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SKILL, CRAFT AND CLASS: A THEORETICAL CRITIQUE AND A CRITICAL CASE

D. J. LEE

Abstract Common to a number of otherwise divergent writings is the attempt to offer a theory of how the changing organization of industrial production impinges upon average skill levels in the work force. From this basis, generalizations are made about the future development of the class structure of advanced capitalism. This article argues that such a simple relation between skill and class structure is unlikely. Among the many factors which intervene between the two, the most important and complex are the labour market institutions and processes determining the exchange value of labour. An appropriate framework of concepts is deployed to allow for this; and its use is illustrated via the critical case of the 'deskilling' of craft labour in twentieth-century Britain. It is argued that important implications exist for the concepts and theories by which the problems of skill and class have hitherto been approached.

IN recent years, the problem of skills and their transformation within modern industry has attracted a growing amount of attention. At the heart of the discussion, only partially recognized, is an important ambiguity in the concept of skill itself. On one hand it is assumed that some useful sociological purpose can be served by examining changes in 'real' skills, i.e. that it is meaningful and possible to talk about the typical levels of dexterity and/or knowledge required by the work processes of advanced capitalism. On the other hand it is widely recognized that skill is also in varying ways a social construct. Divorced from their specific historical and industrial setting, for example, attributions of skill to individuals and groups may be highly misleading.

This problem presents itself in its most troublesome form in the study of class structure and formation. Any investigator who attempts to understand the evolution of classes in modern society is bound to assume (perhaps too readily) that broad changes in the character of industrial work have some kind of impact on the overall composition and consciousness of the workforce. In practice, however, the effects of changes in technology and work organization are filtered through a variety of imperfectly understood social devices. The consequence is that it is not possible to get at the relationship between skill and class structure directly. In this paper, therefore, I shall attempt:

- (a) to show that labour market processes are among the most important of these intervening social filters; and to set out a framework of distinctions and concepts capable of dealing with the different levels at which labour market processes always have to be analyzed (Section A).
- (b) to illustrate the utility of this approach in understanding a critical case: the putative deskilling of craft labour as represented by the apprenticeship trades in Britain since the beginning of the century (Sections B and C).

The concluding section considers the implications of the discussion for the analysis of class structure in general.

A. *The labour market and class structure – towards conceptual refinement*

The tendency to assume a simple linkage between the technical content of skill and the manner in which class structure as a whole will evolve is to be found at its most basic in the now-dated technological theories of writers like Kerr *et al* (1962), Galbraith (1969) and, in large measure, Bell (1973). By assuming that average skill requirements in industry are being progressively upgraded such work attempted to establish an inevitable embourgeoisement or professionalization of the social hierarchy. Curiously enough, the most influential challenge to this position, Braverman's thesis of the deskilling of labour under monopoly capitalism, is hardly more sophisticated in its approach. Where the technician view involves a simple relation:

Technical Change → Rising Skill Levels → Changes in class structure
(Professionalization, etc.)

Braverman merely substitutes a straightforward equivalence between, on the one hand, the supposed outcome of the exploitation of the worker in the workplace (i.e. 'deskilling') and on the other, the proletarianization of the working class as follows:

Exploitation → Falling Skill Levels → Changes in class structure
(Realization of surplus value in the labour process) (Proletarianization)

Criticism of these theories, Braverman's in particular, has brought to light the simplification which is common to both positions, namely: failure to consider the institutional 'filters' which complicate the relationship between production methods, skill levels and class.

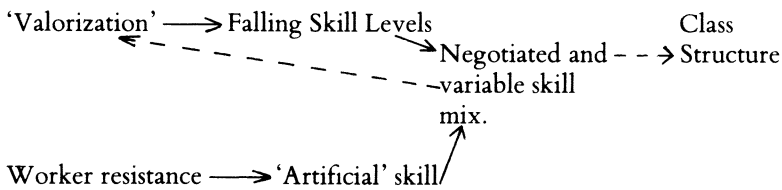
Two distinct types of criticism may in fact be discerned according to which set of 'filters' receives especial emphasis. The first stresses that worker resistance can and does prevent the development of any straight-forward relationship between employers' production methods and the skill structure of the workforce. The second brings out the complexity of the influences on the overall structure of employment in an industrial society, not all of which can be understood as a simple consequence of average or typical developments at workplace level. Let us take each of these in turn.

As the reader will probably be aware, one predominant theme in recent discussions of Braverman's work has dealt with the way in which he either discounts or deliberately ignores worker resistance to deskilling. This tendency is nowhere more evident than in his treatment of craft workers, a group who seem to embody 'the world we have lost' as a result of the mechanization and fragmentation of industrial work. The traditional role of craft organizations in establishing what passes for skill receives scant attention. This key example, it might be said, shows that in practice workers have many opportunities to control the institutions and customs by which skill is acquired, transmitted and recognized.

Braverman's expectation of a progressive loss of power and control by the working class contrasts markedly with the main drift of industrial relations writing in Britain in the post-war period. According to this school of thought a marked

growth has occurred in the control available to organized labour in Britain at the point of production. Craft workers in particular have been able to participate in this, it is said, because of the survival of what Allan Flanders called ‘the craft tradition’ (Flanders 1964: 213-20; *passim* 1970). Those who follow this line of analysis stress the socially constructed element in apprenticeship-based skills and almost inevitably find themselves adopting a degree of agnosticism about craftsmen’s claim to exercise real skills on the job. They also tend to doubt whether recruits to the craft have undergone real training during their apprenticeships so much as a period of ritual servitude designed to reinforce exclusive unionism. Of course, no version of this social construction theory of craft work tries, as far as I know, to suggest that the institutions of craft control can proceed forever in the face of long term changes in industrial structure. More usually, the writings in question contain their own account of the progressive attrition of the real skill basis of craft jobs – but with one crucial addendum. In questioning the reality of the skill content of the craft jobs, encouragement has been given to the widespread assumption that worker resistance to technical and economic change, particularly in the form of exclusive unionism, represents an effective institutional interference with the underlying rationality of economic and market forces.¹

The difficulty which this type of argument presents for class analysis is that once the fact of worker resistance is admitted, it apparently becomes impossible to offer any theory at all about the resultant job mix in the workplace; or the skill input into class structure. For example, Braverman has been criticized by writers sympathetic to his overall position for ignoring labour opposition to deskilling. It nevertheless remains an important Marxist objective to show how proletarianization of the working class is bound up with ‘valorization’ as it is often called, i.e. the realization of surplus value within the labour process. But, as the diagram shows, what the capitalist now has to contend with is the fact that both jobs and workers attract certain social labels which affