0.9	0.9	2.5	I.6
All above industries	83.7	82.2	69.0	67.4
Chemicals	0.6	0.4	I.3	I.6
Lumber	0.9	I.3	3.7	4.2
Domestic and personal service	4.I	4.0	7.2	7.0
Trade	2.7	2.7	9.6	I2.6
All above industries	92.0	90.6	90.7	92.8
All industries	I00	I00	I00	I00

Table A-2I: 'Strike waves', I886-I970.

Given measure as a percentage of its mean over the previous five years.

	N	W	D
I886	298	346	
I887	20I	I6I	
I900	I44	I6I	
I90I	2I7	I46	
I903	I65	I56	
I9I0	I20	223	
I9I2	I09	206	
I9I3	I34	I76	
I9I6	I22	206	
I9I9	I0I	37I	
I933	222	402	2I8
I934	I89	3I8	229
I937	276	I92	I87
I94I	I45	233	I52
I944	I54	I52	67
I945	I29	220	338
I946	I20	2I4	663
I952	I26	I50	I64
I967	I2I	I96	I98
I970	I2I	I43	I82

Note: The above list includes all years in which the figure for N or W is I50 or more. In the sense of E.Shorter and C.Tilly in Strikes in France, I830-I968 (Cambridge Univ. Press, Cambridge, I974) at pp. I06-07 a strike wave occurs when both figures are at least I50.

Table A-22: Strike indices, selected industries, 1950-72.

Industry	Period	N/E	W/E	W/N	D/W
Building	1950-53	304	145	478	12.4
	1954-57	274	104	380	11.2
	1958-61	281	92.9	331	15.9
	1962-65	298	85.1	286	13.0
	1966-69	282	118	418	19.5
	1970-72	261	154	589	19.6
Clothing	1950-53	186	29.6	159	8.7
	1954-57	124	13.3	107	11.7
	1958-61	105	46.5	443	8.2
	1962-65	89	17.5	198	9.4
	1966-69	77	13.1	171	13.4
	1970-72	63	11.2	178	26.4
Coal	1950-53	623	329	528	13.6
	1954-57	344	127	369	8.5
	1958-61	231	85.8	371	28.3
	1962-65	257	99.1	386	10.7
	1966-69	499	253	507	11.9
	1970-72	1200	470	391	7.6

Table A-22: (continued)

Industry	Period	N/E	W/E	W/N	D/W
Motor	1950-53	157	269	1713	13.7
vehicles	1954-57	146	244	1672	4.5
	1958-61	190	381	2010	7.9
	1962-65	111	216	1947	15.5
	1966-69	150	257	1711	15.1
	1970-72	134	234	1748	34.6
Steel	1950-53	166	288	1741	25.0
	1954-57	125	367	2937	11.9
	1958-61	153	263	2642	56.1
	1962-65	144	69.0	480	11.6
	1966-69	172	94.1	547	15.6
	1970-72	169	68.8	405	25.7
Textiles	1950-53	98	57.8	588	22.0
	1954-57	72	28.2	388	24.2
	1958-61	55	12.2	220	10.1
	1962-65	46	15.2	333	12.1
	1966-69	58	21.5	372	14.4
	1970-72	49	10.5	214	12.1

Table A-23: Strikes by contract status, selected industries, I96I-72.

a. % of strikes with given contract status

Industry	Period	First agreement	Re-negot-iation	During term	Other
All manu-facturing	I96I-64	I8.0	55.6	25.6	0.8
	I965-68	I6.4	55.8	27.0	0.8
	I969-72	I3.0	62.3	24.0	0.7
Coal	I96I-64	5.9	I4.5	78.3	I.3
	I965-68	8.2	II.5	79.5	0.8
	I969-72	I.2	4.6	94.I	0.I
Primary metals	I96I-64	I0.4	50.I	39.5	0
	I965-68	I0.0	50.I	39.3	0.6
	I969-72	8.4	58.8	32.5	0.2
Transport equipment	I96I-64	I2.4	43.8	43.3	0.5
	I965-68	II.3	46.3	42.2	0.2
	I969-72	I3.2	5I.I	35.3	0.5

Table A-23: (continued)

b. % of workers involved in strikes with given contract status.

Industry	Period	First agreement	Re-negot-iation	During term	Other
All manu-facturing	I96I-64	3.8	67.4	28.6	0.3
	I965-68	3.6	63.I	33.0	0.3
	I969-72	3.6	59.9	36.5	0.I
Coal	I96I-64	2.I	25.9	7I.6	0.4
	I965-68	I.7	27.6	70.6	0.I
	I969-72	I.0	I5.8	83.2	0.0
Primary metals	I96I-64	I.5	5I.3	47.2	0
	I965-68	3.6	47.6	48.5	0.3
	I969-72	2.9	56.5	40.5	0.I
Transport equipment	I96I-64	0.8	73.8	25.3	0.I
	I965-68	I.0	6I.8	37.I	0.0
	I969-72	3.0	65.3	3I.6	0.I

Table A-24: Strikes by issue, selected industries, 1961-72.

a. % of strikes with given issue.

Industry	Period	(1)	(2)	(3)	(4)	(5)	(6)
All manufacturing	1961-64	60.2	15.1	7.8	13.3	1.9	1.7
	1965-68	62.0	11.6	5.0	17.0	2.8	1.6
	1969-72	67.9	9.5	3.7	14.5	3.3	1.2
Coal	1961-64	I8.5	7.4	19.5	48.6	2.7	3.4
	1965-68	19.4	6.9	19.1	42.3	5.4	6.8
	1969-72	12.0	1.8	8.2	58.7	10.9	8.4
Primary metals	1961-64	52.0	7.7	10.5	26.8	2.5	0.5
	1965-68	60.8	6.8	3.5	24.1	3.4	1.4
	1969-72	65.9	5.1	4.6	20.8	3.0	0.6
Transport equipment	1961-64	43.4	9.1	8.4	34.3	1.9	2.9
	1965-68	49.0	8.4	5.4	33.2	3.0	1.1
	1969-72	56.9	8.8	3.8	26.6	2.7	1.2

Note: Key to issues:

(1) Wages, hours and other contractual matters

(2) Union organisation and security

(3) Job security

(4) Plant administration

(5) Other work conditions

(6) Inter and intra union.

Table A-24: (continued)

b. % of workers involved in strikes with given issue

Industry	Period	(1)	(2)	(3)	(4)	(5)	(6)
All manu-facturing	1961-64	44.0	5.5	8.7	38.9	1.5	1.4
	1965-68	59.4	4.3	6.3	25.0	3.5	1.4
	1969-72	63.1	7.2	4.0	20.8	3.6	1.3
Coal	1961-64	26.2	6.0	20.1	43.1	2.0	2.6
	1965-68	25.4	11.4	15.7	38.8	4.0	4.7
	1969-72	22.2	1.2	3.9	51.0	6.7	14.9
Primary metals	1961-64	36.6	2.0	15.0	41.4	4.0	1.0
	1965-68	48.0	7.6	4.7	35.9	3.0	0.9
	1969-72	65.1	1.9	5.3	22.2	2.6	2.9
Transport equipment	1961-64	15.8	0.9	5.2	77.2	0.3	0.6
	1965-68	42.2	2.9	8.5	41.5	4.6	0.3
	1969-72	45.0	7.0	3.4	41.7	2.3	0.7

Note: Issues are as defined in part 'a' of the Table.

Table A-25: Number of strikes and number of 'cessations', I88I-93.

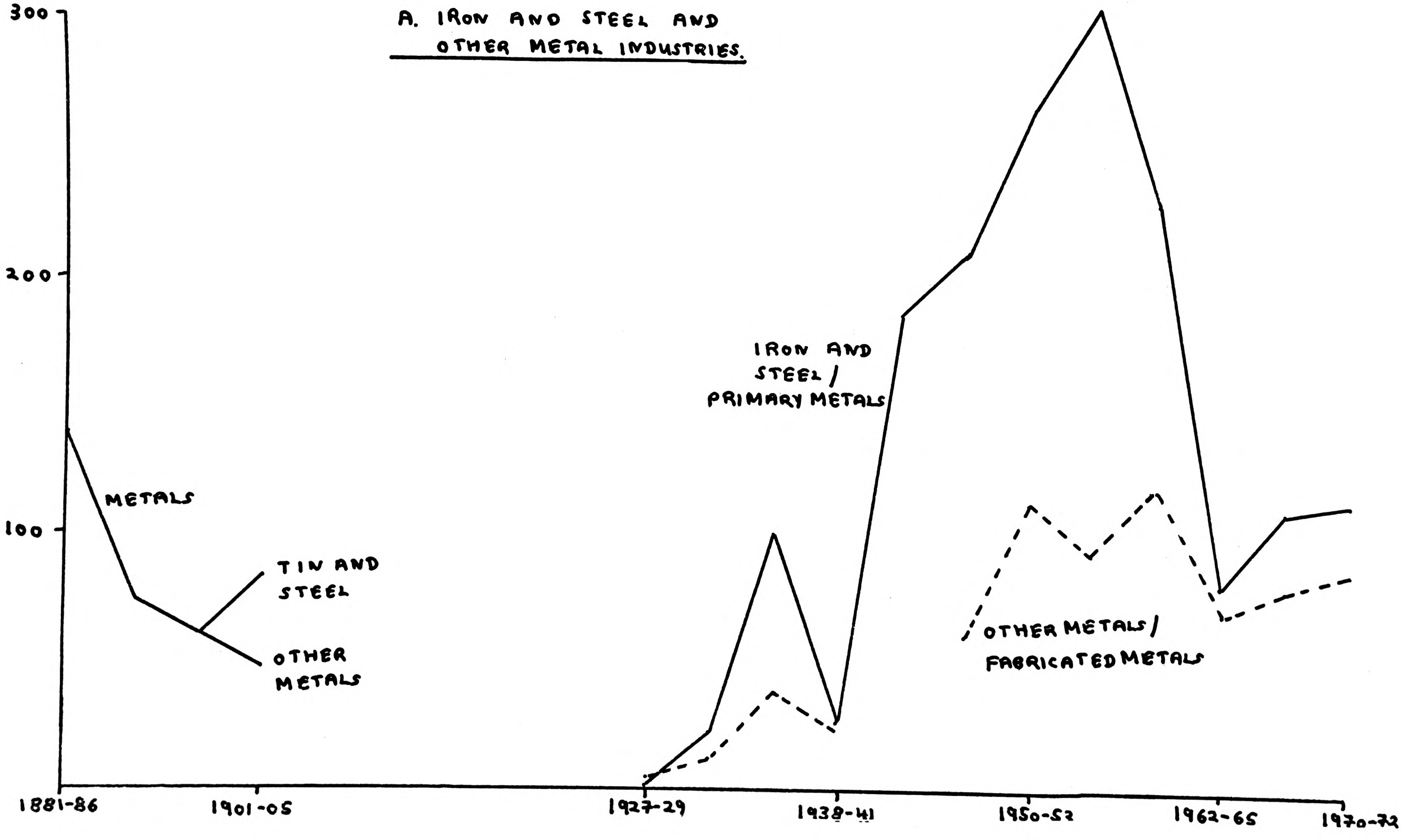
	Number of strikes	Number of 'cessations'	'Cessations' as % of strikes
I88I	477	632	I32
I882	476	59I	I24
I883	506	642	I27
I884	485	629	I30
I885	695	875	I26
I886	I572	2393	I52
I887	I503	I497	99.6
I888	946	943	99.7
I889	IIII	I034	93.I
I890	I897	I895	99.9
I89I	I786	I779	99.6
I892	I359	I348	99.2
I893	I375	I375	I00

Chart A-1: Worker involvement in strikes, selected industries, 1881-1972.

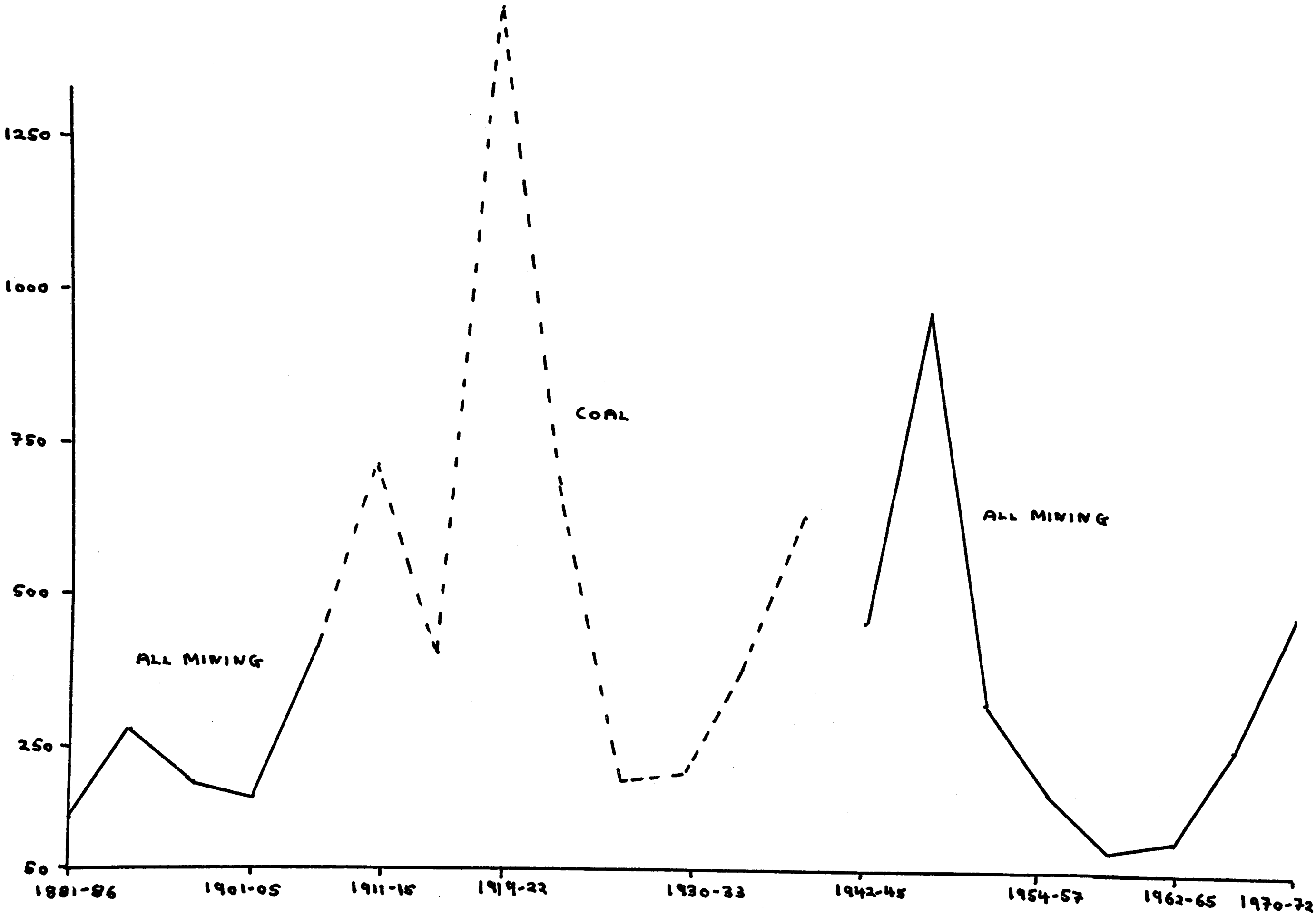
Each sub-section of the Chart gives, for one industry-group, the number of workers involved in strikes per thousand employees. From 1927, the sub-periods used are the same as those of Tables A-1 et. seqq. (i.e. 1927-29, 1930-33 etc.); for 1881-1905 the sub-periods are the four periods considered by the Commissioner of Labor (1881-86, 1887-94, 1894-1900 and 1901-05).

As far as possible, data relating to the same industry-group have been used in each sub-section of the Chart, but the unavoidable changes of definition have meant that completely consistent series have not been available; the major changes of definition are indicated in the Chart. For sources of data, see Appendix One, sections A-1 and A-5.

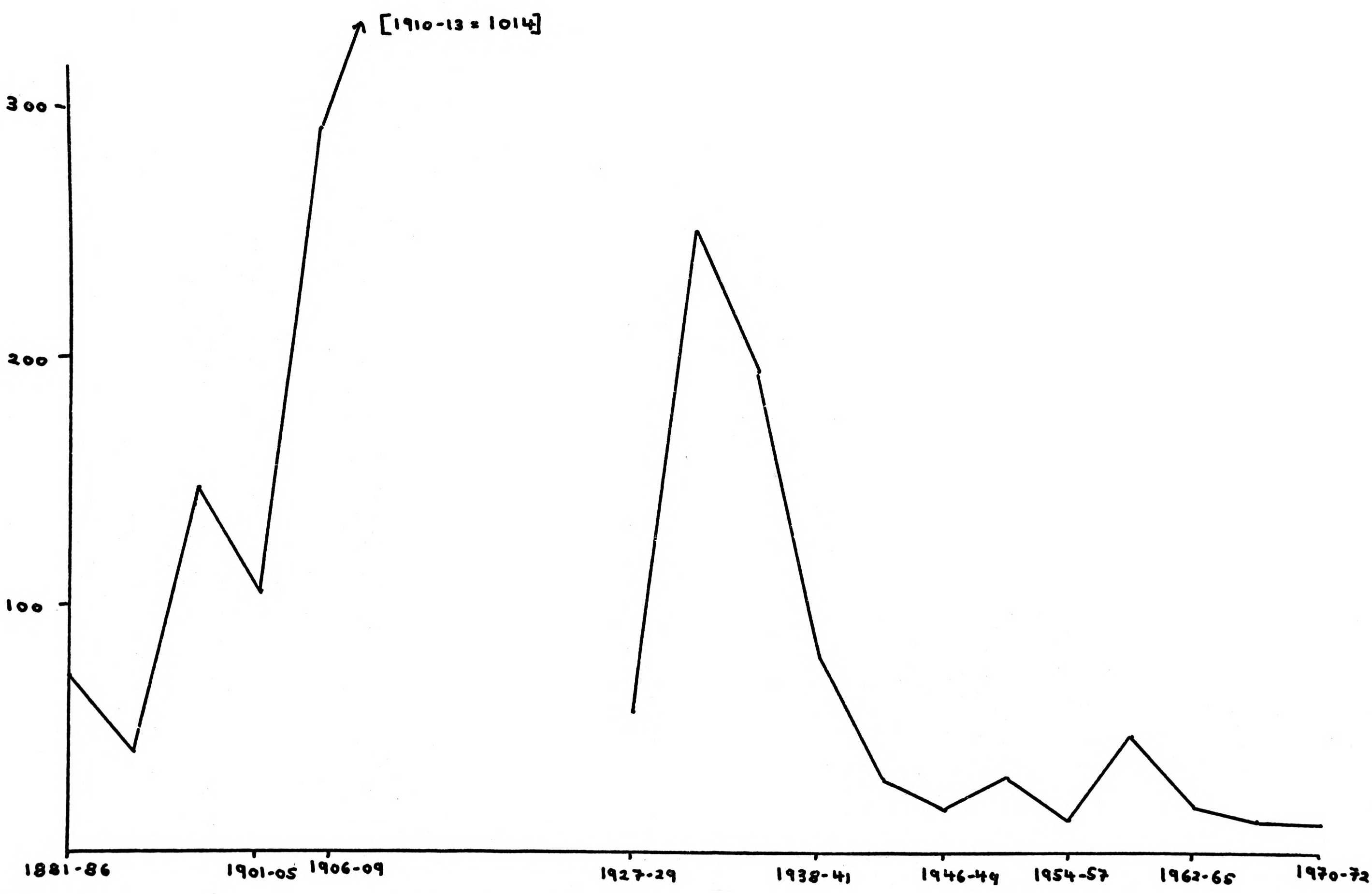
A. IRON AND STEEL AND OTHER METAL INDUSTRIES.



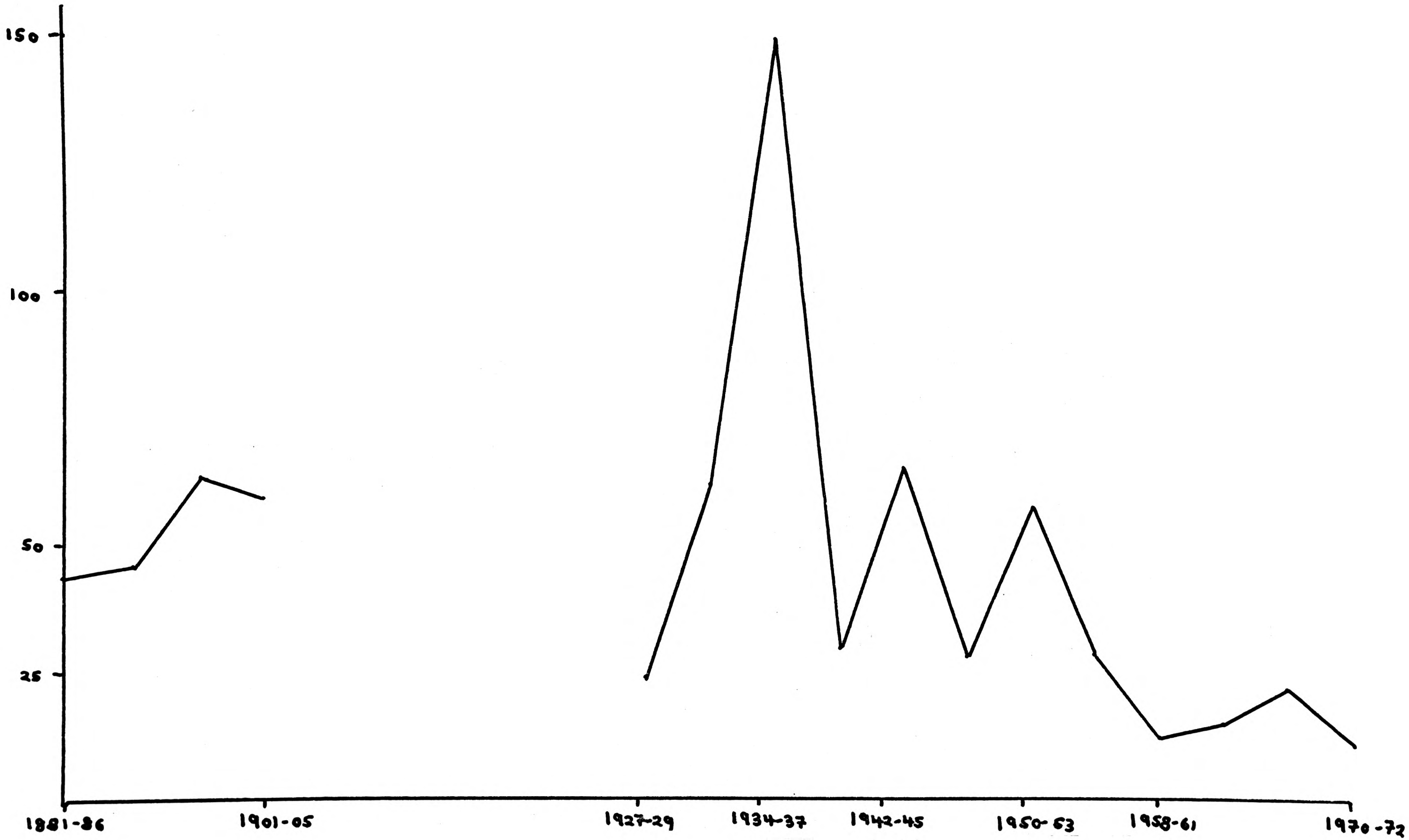
B. COAL AND MINING



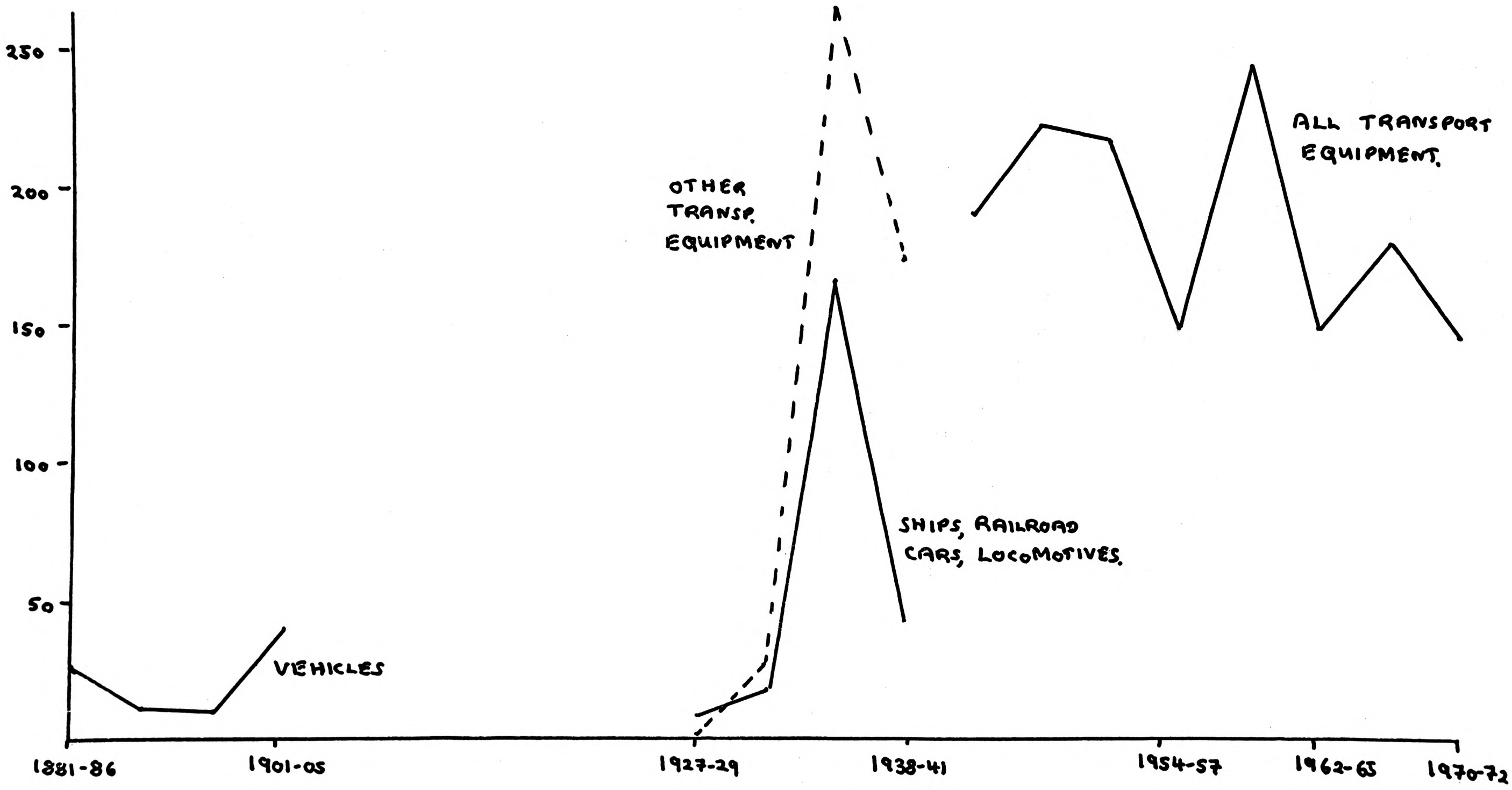
C. CLOTHING


[1910-13 = 1014]
300
200
100
1881-86
1901-05
1906-09
1927-29
1938-41
1946-49
1954-57
1962-65
1970-72

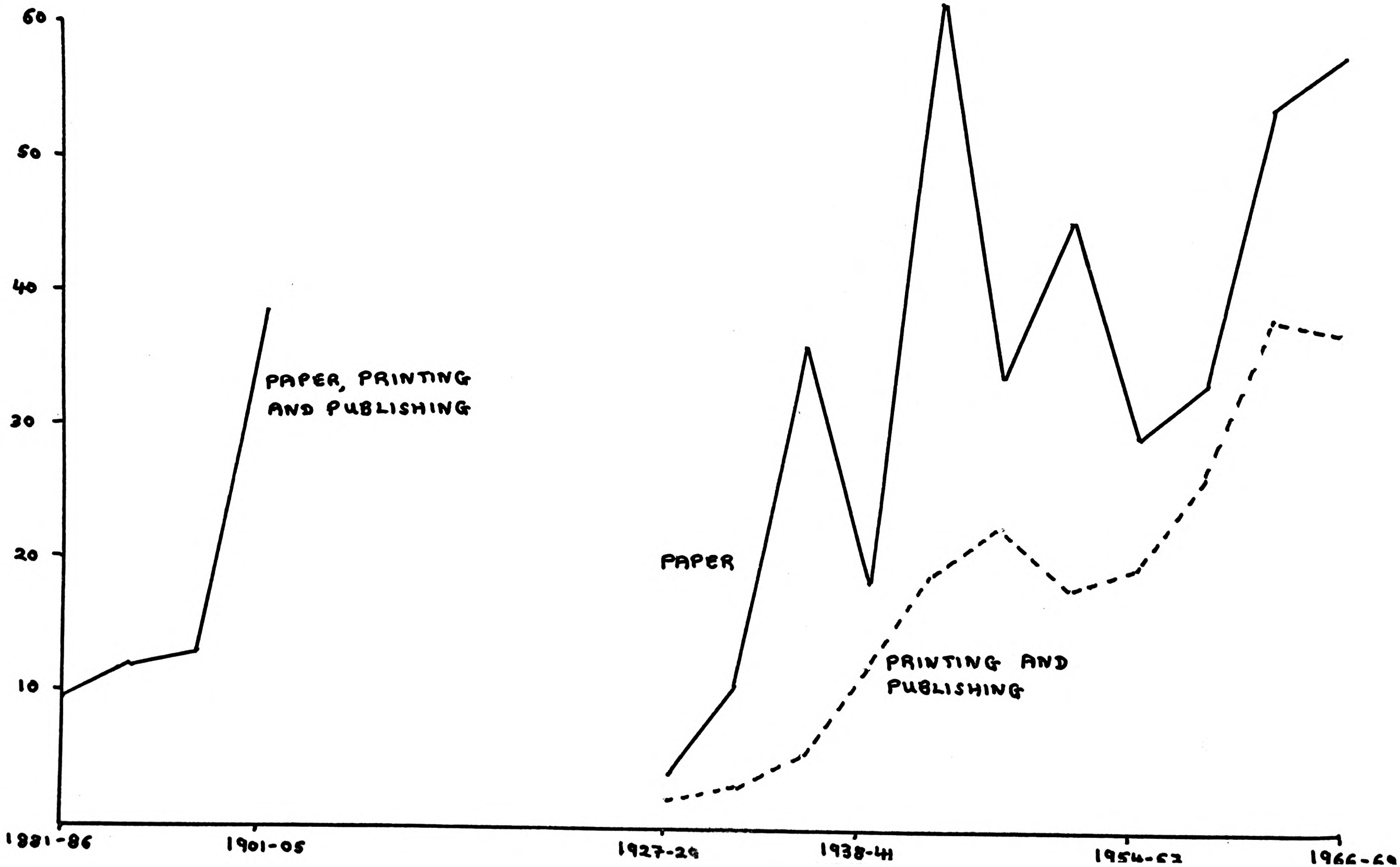
D. TEXTILES


150
100
50
25
1881-86
1901-05
1927-29
1934-37
1942-45
1950-53
1958-61
1970-72

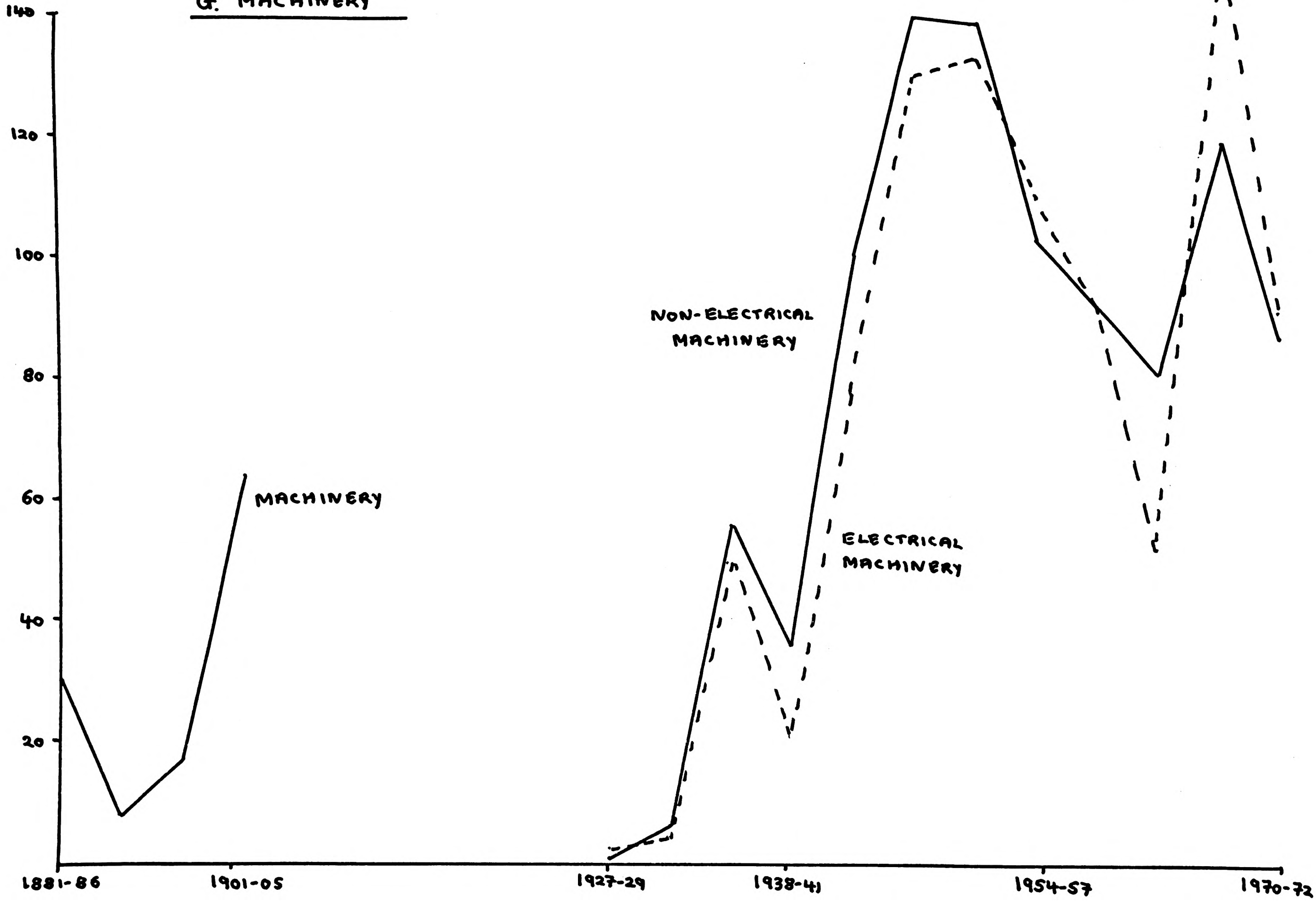
E. VEHICLES


250
200
150
100
50
VEHICLES
OTHER TRANSP. EQUIPMENT
SHIPS, RAILROAD CARS, LOCOMOTIVES
ALL TRANSPORT EQUIPMENT
1881-86
1901-05
1927-29
1938-41
1954-57
1962-65
1970-72

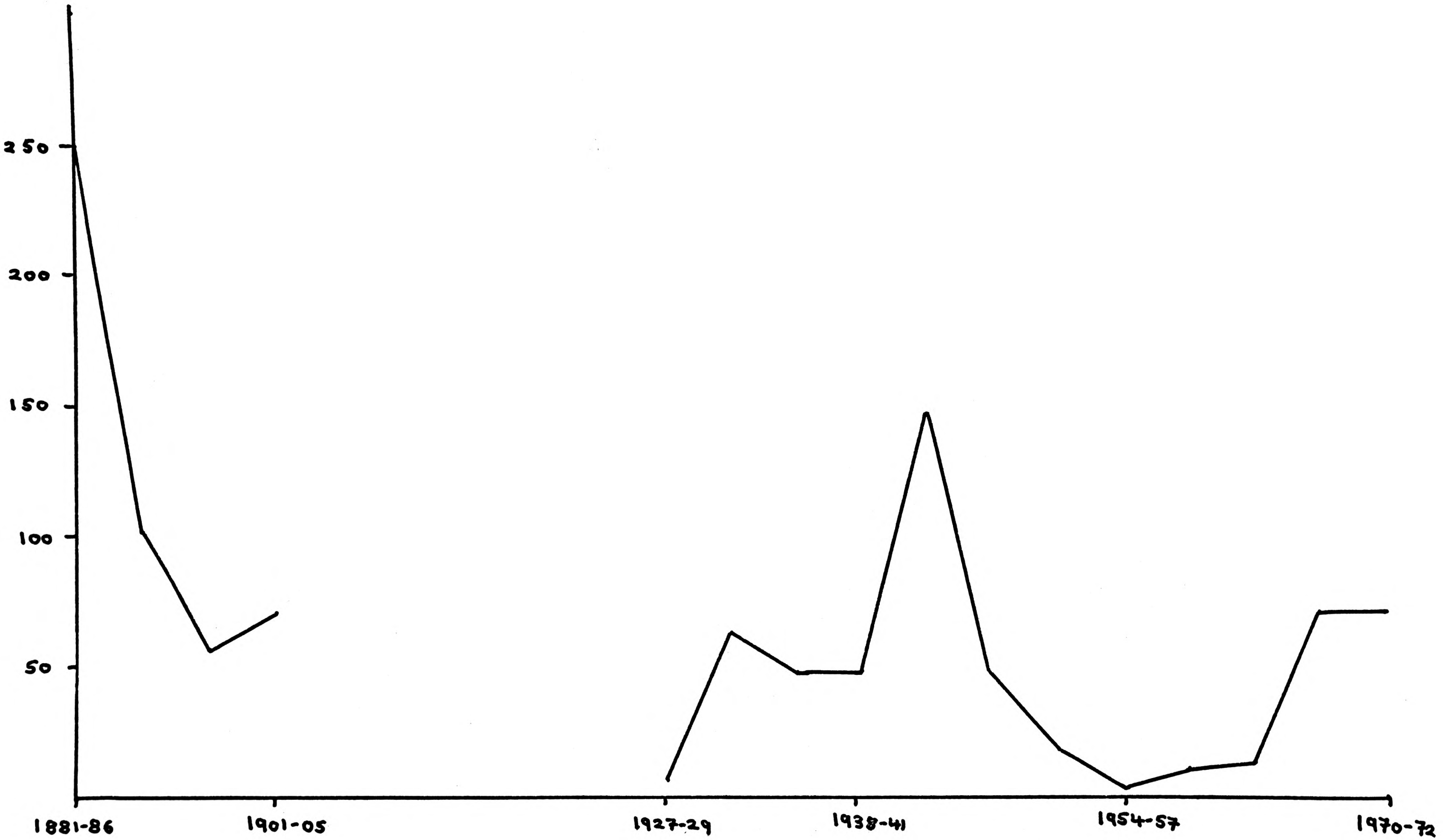
F. PAPER, PRINTING AND PUBLISHING



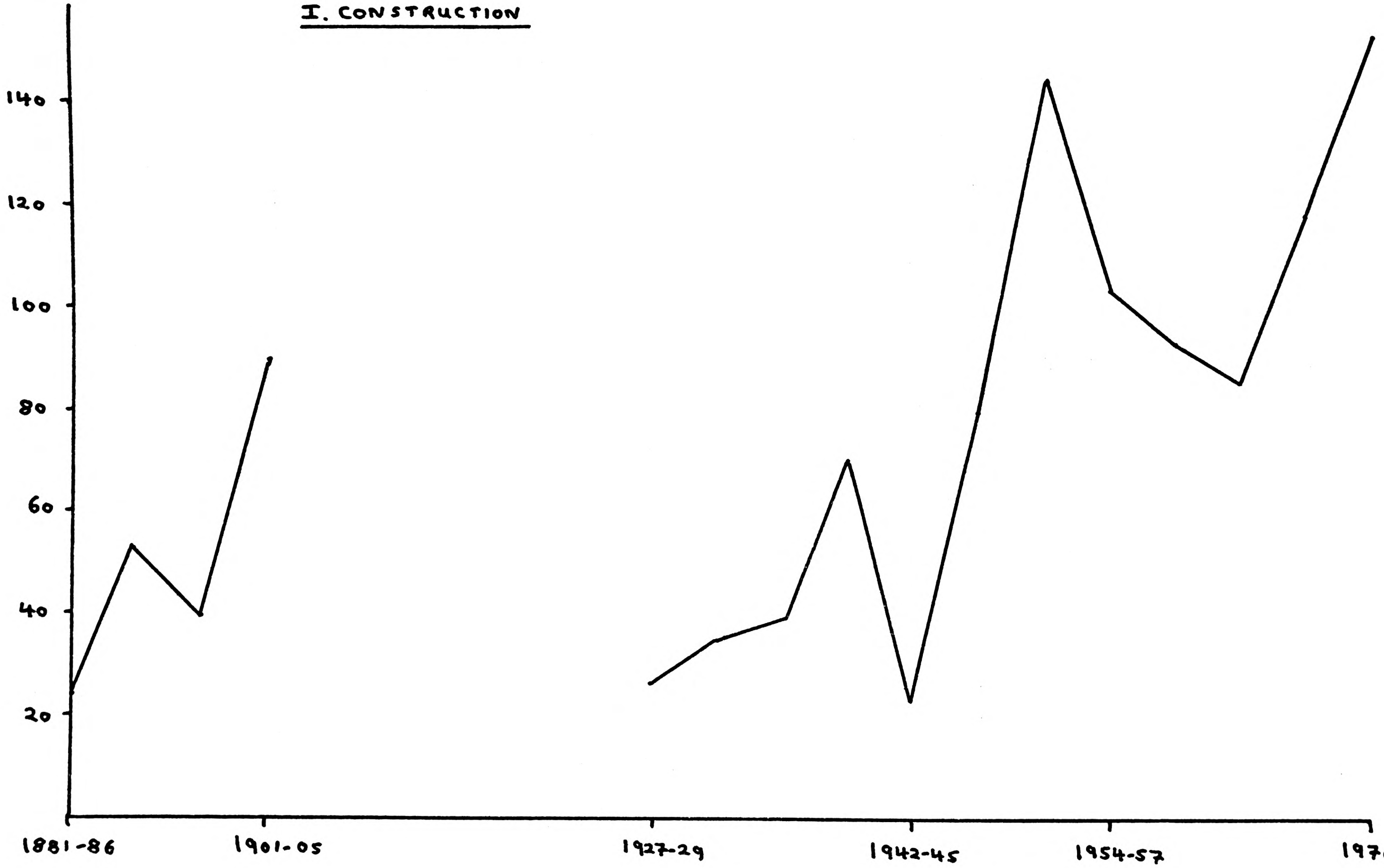
G. MACHINERY


140
120
100
80
60
40
20
MACHINERY
NON-ELECTRICAL MACHINERY
ELECTRICAL MACHINERY
1881-86
1901-05
1927-29
1938-41
1954-57
1970-72

H. TOBACCO


250
200
150
100
50
1881-86
1901-05
1927-29
1938-41
1954-57
1970-72

I. CONSTRUCTION



APPENDIX THREE:

BIBLIOGRAPHY

This Bibliography does not simply list all the works referred to in the footnotes to the text. It excludes (1)works not bearing directly on the use of official statistics, the institutionalisation theory or strikes in America (2)specific mention of every report in the Monthly Labor Review to which I have referred (3)official sources of data. It includes several particularly useful works which are not mentioned in the footnotes, but does not aim to be comprehensive.

The following abbreviations are used for journals which are mentioned frequently:

I.L.R.R.	Industrial and Labor Relations Review
I.R.R.A.	Proceedings of the Industrial Relations Research Association
L.H.	Labor History
M.L.R.	Monthly Labor Review
R.A.	Radical America

L. ADAMIC Dynamite: the story of class violence in America (Viking Press, N.Y., 2nd edn 1934).

A.V. ADAMS & J. KRISLOV 'New union organizing: a test of the Ashenfelter-Pencavel model of trade union growth' Quart.J.Econs, 88, pp.304-11 (1974).

G. ADAMS Age of industrial violence,1910-15 (Columbia Univ.Press,N.Y., 1966).

R.T. ADAMS 'Technology and productivity in bituminous coal, 1949-59' M.L.R., 84, pp.1081-86 (1961).

W. ADAMS (ed.) The structure of American industry (Macmillan, N.Y., 1st edn 1950).

B.L. ADELL The legal status of collective agreements in England, the United States and Canada (Ind. Rels Centre, Queen's Univ. Kingston, Ontario, 1970).

S.D. ALINSKY John L. Lewis: an unauthorized biography (G.P.Putnam's Sons, N.Y., 1949).

R.A. ALLEN The great Southwest strike (Univ. of Texas Press, Austin, Texas, 1942).

J.A. ALUTTO & J.A. BELASCO 'Determinants of attitudinal militancy among nurses and teachers' I.L.R.R., 27, pp.216-27 (1974).

P.ARNOW 'Findings of the Presidential Railroad Commission' I.R.R.A., Spring 1963, pp.677-85.

S. ARONOWITZ False promises: the shaping of American working class consciousness (McGraw-Hill, N.Y., 1973).

O. ASHENFELTER & G.E.JOHNSON 'Bargaining theory, trade unions and industrial strike activity' Amer.Econ.Rev., 59, pp.35-49 (1969).

O. ASHENFELTER & W.S. PEIRCE 'Comment on "Industrial conflict: the power of prediction"' I.L.R.R.,20, pp.92-95 (1966).

O. ASHENFELTER & J.H. PENCAVEL 'American trade union growth 1900-60' Quart.J.Econs, 83, pp.434-48 (1969).

J.S. AUERBACH Labor and liberty: the La Follette Committee and the New Deal (Bobbs-Merrill, Indianapolis, Ind., 1966).

(ed.) American labor: the twentieth century (Bobbs-Merrill, Indianapolis, Ind., 1969).

'New Deal, Old Deal or Raw Deal: some thoughts on New Left historiography' J.Southern Hist., 35, pp.18-30 (1969).

E.F. BAKER Printers and technology: a history of the International Printing Pressmen and Assistants' Union (Columbia Univ. Press, N.Y., 1957).

Technology and woman's work (Columbia Univ. Press, N.Y., 1964).

E.W. BAKKE, C. KERR & C.W. ANROD (eds) Unions, management and the public (Harcourt, Brace & Co., N.Y., 2nd edn 1960).

M.S. BARATZ The union and the coal industry (Yale Univ. Press, New Haven, Conn., 1955).

J. BARBASH Labor unions in action: a study of the mainsprings of unionism (Harper & Bros., N.Y., 1948).

(ed.) Unions and union leadership (Harper & Bros., N.Y.,1959).

(ed.) The labor movement: a re-examination (Univ. of Wisconsin Press, Madison, Wisc., 1967).

'Labor and the corporate state in America' J.Econ.Issues, 6, no.1, pp.43-57 (1972).

H. BARGER & S.H. SCHURR The mining industries, 1899-1939 (National Bureau of Econ. Research, N.Y., 1944).

S. BARKIN (ed.) Worker militancy and its consequences, 1965-75 (Praeger, N.Y., 1975).

'A new agenda for labor' Fortune, 62, no.5,pp.249-55 (1960).

G.E. BARNETT The printers: a study in American trade unionism (Princeton Univ. Press, Princeton, N.J., 1909).

Chapters on machinery and labor (Harvard Univ. Press, Cambridge, Mass., 1926).

R.S. BAUDER 'National collective bargaining in the foundry industry' Amer.Econ.Rev., 24, pp. 462-76 (1934).

M.J. BAUM 'Maturity in industrial relations: a case study' I.L.R.R., 4, pp.257-64 (1951).

D. BELL Work and its discontents (Beacon Press, Boston, 1956).

'The workers' search for security' M.L.R., 86, pp.614-17 (1963).

A. BENHAMOU-HIRTZ Les relations collectives dans la siderurgie Americaine (Armand Colin, Paris, 1966).

A. BERGLUND The United States Steel Corporation (Columbia Univ.Press, N.Y., 1907).

E. BERMAN Labor disputes and the President of the United States (Columbia Univ. Press, N.Y., 1924).

A.L. BERNHEIM & D.V.DOREN (eds) Labor and the Government (McGraw-Hill, N.Y., 1935).

B.J. BERNSTEIN (ed.) Towards a new past: dissenting essays in American history (Pantheon Books, N.Y., 1968).

'The Truman Administration and the steel strike of 1946' J.Amer.Hist., 52, pp.791-803 (1966).

I. BERNSTEIN The New Deal collective bargaining policy (Univ. of California Press, Berkeley & Los Angeles, 1950).

The lean years (Houghton Mifflin, Cambridge, Mass., 1960).

Turbulent years (Houghton Mifflin, Boston, 1970).

'The growth of American unions' Amer.Econ.Rev., 44, pp.301-18 (1954).

I. BERNSTEIN, H.L. ENARSON & R.W. FLEMING (eds) Emergency disputes and national policy (Harper & Bros., N.Y., 1955).

I. BERNSTEIN & H.G. LOVELL 'Are coal strikes national emergencies?' I.L.R.R., 6, pp.352-67 (1953).

R.T. BERTHOFF British immigrants in industrial America, 1790-1950 (Harvard Univ. Press, Cambridge, Mass., 1953).

A. BIMBA The Molly Maguires (Martin Lawrence, London, 1932).

The history of the American working class (Martin Lawrence, London, 2nd edn 1934).

A.M. BING War-time strikes and their adjustment (E.P.Dutton & Co., N.Y., 1921).

J.L. BLACKMAN Presidential seizure in labor disputes (Harvard Univ. Press, Cambridge, Mass., 1967).

H. BLANKENHORN The strike for union: a study of the non-union question in coal and the problems of a democratic movement (H.W.Wilson, N.Y., 1924).

J.W. BLOCH 'The strike and discontent' M.L.R., 86, pp.645-51 (1963).

A.A. BLUM (ed.) Teacher unions and associations: a comparative study (Univ.of Illinois Press, Urbana, Ill., 1969).

A.A. BLUM 'Labor at the crossroads' Harvard Business Rev., 42, no.4, pp.6-19, 172 (1964).

'Why unions grow' L.H., 9,pp.39-72 (1968).

A.A. BLUM, M.ESTEY, J.W. KUHN, W.A. WILDMAN & L. TROY White-collar workers (Random House, N.Y., 1971).

E.L. BOGART & G.M. THOMPSON Readings in the economic history of the United States (Longman's, Green & Co., N.Y., 1916).

D.C. BOK & J.T. DUNLOP Labor and the American community (Simon & Schuster, N.Y., 1970).

C.E. BONNETT Employers' associations in the United States (Macmillan, N.Y., 1922).

History of employers' associations in the United States (Vantage Press, N.Y., 1956).

P. BOOTH 'Theses on contemporary U.S. labor unionism' R.A., 5,no.1, pp.1-10 (1971).

D.O. BOWMAN Public control of labor relations: a study of the National Labor Relations Board (Macmillan, N.Y., 1942).

R.O. BOYER & H.M. MORAIS Labor's untold story (Cameron Assocs, N.Y.,1955).

H. BRAVERMAN Labor and monopoly capital: the degradation of work in the twentieth century (Monthly Review Press, N.Y.,1974).

J. BRECHER The sit-down strikes of the 1930's: from baseball to bureaucracy (Root & Branch pamphlet no.4, Cambridge, Mass., n.d. (1971?)).

Strike. The true history of mass insurgence in America from 1877 to the present (Straight Arrow Books, San Francisco, 1972).

V.M. BRIGGS 'The strike insurance plan of the railroad industry' Ind.Rels, 6, pp.205-12 (1967).

P.F. BRISSENDEN The I.W.W.: a study of American syndicalism (Columbia Univ. Press, N.Y., 2nd edn 1920).

'The settlement of labour disputes over interests in the United States' J.Ind.Rels, 6, pp.20-35 (1964).

D. BRITT & O.R. GALLE 'Industrial conflict and unionization' Amer. Sociol.Rev., 37, pp.46-57 (1972).

'Structural antecedents of the shape of strikes: a comparative analysis' Amer.Sociol.Rev.,39, pp.642-51 (1974).

D. BRODY Steelworkers in America: the non-union era (Harvard Univ. Press, Cambridge, Mass.,1960).

The Butcher Workmen: a study of unionization (Harvard Univ. Press, Cambridge, Mass.,1964).

Labor in crisis: the steel strike of 1919 (J.B.Lippincott Co., Philadelphia, 1965).

'Labor and the Great Depression: the interpretive prospects' L.H., 13, pp.231-44 (1972).

'Review essay of A. and S.Lynd "Rank and file: personal histories by working class organizers"' L.H., 16, pp.117-26 (1975).

W.G. BROEHL The Molly Maguires (Harvard Univ.Press, Cambridge,Mass.,1964).

R.R.R. BROOKS When labor organizes (Yale Univ.Press, New Haven,Conn.,1937).

As steel goes...Unionism in a basic industry (Yale Univ. Press, New Haven, Conn.,1940).

T.R. BROOKS Toil and trouble: a history of American labor (Delacorte Press, N.Y., 1964).

D.V. BROWN & C.A. MYERS 'The changing industrial relations philosophy of American management' I.R.R.A., annual meeting 1956, pp.84-99.

R.V. BRUCE 1877: year of violence (Bobbs-Merrill, Indianapolis, 1959).

K.L. BRYANT 'Labor in politics: the Oklahoma State Federation of Labor during the Age of Reform' L.H., 11, pp.259-76 (1970).

S. BUDER Pullman: an experiment in industrial order and community planning, 1880-1930 (Oxford Univ.Press, N.Y., 1967).

J.M. BUDISH & G. SOULE The new unionism in the clothing industry (Harcourt, Brace & Howe, N.Y., 1920).

B.M. BURGOON 'The railway industry' I.R.R.A., Spring 1970, pp.491-98.

D.R. BURKE & L. RUBIN 'Is contract rejection a major collective bargaining problem?' I.L.R.R., 26, pp.820-33 (1973).

J.F. BURTON 'Can public employees be given the right to strike?' I.R.R.A., Spring 1970, pp.472-78.

J.T. CARPENTER Employers' associations and collective bargaining in New York City (Cornell Univ.Press, Ithaca, N.Y., 1950).

Competition and collective bargaing in the needle trades, 1910-67 (Cornell Univ. Press, Ithaca, N.Y., 1972).

L.L. CARY 'Institutionalized conservatism in the early C.I.O.: Adolph Germer, a case study' L.H., 13, pp.475-504 (1972).

M. CASS 'The relationship between size of firm and strike activity' M.L.R., 80, pp.1330-34 (1957).

N.W. CHAMBERLAIN Collective bargaining (McGraw-Hill, N.Y., 1951).

Social responsibility and strikes (Harper & Bros., N.Y., 1953).

'The union challenge to management control' I.L.R.R., 16, pp.184-92 (1963).

'Strikes in contemporary context' I.L.R.R., 20, pp.602-16 (1967).

N.W. CHAMBERLAIN & J.W. KUHN Collective bargaining (McGraw-Hill, N.Y., 2nd edn 1965).

N.W. CHAMBERLAIN & J.M. SCHILLING The impact of strikes (Harper & Bros., N.Y., 1954).

A.D. CHANDLER Giant enterprise: Ford, General Motors and the automobile industry (Harcourt, Brace & World, N.Y., 1964).

W.N. CHERNISH Coalition bargaining (Univ. of Pennsylvania Press, Philadelphia, 1969).

C.L. CHRISTENSON 'The theory of the offset factor: the impact of labor disputes upon coal production' Amer.Econ.Rev., 43, pp.513-47 (1953).

L. CHURCHILL 'Ethnomethodology and measurement' Soc.Forces, 50, pp.182-91 (1971).

A.V. CICOUREL Method and measurement in sociology (Free Press, N.Y., 1964).

M. CIMINI 'Government intervention in railroad disputes' M.L.R., 94, no.12, pp.27-34 (1971).

E. CLAGUE The Bureau of Labor Statistics (Praeger, N.Y., 1968).

H.A. CLEGG Trade unionism under collective bargaining: a theory based on comparisons of six countries (Blackwell, Oxford, 1976).

'Pluralism in industrial relations' Brit.J.Ind.Rels, 13, pp.309-16 (1975).

S. CLELAND The influence of plant size on industrial relations (Ind. Rels Section, Princeton Univ.,Princeton, N.J.,1955).

M. COLEMAN Men and coal (Farrar & Rinehart, N.Y., 1943).

J.R. COMMONS (ed.) Trade unionism and labor problems (A.M.Kelley, N.Y., 1967, orig.publ. 1905).

Labor and administration (Macmillan, N.Y., 1913).

J.R. COMMONS et.al. History of labour in the United States, 4 vols (Macmillan, N.Y., vols 1 & 2 1918, vols 3 & 4 1935).

L.W. COOPER 'The American labor movement in prosperity and depression' Amer.Econ.Rev., 22, pp.641-59 (1932).

R.J. CORNELL The anthracite coal strike of 1902 (Catholic Univ. of America Press, Washington, D.C.,1957).

R.C. CORTNER The Wagner Act cases (Univ.of Tennessee Press, Knoxville, Tenn., 1964).

H.L. COSTNER (ed.) Sociological methodology, 1973-74 (Jassey-Bass Publishers, San Francisco, 1974).

C. CRAYPO 'Collective bargaining in the conglomerate, multinational firm: Litton's shutdown of Royal Typewriter' I.L.R.R., 29, pp.3-25 (1975).

The Crisis in the American trade union movement Annals of the Amer. Acad. of Pol. & Soc. Sci, 350 (1963).

J.H.G. CRISPO Industrial relations: challenges and responses (Univ. of Toronto Press, Toronto, 1966).

W.H. CROOK Communism and the general strike (The Shoestring Press, Hamden, Conn.,1960).

I.B. CROSS / history of the labor movement in California (Univ. of California Press, Berkeley 1935).

J.T. CUMBLER 'Labor, capital and community: the struggle for power' L.H., 15, pp.395-415 (1974).

R. DAHRENDORF Class and class conflict in industrial society (Routledge & Kegan Paul, London, 1959).

C.R. DAUGHERTY, M.G. de CHAZEAU & S.S. STRATTON The economics of the iron and steel industry, 2 vols (McGraw-Hill, N.Y., 1937).

H.B. DAVIS Labor and steel (Martin Lawrence, London, 1933).

P. DAVIS The development of the American glass industry (Harvard Univ. Press, Cambridge, Mass., 1949).

L. de CAUX Labor radical: from the Wobblies to the C.I.O., a personal history (Beacon Press, Boston, 1970).

G.E. DELEHANTY Non-production workers in U.S. manufacturing (North-Holland, Amsterdam, 1968).

M. DERBER The American idea of industrial democracy, 1865-1965 (Univ. of Illinois Press, Urbana, Ill., 1970).

M. DERBER & E. YOUNG (eds) Labor and the New Deal (Univ. of Wisconsin Press, Madison, Wisc., 1957).

M. DERBER 'Collective bargaining in Great Britain and the United States' Quart. Rev. of Econs & Bus., 8, no.4, pp.55-66 (1968).

W.M. DICK Labor and Socialism in America: the Gompers era (Kennikat Press, Port Washington, N.Y., 1972).

F. DOBBS Teamster rebellion (Monad Press, N.Y., 1972).

F.S. DOODY Readings in labor economics (Addison-Wesley Press, Cambridge, Mass., 1950).

J.D. DOUGLAS The social meanings of suicide (Princeton Univ. Press, Princeton, N.J., 1967).

P.H. Douglas 'An analysis of strike statistics' J. Amer. Statistical Assoc., 18, pp.866-77 (1923).

H.M. DOUTY 'The trend of industrial disputes, 1922-1930' J. Amer. Statistical Assoc., 27, pp.168-72 (1932).

'Collective bargaining coverage in factory employment, 1958' M.L.R., 83, pp.345-49 (1960).

R. DUBIN 'A theory of conflict and power in union-management relations' I.L.R.R., 13, pp.501-18 (1960).
'Industrial conflict: the power of prediction' I.L.R.R., 18, pp.352-63 (1965).

'Attachment to work and union militancy' Ind.Rels, 12, no.1, pp.51-64 (1973).

T. DUBLIN 'Women, work and protest in the early Lowell mills' L.H., 16, pp.99-116 (1975).

M. DUBOFSKY When workers organize: New York City in the Progressive Era (Univ. of Massachusetts Press, Amherst, Mass., 1968).
We shall be all: a history of the Industrial Workers of the World (Quadrangle Books, Chicago, 1969).
(ed.) American labor since the New Deal (Quadrangle Books, N.Y., 1971).

'The origins of Western working class radicalism, 1890-1905' L.H., 7, pp.131-54 (1966).

J.T. DUNLOP Industrial relations systems (Southern Illinois Univ., Press, Carbondale, Ill., 1970, orig. publ.1958).

'Future trends in industrial relations in the United States' paper given to Internat. Ind.Rels Assoc., 3rd World Congress, 1973.

J.T. DUNLOP & N.W. CHAMBERLAIN Frontiers of collective bargaining (Harper & Row, N.Y., 1967).

J.G. DUNNE Delano: the story of the California grape strike (Farrar, Strauss & Giroux, N.Y., 1967).

J.W. DURCAN & W.E.J. McCARTHY 'The State subsidy theory of strikes' Brit.J.Ind.Rels, 12, pp.26-47 (1974).

B.C. EATON 'The worker and the profitability of the strike' I.L.R.R., 26, pp.670-79 (1972).

J.D. EDELSTEIN & M. WARNER Comparative union democracy: organisation and opposition in British and American unions (George Allen & Unwin, London, 1975).

D.D. EGBERT & S. PERSONS Socialism and American life, Vol.1 (Princeton Univ. Press, Princeton, N.J., 1952).

G.G. EGGERT Railroad labor disputes: the beginnings of Federal strike policy (Univ.of Michigan Press, Ann Arbor, Mich.,1967).

C.F. EISELE 'Organization size, technology and frequency of strikes' I.L.R.R., 27, pp.560-71 (1974).

J.E.T. ELDRIDGE Industrial disputes (Routledge & Kegan Paul,London,1968).

P. ELIEL 'Industrial peace and conflict: a study of two Pacific Coast industries' I.L.R.R., 2, pp.477-501 (1949).

C. ERICKSON American industry and the European immigrant 1860-1885 (Harvard Univ.Press, Cambridge, Mass., 1957).

W.D. EVANS 'Effects of mechanization in cigar manufacturing' M.L.R., 46, pp.1100-20 (1938).

S. FABRICANT Employment in manufacturing, 1899-1939 (National Bureau of Econ. Research, N.Y., 1942).

H.U. FAULKNER The decline of laissez faire, 1897-1917 (Rinehart & Co., N.Y., 1951).

P. FILMER, M. PHILLIPSON, D. SILVERMAN & D. WALSH New directions in sociological theory (Collier-Macmillan, London, 1972).

S. FINE Laissez-faire and the General-welfare State: a study of conflict in American thought, 1865-1901 (Univ.of Michigan Press, Ann Arbor, Mich., 1956).

The automobile under the Blue Eagle (Univ.of Michigan Press, Ann Arbor, Mich.,1963).

Sit-down: the General Motors strike of 1936-37 (Univ. of Michigan Press, Ann Arbor, Mich., 1969).

'The origins of the United Automobile Workers, 1933-35' J.Econ. Hist., 18, pp.249-82 (1958).

'President Roosevelt and the Automobile Code' Mississippi Valley Hist.Rev., 45, pp.23-50 (1958).

'The Toledo Chevrolet strike of 1935' Ohio Hist.Quart., 67, pp.326-56 (1958).

M.R. FISHER Measurement of labour disputes and their economic effects (O.E.C.D., Paris, 1973).

R.W. FISHER 'Labor in the economy of 1967' M.L.R.,90, no.12,pp.1-11 (1967).

J.A. FITCH The steel workers (Russell Sage Foundation, N.Y., 1910).

R.J. FLANAGAN, G. STRAUSS & L. ULMAN 'Worker discontent and work place behavior' Ind.Rels, 13, no.2, pp.101-23 (1974).

P.S. FLORENCE Economics and sociology of industry (C.A.Watts, London, 2nd edn 1969).

P.S. FONER History of the labor movement in the United States (International Publishers, N.Y., vol.1 1947, vol.2 1955, vol.3 1964, vol.4 1965).

K. FORCHHEIMER 'Some international aspects of the strike movement' Bull. of the Oxford Univ.Instit.of Stats, 10, pp.9-24, 294-304 (1948).

Fortune 'The labor situation' vol34,no.5,pp.121-26,280-86 (1946).

'Continuous coal mining' vol.41,no.6,pp.111-27 (1950).

H. FOSTER 'Employers' strike insurance' L.H., 12, pp.483-529 (1971).

W.Z. FOSTER The great steel strike and its lessons (B.W.Huebsch Inc., N.Y., 1920).

A. FOX Beyond contract: work, power and trust relations (Faber & Faber, London, 1974).

D.R. FUSFIELD 'The rise of the corporate State in America' J.Econ. Issues, 6,no.1, pp.1-22 (1972).

P. GALAMBOS & E.W. EVANS 'Work stoppages in the U.K.,1951-64' Bull.of the Oxford Univ.Instit.of Stats, 28, pp.33-57 (1966).

W. GALENSON The C.I.O. challenge to the A.F.L. (Harvard Univ. Press, Cambridge, Mass.,1960).

'1937: the turning point for American labor' (Univ. of California at Berkeley Instit.of Ind.Rels Reprint no.120).

'Why the American labor movement is not Socialist' (Univ. of California at Berkeley Instit.of Ind.Rels Reprint no.168).

W. GALENSON & S.M. LIPSET (eds) Labor and trade unionism (Wiley,N.Y., 1960).

J.S. GAMBS The decline of the I.W.W. (Russell & Russell, N.Y., 1966, orig. publ. 1932).

J.W. GARBARINO 'Bargaining strategy and the form of contracts' Ind.Rels, 1, no.2, pp.73-88 (1962).

'Managing conflict in industrial relations: U.S. experience and current issues in Britain' Brit.J.Ind.Rels, 7, pp.317-35 (1969).

H. GARFINKEL Studies in ethnomethodology (Prentice-Hall, Englewood Cliffs, N.J., 1967).

J.A. GARRATY The New Commonwealth, 1877-90 (Harper & Row, N.Y.,1968).

'The U.S.Steel Corporation versus labor: the early years' L.H., 1, pp.3-38 (1960).

A. GIFFORD 'The impact of Socialism on work stoppages' Ind.Rels, 13,no.2, pp.208-12 (1974).

D. GILBERT 'A statistical analysis of the right-to-work law conflict' I.L.R.R., 19, pp.533-37 (1966).

E. GINZBERG & H. BERMAN The American worker in the twentieth century: a history through autobiographies (Free Press, N.Y., 1963).

M. GLABERMAN 'Marxism, the working class and the trade unions' Studies on the Left, 4,no.3, pp.65-70 (1964).

R.W. GLASS 'Work stoppages and teachers: history and prospect' M.L.R., 90, no.8, pp.43-46 (1967).

M. GOLDBLOOM, J. HERLING, J. SEIDMAN & E. YARD Strikes under the New Deal (League for Industrial Democracy, N.Y., n.d. (1935?)).

C.S. GOLDEN & V.D. PARKER (eds) Causes of industrial peace under collective bargaining (Harper & Bros., N.Y., 1955).

N. GOLDFINGER 'Labor-management relations in an increasingly difficult economic environment' I.R.R.A., Winter 1974, pp.1-8.

S. GOMPERS Seventy years of life and labour, 2 vols (Hurst & Blackett Co., London, 1925).

J. GOODING 'Blue-collar blues on the assembly line' Fortune, 82, no.1, pp.69-71, 112-17 (1970).

C. GOODRICH The miners' freedom (Workers' Educ. Bureau of Amer.,N.Y.,1926)

M.M. GORDON Assimilation in American life (Oxford Univ.Press, N.Y.,1964).

A. GORZ (ed.) The division of labour: the labour process and class struggle in modern capitalism (Harvester Press, Brighton, 1976).

A.W. GOULDNER Wildcat strike (Routledge & Kegan Paul, London, 1955).

H.D. GRAHAM & T.R. GURR (eds) Violence in America (U.S. Government Printing Office, Washington, D.C., 1969).

J. GREEN 'Working class militancy in the depression' R.A., 6, no.6, pp.1-35 (1972).

M. GREEN The National Civic Federation and the American labor movement, 1900-25 (Catholic Univ. of America Press, Washington, D.C., 1956).

V.R. GREENE The Slavic community on strike (Univ. of Notre Dame Press, Notre Dame, Ind., 1968).

J.D. GREENSTONE Labor in American politics (Vintage Books edn, N.Y., 1970).

C.O. GREGORY Labor and the law (W.W.Norton & Co., N.Y., 2nd edn 1958).

J.I. GRIFFIN Strikes: a study in quantitative economics (Columbia Univ. Press, N.Y., 1939).

G.N. GROB Workers and Utopia: a study of ideological conflict in the American labor movement, 1865-1900 (Northwestern Univ. Press, Evanston, Ill., 1961).

H.G. GUTMAN 'An iron workers' strike in the Ohio Valley' Ohio Hist. Quart., 68, pp.353-70 (1959).

'Two lockouts in Pennsylvania, 1873-74' Pennsylvania Magazine of Hist. & Biog., 83, pp.307-26 (1959).

'Reconstruction in Ohio: Negroes in the Hocking Valley coal mines in 1873 and 1874' L.H., 3, pp.243-64 (1962).

'Work, culture and society in industrializing America, 1815-1919' Amer. Hist. Rev., 78, pp.531-88 (1973).

W. HABER Industrial relations in the building industry (Harvard Univ. Press, Cambridge, Mass., 1930).

(ed.) Labor in a changing America (Basic Books, N.Y., 1966).

W. HABER & H.M. LEVINSON Labor relations and productivity in the building trades (Bureau of Ind. Rels, Univ. of Michigan, 1956).

W.H. HAMILTON & H.R. WRIGHT The case of bituminous coal (George Allen & Unwin, London, 1925).

H.B. HAMMETT 'Labor and race: the Georgia railroad strike of 1909' L.H., 16, pp.470-84 (1975).

M. HANDMAN 'Changing ideologies in the American labor movement' Amer.J. Sociol., 43, pp.525-38 (1938).

A.H. HANSEN 'Cycles of strikes' Amer.Econ.Rev., 11,pp.616-21 (1921).

F.H. HARBISON 'The General Motors-United Auto Workers agreement of 1950' J.Pol.Econ., 58, pp.397-411 (1950).

F.H. HARBISON & J.R. COLEMAN Goals and strategy in collective bargaining (Harper & Bros., N.Y., 1951).

F.H. HARBISON & R. DUBIN Patterns of union-management relations (Science Research Assocs, Chicago, 1947).

F.H. HARBISON & R.C. SPENCER 'The politics of collective bargaining: the post-war record in steel' Amer.Pol.Sci.Rev., 48,pp.705-20 (1954).

M. HARRINGTON & P. JACOBS (eds) Labor in a free society (Univ. of California Press, Berkeley & Los Angeles, 1959).

H. HARRIS American labor (Yale Univ.Press, New Haven, Conn.,1939).

P.T. HARTMAN Collective bargaining and productivity: the longshore mechanization agreement (Univ.of California Press, Berkeley & Los Angeles, 1969).

S.D. HAYS The response to industrialism, 1885-1914 (Univ. of Chicago Press, Chicago, 1957).

P. HENLE 'Organized labor and the new militants' M.L.R.,92,no.7, pp.20-25 (1969).

W. HERBERG 'Jewish labor movement in the United States' I.L.R.R., 5, pp.501-23 (1952) & 6, pp.44-66 (1952).

R. HERDING Job control and union structure (Rotterdam Univ.Press, Rotterdam, 1972).

J. HERLING Right to challenge: people and power in the Steelworkers' Union (Harper & Row, N.Y., 1972).

R. HESSEN 'The Bethlehem steel strike of 1910' L.H.,15,pp.3-18 (1974).

J.R. HICKS The theory of wages (Macmillan, London, 1932).

R. HIGGS The transformation of the American economy, 1865-1914 (Wiley, N.Y.,1971).

J. HIGHAM Strangers in the land (Rutgers Univ.Press, New Brunswick, N.J., 1955).

G.H. HILDEBRAND 'Cloudy future for coalition bargaining' Harvard Business Rev., 46,no.6, pp.114-28 (1968).

S. HILL & K. THURLEY 'Sociology and industrial relations' Brit.J.Ind. Rels, 12, pp.147-70 (1974).

E.T. HILLER The strike (Univ.of Chicago Press, Chicago, 1928).

B. HINDESS The use of official statistics in sociology (Macmillan, London, 1973).

H.E. HOAGLAND Collective bargaining in the lithographic industry (Columbia Univ. Press, N.Y., 1917).

C. HOFFMAN The depression of the Nineties (Greenwood Publishing Corp., Westport, Conn.,1970).

R. HOFSTADTER The American political tradition (J.Cape, London, 1962).

J.H. HOLLANDER & G.E. BARNETT (eds) Studies in American trade unionism (Hodder & Stoughton, London, 1906).

J.W. HOWARD 'Frank Murphy and the sit-down strikes of 1937' L.H., 1, pp.103-40 (1960).

I. HOWE (ed.) Beyond the New Left (Horizon Press, N.Y., 1970).

(ed.) The world of the blue-collar worker (Quadrangle Books, N.Y., 1972).

I. HOWE & B.J. WIDICK The U.A.W. and Walter Reuther (Random House, N.Y., 1949).

R.F. HOXIE Trade unionism in the United States (Russell & Russell, N.Y., 1966, orig. publ. 1923).

G. HUNNIUS, G.D. CARSON & J. CASE (eds) Workers' control (Vintage Books, N.Y., 1973).

L.C. HUNTER 'The economic determination of strike activity: a reconsideration' (Univ.of Glasgow Discussion Papers in Economics, no.1, 1973).

R.W. HURD 'Organizing the poor: the California grape strike experience' Rev.of Radical Pol.Econs, 6,no.1, pp.50-75 (1974).

R. HYMAN **Strikes** (Fontana-Collins, London, 1972).

G.K. INGHAM **Strikes and industrial conflict: Britain and Scandinavia** (Macmillan, London, 1974).

INTERCHURCH WORLD MOVEMENT **Report on the steel strike of 1919** (Harcourt, Brace & Howe, N.Y., 1920).

Public opinion and the steel strike (Harcourt, Brace & Co., N.Y., 1921).

INTERNATIONAL LABOUR OFFICE **Methods of compiling statistics of industrial disputes** (Studies & Reports Series N, no.10, Geneva, 1926).

The trade union situation in the United States (I.L.O., Geneva, 1960).

INTERNATIONAL LABOUR REVIEW **'Industrial disputes,1937-54'** Vol.72, pp.78-91 (1955).

F.C. JAHER (ed.) **The age of industrialism in America** (Free Press, N.Y.,1968).

V.H. JENSEN **Lumber and labor** (Farrar & Rinehart, N.Y.,1945).

Heritage of conflict: labor relations in the nonferrous metals industry up to 1930 (Cornell Univ.Press, Ithaca, N.Y.,1950).

Nonferrous metals industrial unionism, 1932-54 (Cornell Univ. Press, Ithaca, N.Y.,1954).

Strife on the waterfront: the port of New York since 1945 (Cornell Univ.Press, Ithaca, N.Y., 1974).

J.P. JOHNSON **'Drafting the N.R.A. Code of fair competition for the bituminous coal industry'** J.Amer.Hist.,53,pp.521-41 (1966).

R.W. JOHNSON **'An employer looks at labor-management relations'** I.L.R.R., 1, pp.486-92 (1948).

A.W. JONES **Life, liberty and property** (J.B.Lippincott Co., Philadelphia, 1941).

M. JOSEPHSON **Sidney Hillman: statesman of American labor** (Doubleday, N.Y., 1952).

E.H. & D.B. JURKAT **'Economic function of strikes'** I.L.R.R.,2,pp.527-45 (1949).

O. KAHN-FREUND & R. HEPPLE Laws against strikes (Fabian Society Research Series no.305, 1972).

H.K. KANAREK 'The Pennsylvania anthracite strike of 1922' Pennsylvania Magazine of Hist.& Biog., 99, pp.207-25 (1975).

B. KARSH Diary of a strike (Univ.of Illinois Press, Urbana, Ill., 1958).

M. KARSON American labor unions and politics, 1900-18 (Southern Illinois Univ.Press, Carbondale, Ill., 1958).

E.M. KASSALOW Trade unions and industrial relations: an international comparison (Random House, N.Y., 1969).

J.J. KAUFMAN Collective bargaining in the railroad industry (King's Crown Press, Columbia Univ., N.Y., 1954).

'Logic and meaning of work rules on the railroads' I.R.R.A., 1961 annual meeting, pp.378-88.

J.W. KENDRICK Productivity trends in the United States (N.B.E.R., Princeton Univ.Press, Princeton, N.J., 1961).

Postwar productivity trends in the United States, 1948-69 (National Bureau of Econ. Research, N.Y., 1973).

T. KENNEDY 'Freedom to strike is in the public interest' Harvard Business Rev., 48, no.4, pp.41-57 (1970).

C. KERR 'Industrial relations and the liberal pluralist' I.R.R.A., 1954 annual meeting, pp.2-16.

C. KERR, J.T. DUNLOP, F.H. HARBISON & C.A. MYERS Industrialism and industrial man (Penguin, Harmondsworth, 2nd British edn 1973).

K.A. KERR 'Labor-management co-operation: an 1897 case' Pennsylvania Magazine of Hist.& Biog., 99, pp.45-71 (1975).

E.C. KIRKLAND Industry comes of age: business, labor and public policy, 1860-1897 (Holt, Rinehart & Winston, N.Y., 1961).

P.L. KLEINSORGE & W.C. KERBY 'The pulp and paper rebellion: a new Pacific Coast union Ind.Rels, 6, pp.1-20 (1966).

K.G.J.C. KNOWLES Strikes: a study in industrial conflict (Blackwell, Oxford, 1952).

P.A.C. KOISTINEN 'Mobilizing the World War II economy: labor and the industrial-military alliance' Pacific Hist.Rev., 42, pp.443-78 (1973).

G. KOLKO The triumph of conservatism: a re-interpretation of American history, 1900-16 (Quadrangle Paperbacks, Chicago, 1967, orig.publ.1963).

G. KORMAN Industrialization, immigrants and Americanizers: the view from Milwaukee, 1966-1921 (The State Historical Society of Wisconsin, Madison, Wisc.,1967).

W. KORNBLUM Blue-collar community (Univ.of Chicago Press,Chicago, 1974).

A. KORNHAUSER, R.DUBIN & A.M. ROSS (eds) Industrial conflict (McGraw-Hill, N.Y., 1954).

M.D. KOSSORIS 'Working rules in West coast longshoring' M.L.R., 84, pp.1-10 (1961).

L. KRAMER Labor's paradox: the American Federation of State, County and Municipal Employees, A.F.L.-C.I.O. (Wiley, N.Y., 1962).

H. KRAUS The many and the few (Plantin Press, Los Angeles, 1947).

T.A. KRUEGER 'American labor historiography,old and new: a review essay' J.Social Hist., 4, pp.277-85 (1971).

J. KUCZYNSKI A short history of labour conditions under industrial capitalism in the United States of America, 1789-1946 (Frederick Muller Ltd.,London, 3rd edn 1973).

J.W. KUHN Bargaining in grievance settlement (Columbia Univ.Press,N.Y.,1961).

'Right-to-work laws: symbols or substance?' I.L.R.R., 14, pp.587-94 (1961).

D. KUJAWA American labor and the multinational corporation (Praeger, N.Y., 1973).

H.J. LAHNE The cotton-mill worker in the twentieth century (Farrar & Rinehart, N.Y., 1944).

'Union contract ratification procedures' M.L.R.,91, no.5, pp. 7-10 (1968).

V.W. LANFEAR Business fluctuations and the American labor movement, 1915-22 (Columbia Univ.Press, N.Y., 1924).

C.P. LARROWE 'The great maritime strike of '34' L.H., 11, pp.403-51 (1970) & 12, pp. 3-37 (1971).

J.H.M. LASLETT Labor and the left: a study of Socialist and radical influences in the American labor movement, 1881-1924 (Basic Books, N.Y., 1970).

S. LEBERGOTT Manpower in economic growth: the American record since 1800 (McGraw-Hill, N.Y., 1964).

J.C. LEGGETT Class, race and labor: working-class consciousness in Detroit (Oxford Univ.Press, N.Y., 1968).

A. LEISERSON 'Public opinion as a factor in labor disputes' I.R.R.A., 1952 annual meeting, pp.26-33.

R.D. LEITER The teamsters' union (Bookman Assocs, N.Y., 1957).

S. LENS Left, right and center: conflicting forces in American labor (Henry Regnery Co.,Hinsdale, Ill.,1949).

The crisis of American labor (Sagamore Press, N.Y.,1959).

R.A. LESTER As unions mature (Princeton Univ.Press,Princeton,N.J.,1958).

(ed.) Labor: readings on major issues (Random House, N.Y.,1965).

R.A. LESTER & J. SHISTER (eds) Insights into labor issues (Macmillan, N.Y., 1949).

W.E. LEUCHTENBURG Franklin D.Roosevelt and the New Deal,1932-40 (Harper & Row, N.Y., 1963).

L. LEVINE The women's garment workers: a history of the International Ladies' Garment Workers' Union (B.W.Huebsch, N.Y., 1924).

C. LEVINSON Industry's democratic revolution (George Allen & Unwin, London, 1974).

E. LEVINSON I break strikes. The technique of Pearl. L. Bergoff (R.M. McBride & Co., N.Y.,1935).

H.M. LEVINSON Unionism, wage trends and income distribution,1914-47 (Univ.of Michigan Press, Ann Arbor, Mich.,1951).

'Pattern bargaining: a case study of the Automobile workers' Quart.J.Econs, 74, pp.296-317 (1960).

S.A. LEVITAN (ed.) Blue-collar workers (McGraw-Hill, N.Y., 1971).

T. LEVITT 'Prosperity versus strikes' I.L.R.R.,6, pp.220-26 (1953).

H.G. LEWIS Unionism and relative wages in the United States (Univ. of Chicago Press, Chicago, 1963).

C.E. LINDBLOM Unions and capitalism (Yale Univ.Press,New Haven,Conn.,1949).

A. LINDSEY The Pullman strike (Univ.of Chicago Press, Chicago, 1942).

S.M. LIPSET 'Trade unions and social structure' Ind.Rels, 1,no.1,pp.75-89 (1961) & 1, no.2, pp.89-110 (1962).

D.B. LIPSKY & H.S. FARBER 'The composition of strike activity in the construction industry' I.L.R.R., 29, pp.388-404 (1976).

C.D. LONG Wages and earnings in the United States, 1860-90 (Princeton Univ.Press, Princeton, N.J.,1960).

V.R. LORWIN 'Reflections on the history of the French and American labor movements' J.Econ.Hist., 17, pp.25-44 (1957).

R.S. & H.M. LYND Middletown (Harcourt,Brace & Co.,N.Y.,1929).

S. LYND (ed.) American labor radicalism: testimonies and interpretations (Wiley, N.Y., 1973).

'The possibility of radicalism in the early 1930's; the case of steel' R.A., 6, no.6, pp.37-64 (1972).

W.E.J. McCARTHY 'The reasons given for striking' Bull.of the Oxford Univ. Instit. of Stats, 21, pp.17-29 (1959).

'The nature of Britain's strike problem' Brit.J.Ind.Rels, 8, pp.224-36 (1970).

W.E.J. McCARTHY & N.D. ELLIS Management by agreement (Hutchinson, London, 1973).

R.M. MacDONALD Collective bargaining in the automobile industry (Yale Univ. Press, New Haven, Conn.,1963).

'Collective bargaining in the postwar period' I.L.R.R.,20, pp.553-77 (1967).

J.J. McGINLEY Labor relations in the New York rapid transit systems, 1904-44 (King's Crown Press, Columbia Univ.,N.Y., 1949).

R. McKENNEY Industrial valley (Harcourt,Brace & Co.,N.Y.,1939).

M.A. McLAURIN Paternalism and protest: Southern cottom mill workers and organized labor, 1875-1905 (Greenwood Publishing Corp., Westport, Conn.,1971).

D.L. McMURRY The great Burlington strike of 1888 (Harvard Univ.Press, Cambridge, Mass., 1956).

'The legal ancestry of the Pullman strike injunctions' I.L.R.RL, 14, pp.235-56 (1961).

W.L. McNAUGHTON & J. LAZAR Industrial relations and the government (McGraw-Hill, N.Y., 1954).

W.H. McPHERSON 'Co-operation among auto managements in collective bargaining' I.R.R.A., Spring meeting 1960, pp.607-14.

B.D. MABRY Labor relations and collective bargaining (Ronald Press Co., N.Y., 1966).

C.A. MADISON American labor leaders (Frederick Ungar Co.,N.Y.,2nd edn 1962).

B. MANDEL Samuel Gompers (Antioch Press, Yellow Springs, Ohio, 1963).

E. MANDEL Marxist economic theory (Merlin Press, London, 1968).

'Where is America going' New Left Rev., 54, pp.3-15 (1969).

M. MANN Consciousness and action among the Western working class (Macmillan, London, 1973).

S.P. MANOR 'Geographical changes in U.S. employment from 1950 to 1960' M.L.R., 86, pp.1-10 (1963).

E. MANSFIELD The economics of technological change (Longman's, Green & Co., London, 1969).

I.M. MARCUS 'Labor discontent in Tioga Co., Pennsylvania, 1865-1905: the Gutman thesis, a test case' L.H., 14, pp.414-22 (1973).

H. MARCUSE One dimensional man (Abacus edn, London, 1972, orig.publ. 1964).

R.B. MARKE 'American trade union growth, 1900-60: a comment' Quart. J. Econs, 85, pp.187-93 (1971).

C. MARKHAM (ed.) Jobs, men and machines (Praeger, N.Y., 1964).

F.R. MARSHALL Labor in the South (Harvard Univ.Press,Cambridge,Mass.,1967).

T. MAYER 'Some characteristics of union members in the 1880's and 1890's' L.H., 5, pp.57-66 (1964).

F. MEYERS 'Effects of "right-to-work" laws: a study of the Texas Act' I.L.R.R., 9, pp.77-84 (1955).

D.C. MILLER & W.H. FORM Industrial sociology (Harper & Row, N.Y., 2nd edn 1964).

W. MILLER 'American historians and the business elite' J.Econ.Hist., 9, pp. 184-208 (1949).

H.A. MILLIS & R.E. MONTGOMERY Labor's progress and some basic labor problems (McGraw-Hill, N.Y., 1938).

Organized labor (McGraw-Hill, N.Y., 1945).

C.W. MILLS The new men of power (Harcourt, Brace & Co., N.Y., 1948).

B. MITCHELL Depression decade: from New Era through New Deal, 1929-41 (Holt, Rinehart & Winston, N.Y., 1964).

G.S. MITCHELL Textile unionism in the South (Univ.of North Carolina Press, Chapel Hill, N.C., 1931).

J. MITCHELL Organized labor (American Book & Bible House, Philadelphia, 1903).

D. MONTGOMERY 'The "new unionism" and the transformation of workers' consciousness in America, 1909-22' J.Social Hist., 7, pp.509-29 (1974).

'Workers' control of machine production in the nineteenth century' L.H., 17, pp.485-509 (1976).

MONTHLY LAB.REV. Annual article on 'strikes and lockouts' or 'work stoppages', May or June issue each year since 1916.

Monthly articles 'Labor month in review' and 'Developments in industrial relation' Jan.1960 to Dec.1975.

'Index of productivity of labor in the steel, automobile, shoe and paper industries', 23, pp.1-19 (1926).

'The passing of the National Window Glass Workers', 29, pp.773-88 (1929).

'Labor espionage: summary of Senate inquiry', 46, pp.693-98 (1938).

'Strike restrictions in union agreements', 52, pp.546-64 (1941).

'Wage structure of the motor vehicle industry, part I', 54, pp.279-304 (1942).

'Extent of collective bargaining and union recognition in 1945', 62, pp.567-72 (1946).

'Regional shifts in industry and population, 1899-1949', 71, pp.106-08 (1950).

'Impact of longshore strikes on the national economy', 93, no.3, pp.51-53 (1970).

W.E. MOORE Industrial relations and the social order (Macmillan, N.Y.,1946).

Industrialization and labor (Cornell Univ.Press, Ithaca, N.Y., 1951).

W.E. MOORE & A.S. FELDMAN (eds) Labor commitment and social change in developing areas (Soc.Sci.Research Council, N.Y.,1960).

H.W. MORGAN (ed.) The gilded age: a reappraisal (Syracuse Univ.Press, N.Y.,1963).

R.B. MORRIS Government and labor in early America (Columbia Univ. Press, N.Y., 1946).

M.H. MOSKOW Teachers and unions (Univ. of Pennsylvania Wharton School of Finance & Commerce, Philadelphia, 1966).

G.D. NASH 'Franklin D.Roosevelt and labor: the World War I origins of early New Deal policy' L.H., 1, pp.39-52 (1960).

NATIONAL BUREAU OF ECON. RESEARCH The measurement and behavior of unemployment(Princeton Univ.Press, Princeton, N.J.,1957).

Aspects of labor economics (Princeton Univ.Press, Princeton, N.J.,1962).

D. NELSON 'The new factory system and the unions: the National Cash Register Co. dispute of 1901' L.H.,15, pp.163-78 (1974).

R.L. NELSON The merger movement in American industry, 1895-1956 (Princeton Univ.Press, Princeton, N.J.,1959).

H.R. NORTHRUP Compulsory arbitration and government intervention in labor disputes (Labor Policy Assoc., Washington, D.C.,1966).

H.R. NORTHRUP & H.A. YOUNG 'The causes of industrial peace revisited' I.L.R.R., 22, pp.31-47 (1968).

H. OBER 'Trade union policy and technological change'(Works Progress Admin., National Resources Project report no.L-8, Philadelphia, 1940).

P.S. O'BRIEN 'Industrial conflict and business fluctuations: a comment' J.Pol.Econ., 73, pp.650-54 (1965).

T. O'HANLON 'Anarchy threatens the kingdom of coal' Fortune, 83, no.1, pp.78-85 (1971).

G. OWEN Industry in the U.S.A. (Penguin, Harmondsworth, 1966).

R. OZANNE A century of labor-management relations at McCormick and International Harvester (Univ.of Wisconsin Press, Madison, Wisc., 1967).

B. PALMER 'Class, conception and conflict: the thrust for efficiency, managerial views of labor and the working class rebellion, 1903-2 Rev.of Radical Pol.Econs, 7,no.2, pp.31-49 (1975).

K. PEARSON 'Mathematical contributions to the theory of evolution: on a form of spurious correlation which may arise when indices are used in the measurement of organs' Proc.Roy.Soc.,60, pp.489-502 (1897).

H. PELLING American labor (Univ.of Chicago Press, Chicago, 1960).

J.H. PENCAVEL 'An investigation into industrial strike activity in Britain' Economica, N.S. 37, pp.239-56 (1970).

M. PERLMAN Labor union theories in America (Row, Peterson & Co.,Evanston, Ill., 1958).

The Machinists: a new study in American trade unionism (Harvard Univ.Press, Cambridge, Mass.,1961).

S. PERLMAN Ahistory of trade unionism in the United States (Macmillan, N.Y., 1922).

A theory of the labor movement (A.M.Kelley, N.Y.,1949, orig. publ. 1928).

F. PETERSON Strikes in the United States, 1880-1936(U.S. Dept. of Labor Bulletin no.651, Washington, D.C.,1938).

American labor unions (Harper & Row, N.Y., 2nd edn 1963).

'Industrial relations in 1938' M.L.R., 48,pp.493-508 (1939).

'Cause of industrial unrest' Annals of the Amer.Acad. of Pol. & Soc.Sci., 274, pp.25-31 (1951).

S. PETRO The Kohler strike: union violence and administrative law (Henry Regnery Co., Chicago, 1961).

O.W. PHELPS 'Compulsory arbitration: some perspectives' I.L.R.R.,18, pp.81-91 (1964).

F.C. PIERSON Unions on postwar America: an economic assessment (Random House, N.Y., 1967).

N. POLLACK The Populist response to industrial America: Midwestern Populist thought (Harvard Univ.Press, Cambridge,Mass.,1962).

L. POPE Millhands and preachers (Yale Univ.Press, New Haven,Conn.,1942).

A.R. PRED The spatial dynamics of U.S. urban-industrial growth, 1800-1914 (M.I.T. Press, Cambridge, Mass.,1966).

A. PREIS Labor's giant step: twenty years of the C.I.O. (Pathfinder Press, N.Y.,1972, orig. publ. 1964).

J.R. PRICKETT 'Communists and the automobile industry in Detroit before 1935' Michigan Hist., 57, pp.185-208 (1973).

Radical America 'Symposium on Jeremy Brecher's "Strike"', vol.7, no.6, pp.69-112 (1973).

R. RADOSH American labor and United States foreign policy (Vintage Books, N.Y., 1969).

'The corporate ideology of American labor leaders from Gompers to Hillman' Studies on the Left, 6,no.6, pp.66-88 (1966).

J.G. RAYBACK A history of American labor (Free Press,N.Y.,2nd edn 1966).

A. REES 'Industrial conflict and business fluctuations' J.Pol.Econ., 60, pp.371-82 (1952).

R.W. REVANS 'Industrial morale and size of unit' Pol.Quart.,27,pp.303-11 (1956).

L.G. REYNOLDS Labor economics and labor relations (Prentice-Hall, Englewood Cliffs, N.J., 6th edn 1974).

I. RICHTER Political purpose in trade unions (George Allen & Unwin, London, 1973).

G.V. RIMLINGER 'International differences in strike propensities of coal miners: experience in four countries' I.L.R.R.,12, pp.389-405 (1959).

'The legitimation of protest: a comparative study in labor history' Compar.Studs in Soc.& Hist.,2,pp.329-43 (1960).

M. ROOMKIN 'Union structure, internal control and strike activity' I.L.R.R., 29, pp.198-217 (1976).

G. ROSENBLUM Immigrant workers: their impact on American labor radicalism (Basic Books, N.Y., 1973).

A.M. ROSS 'The prospects for industrial conflict' Ind.Rels, 1,no.1, pp.57-74 (1961).

A.M. ROSS & D. IRWIN 'Strike experience in five countries, 1927-47' I.L.R.R., 4,pp.323-42 (1951).

A.M. ROSS & P.T. HARTMAN Changing patterns of industrial conflict (Wiley, N.Y., 1960).

I. ROSS 'How to tell when the unions will be tough' Fortune, 92, no.1, pp.100-03, 151-52, 156 (1975).

P. ROSS The government as a source of union power: the role of public policy in collective bargaining (Brown Univ.Press,Providence, R.I.,1965).

R.L. ROWAN (ed.) Collective bargaining: survival in the '70's? (Univ. of Pennsylvania Press, Philadelphia, 1972).

L.R. SAYLES & G. STRAUSS The local union (Harcourt, Brace & World, N.Y., 2nd edn 1967).

A.M. SCHLESINGER The age of Roosevelt: Vol. 2, The coming of the New Deal (Heinemann, London, 1960).

R. SCHRANK 'Work in America: what do the workers really want?' Ind.Rels, 13, no.2, pp.124-29 (1974).

H. SEIDMAN Labor czars: a history of labor racketeering (Liveright Publishing Corp., N.Y., 1938).

J. SEIDMAN American labor from Defense to Reconstruction (Univ. of Chicago Press, Chicago, 1953).

'Labor policy of the Communist Party during World War II' I.L.R.R., 4, pp.55-69 (1950).

J. SEIDMAN, J. LONDON, B. KARSH & D.L. TAGLIACOZZO The worker views his union (Univ.of Chicago Press, Chicago, 1958).

B.M. SELEKMAN Labor relations and human relations (McGraw-Hill, N.Y.,1947).

J.J. SENTURIA 'Types of employer-employee dealing' M.L.R., 41, pp.1441-46 (1935).

W. SERRIN The company and the union: the 'civilized relationship' of the General Motors Corporation and the United Auto Workers (Vintage Books edn, N.Y., 1974).

B.K. SHELTON 'The grain shovellers' strike of 1899' L.H., 9, pp.210-38 (1968).

H.L. SHEPPARD & N.Q. HERRICK Where have all the robots gone? Worker dissatisfaction in the '70's (Free Press, N.Y., 1972).

H.J. SHERMAN Profits in the United States (Cornell Univ.Press, Ithaca, N.Y., 1968).

J. SHISTER (ed.) Readings in labor economics and industrial relations (J.B.Lippincott Co., Philadelphia, 2nd edn 1956).

'The direction of unionism, 1947-67: thrust or drift' I.L.R.R., 20, pp.578-601 (1967).

J. SHISTER, B. AARON & C.W. SUMMERS (eds) Public policy and collective bargaining (Harper & Row, N.Y., 1962).

E. SHORTER & C. TILLY Strikes in France, 1830-1968 (Cambridge Univ. Press, London, 1974).

'The shape of strikes in France, 1830-1960' Compar.Studs in Soc.& Hist., 13, pp.60-86 (1971).

A.B. SHOSTAK Blue-collar life (Random House, N.Y., 1969).

R.W. SHUGG 'The New Orleans general strike of 1892' Louisiana Hist.Quart., 21, pp.547-60 (1938).

N.L. SHUMSKY 'San Francisco's workingmen respond to the modern city' Calif. Hist.Quart., 55, pp.46-57 (1976).

M. SILVER 'Recent British strike trends: a factual analysis' Brit.J.Ind. Rels, 11, pp.66-104 (1973).

'Lies, damned lies and strike statistics: the measurement of trends in industrial conflict' (unpublished paper, 1975).

W.E. SIMKIN 'Refusals to ratify contracts' I.L.R.R., 21, pp.518-40 (1968).

J.W. SKEELS 'The background of U.A.W. factionalism' L.H., 2, pp.158-81 (1961).

'Measures of U.S. strike activity' I.L.R.R., 24, pp.515-25 (1971).

S.H. SLICHTER Union policies and industrial management (Brookings Instit., Washington, D.C., 1941).

S.H. SLICHTER, J.J. HEALY & E.R. LIVERNASH The impact of collective Bargaining on management (Brookings Instit., Washington, D.C., 1960).

N.J. SMELSER Social change in the industrial revolution (Univ.of Chicago Press, Chicago, 1959).

J.S. SMITH 'Labor and Government in the Wilson era, 1913-21: some conclusions' L.H., 3, pp.265-86 (1962).

C.D. SNYDER White collar workers and the U.A.W. (Univ.of Illinois Press, Urbana, Ill., 1973).

D. SNYDER 'Institutional setting and industrial conflict: comparative analysis of France, Italy and the United States' Amer.Sociol. Rev., 40, pp.259-78 (1975).

R. SOBEL The age of giant corporations, a microeconomic history of American business, 1914-70 (Greenwood Press, Westport, Conn., 1972).

D.G. SOFCHALK 'The Chicago Memorial Day incident: an episode in mass action' L.H., 6, pp.3-43 (1965).

W. SOMBART Why is there no Socialism in the United States? (Macmillan, London, 1976; orig. publ. 1906).

G.G. SOMERS (ed.) Essays in industrial relations theory (Iowa State Univ. Press, Ames, Iowa, 1969).

(ed.) The next 25 years of industrial relations (Ind. Rels Research Assoc., Madison, Wisc., 1973).

G.G. SOMERS, E.L. CUSHMAN & N. WEINBERG (eds) Adjusting to technological change (Harper & Row, N.Y., 1963).

S.H. SOSNICK 'Non-stoppage strikes: a new approach I.L.R.R., 18, pp.73-80 (1964).

G. SOULE Prosperity decade: a chapter from American economic history, 1917-29 (Pilot Press, London, 1947).

J.R. SPERRY 'Rebellion within the ranks: Pennsylvania anthracite, John L. Lewis, and the coal strikes of 1943' Pennsylvania Hist., 40, pp.293-313 (1973).

J.V. SPIELMANS 'On strike analysis' J.Pol.Econ., 50, pp.750-60 (1942).

P.N. STEARNS Lives of labour (Croom Helm, London, 1975).

P.N. STEARNS 'Measuring the evolution of strike movements' Internat.Rev. of Soc.Hist.,19, pp.1-27 (1974).

A.K. STEIGERWALT The National Association of Manufacturers, 1895-1914: a study in business leadership (Bureau of Business Research, Univ. of Michigan, 1964).

B. STEIN 'Labor's role in government agencies during World War II' J.Econ. Hist., 17, pp.389-409 (1957).

B. STERN 'Labor productivity in the boot and shoe industry' M.L.R., 48, pp. 271-92 (1939).

J.L. STERN 'Declining utility of the strike' I.L.R.R.,18,pp.60-72 (1964).

R.N. STERN 'Intermetropolitan patterns of strike frequency' I.L.R.R., 29, pp.218-35 (1976).

E.M. STEWART 'A quarter century of governmental labor activity' M.L.R., 46, pp.297-321 (1938).

J. STIEBER Governing the U.A.W. (Wiley, N.Y., 1962).

Public employee unionism: structure, growth and policy (Brookings Instit., Washington, D.C., 1973).

(ed.) Employment problems of automation and advanced technology an international perspective (Macmillan, London, 1966).

'Company co-operation in collective bargaining in the basic steel industry' I.R.R.A., Spring meeting 1960, pp.614-21.

'Work rules and practices in mass production industries' I.R.R.A., annual meeting 1961, pp.399-412.

'Grievance arbitration in the United States: an analysis of its functions and effects' pp.1-30 in Three studies in collective bargaining (Research paper no.8, Royal Commission on Trade Unions and Employers' Associations, H.M.S.O., 1968).

G.J. STIGLER Capital and rates of return in manufacturing industry (Princeton Univ.Press, Princeton, N.J., 1963).

K. STONE 'The origins of job structures in the steel industry' R.A., 7, no.6, pp.16-64 (1973).

G. STRAUSS 'The shifting power balance in the plant' Ind.Rels, 1, no.3, pp.65-96 (1962).

A. STURMTHAL Comparative labor movements (Wadsworth Publishing Co., Belmont, Calif.,1972).

(ed.) White-collar trade unions (Univ. of Illinois Press, Urbana, Ill.,1966).

A.E. SUFFERN The American coal miners' struggle for industrial status (George Allen & Unwin, London, 1926).

G.G. SUGGS Colorado's war on militant u ionism (Wayne State Univ. Press, Detroit, Mich.,1972).

P.E. SULTAN The disenchanted unionist (Harper & Row, N.Y.,1963).

P.M. SWEEZY & H. MAGDOFF The dynamics of U.S. capitalism (Monthly Review Press, N.Y., 1972).

Symposium on 'Management's new look in labor relations' Ind.Rels, 1,no.1, pp.9-55 (1961).

P. TAFT The structure and government of labor unions (Harvard Univ.Press, Cambridge, Mass.,1954).

Organized labor in American history (Harper & Row, N.Y., 1964).

Labor politics American style: the California State Federation of Labor (Harvard Univ.Press, Cambridge, Mass.,1968).

Corruption and racketeering in the labor movement (New York State School of Ind. & Lab. Rels, Cornell Univ., Bulletin no.38, 2nd edn 1970).

'On the origins of business unionism' I.L.R.R.,17,pp.20-38 (1963).

'Violence in American labor disputes' Annals of the Amer. Acad. of Pol. & Soc. Sci., 364, pp.127-40 (1966).

'Labor history and the labor movement today' L.H.,7,pp.70-77(1966).

G.W. TAYLOR 'The recognition of national economic interests in bargaining' M.L.R., 83, pp.18-21 (1960).

'Public employment: strikes or procedures' I.L.R.R.,20,pp.617-36 (1967).

P. TEMIN Iron and steel in nineteenth century America (M.I.T. Press, Cambridge, Mass.,1964).

Causal factors in American economic growth in the nineteenth century (Macmillan, London, 1975).

S. THERNSTROM Poverty and progress: social mobility in a nineteenth century city (Harvard Univ. Press, Cambridge, Mass.,1964).

The Other Bostonians: poverty and progress in the American metropolis, 1880-1970 (Harvard Univ. Press, Cambridge, Mass., 1973).

A.J. THIEBLOT & R.M. COWIN Welfare and strikes (Univ. of Pennsylvania Press, Philadelphia, 1972).

B.V. TOTH 'Labor in a year of expansion' M.L.R., 92,no.1, pp.11-19 (1969).

L. TROY Distribution of union membership among the States, 1939 and 1953 (National Bureau of Econ. Research, N.Y., 1957).

Trade union membership, 1897-1962 (National Bureau of Econ. Research, N.Y., 1965).

'Trade union growth in a changing economy' M.L.R., 92, no.9,pp.3-7 (1969).

H.A. TURNER Is Britain really strike-prone? (Dept. of Applied Econs Occasional Paper no.20, Cambridge Univ. Press,Cambridge, 1969).

H.A. TURNER, G. CLACK & G. ROBERTS Labour relations in the motor industry (George Allen & Unwin, London, 1967).

TWENTIETH CENTURY FUND How collective bargaining works (Twentieth Century Fund, N.Y.,1942).

Pickets at city hall (Twentieth Century Fund, N.Y, 1970).

J.C. ULLMAN 'How accurate are estimates of State and local unemployment' I.L.R.R., 16, pp.434-52 (1963).

L. ULMAN The rise of the national trade union (Harvard Univ. Press, Cambridge, Mass.,1955).

The government of the Steel Workers' Union (Wiley, N.Y.,1962).

(ed.) Challenges to collective bargaining (Prentice-Hall, Englewood Cliffs, N.J.,1967).

I. UNGER 'The "New Left" and American history: some recent trends in U.S. historiography' Amer.Hist.Rev., 72, pp.1237-63 (1967).

S.H. UNTERBERGER & E.C. KOZIARA 'Airline strike insurance: a study in escalation' I.L.R.R., 29, pp.26-45 (1975).

V. VALE Labour in American politics (Routledge & Kegan Paul, London, 1971).

J. VANDERKAMP 'Economic activity and strikes in Canada' Ind.Rels, 9, pp.215-30 (1970).

M.H. VORSE Men and steel (Labour Publishing Co., London, 1922).

Labor's new millions (Modern Age Books, N.Y., 1938).

H.M. WACHTEL 'Class consciousness and stratification in the labor process' Rev.of Radical Pol.Econs, 6, no.1, pp.1-31 (1974).

A.M. WAKSTEIN 'The National Association of Manufacturers and labor relations in the 1920's' L.H., 10, pp.163-76 (1969).

C.R. WALKER Steeltown (Harper & Bros., N.Y., 1950).

C.R. WALKER & R.H. GUEST The man on the assembly line (Harvard Univ. Press, Cambridge, Mass., 1952).

D.J. WALKOWITZ 'Statistics and the writing of workingclass culture: a statistical portrait of iron workers in Troy, N.Y., 1860-80' L.H., 15, pp.416-60 (1974).

J.R. WALSH 'Labor's contribution to the war' Science & Society, 7, pp.72-79 (1943).

W.D. WALSH 'Economic conditions and strike activity in Canada' Ind.Rels, 14, pp.45-54 (1975).

N.J. WARE The industrial worker, 1840-60 (Houghton Mifflin, Boston, 1924).

The labor movement in the United States, 1860-95 (D.Appleton & Co., N.Y., 1929).

C.E. WARNE (ed.) The steel strike of 1919 (D.C.Heath & Co., Boston, 1963).

C.E. WARNE et.al. (eds) Yearbook of American labor: Vol.1, War labor policies (Philosophical Library, N.Y., 1945).

(eds.) Labor in postwar America (Remsen Press, N.Y., 1949).

W.L. WARNER & J.O. LOW The social system of the modern factory. The strike: a social analysis (Yale Univ.Press, New Haven, Conn., 1947).

K. WARREN The American steel industry, 1850-1970 (Clarendon Press, Oxford, 1973).

S. & B. WEBB Industrial democracy (Longman's, Green & Co., London, 2nd edn 1914).

J. WEINSTEIN The decline of Socialism in America, 1912-1925 (Monthly Review Press, N.Y., 1967).

The corporate ideal in the Liberal State, 1900-1918 (Beacon Press, Boston, 1968).

A.R. WEINTRAUB 'Prosperity versus strikes: an empirical approach' I.L.R.R., 19, pp.231-38 (1966).

S. WEIR 'U.S.A.: the labor revolt' Internat. Socialist J., 20, pp.279-96 (1967) & 21, pp.465-73 (1967).

'Class forces in the 1970's' R.A., 6, no.3, pp.31-77 (1972).

S.C. WHITE 'Work stoppages of government employees' M.L.R., 92, no.12, pp.29-34 (1969).

B.J. WIDICK Labor today: the triumphs and failures of unionism in the United States (Houghton Mifflin, Boston, 1964).

R.H. WIEBE The segmented society: an introduction to the meaning of America (Oxford Univ. Press, N.Y., 1975).

'The anthracite coal strike of 1902: a record of confusion' Mississippi Valley Hist.Rev., 48, pp.229-51 (1961).

W.A. WILDMAN 'Collective action by public school teachers' I.L.R.R., 18, pp.3-19 (1964).

H.L. WILENSKY & C.N. LEBEAUX Industrial society and social welfare (Russell Sage Foundation, N.Y., 1958).

R.M. WILLIAMS American society: a sociological interpretation (A.A. Knopf, N.Y., 1951).

J.G. WILLIAMSON Late nineteenth century American development (Cambridge Univ. Press, Cambridge, 1974).

A.M. WINKLER 'The Philadelphia transit strike of 1944' J.Amer.Hist., 59, pp.73-89 (1972).

E.E. WITTE The government in labor disputes (McGraw-Hill, N.Y., 1932).

L. WOLFF Lockout: the story of the Homestead strike of 1892 (Harper & Row, N.Y., 1965).

T. WOLFSON 'Role of the I.L.G.W.U. in stabilizing the women's garment industry' I.L.R.R., 4, pp.33-43 (1950).

C. WOLLENBERG 'Working on El Traque: the Pacific Electric strike of 1903' Pacific Hist.Rev., 42, pp.358-69 (1973).

L. WOLMAN The growth of American trade unions, 1880-1923 (National Bureau of Econ. Research, N.Y., 1924).

Ebb and flow in trade unionism (National Bureau of Econ. Research, N.Y, 1936).

H. WOOL 'What's wrong with work in America: a review essay' M.L.R., 96, no.3, pp.38-44 (1973).

Work in America (Report of a Special Task Force to the Secretary of Health, Education and Welfare, M.I.T. Press, Cambridge, Mass., 1973).

B. WYCKO 'The work shortage: class struggle and capital reproduction' Rev. of Radical Pol. Econs, 7, no.2, pp.11-30 (1975).

B. YABROFF & L.M. DAVID 'Collective bargaining and work stoppages involving teachers' M.L.R., 76, pp.475-79 (1953).

C.K. YEARLEY Britons in American labor: a history of the influence of U.K. immigrants on American labor, 1820-1914 (John Hopkins Univ. Press, Baltimore, Md., 1957).

S. YELLEN American labor struggles (S.A. Russell, N.Y., 1956, orig. publ. 1936).

I. YELLOWITZ Labor and the Progressive Movement in NewYork State, 1897-1916 (Cornell Univ. Press, Ithaca, N.Y., 1965).

J. ZERZAN 'Understanding the anti-radicalism of the National Civic Federation' Internat.Rev. of Social Hist.,19, pp.194-210 (1974).

D. ZISKIND One thousand strikes of government employees (Columbia Univ. Press, N.Y., 1940).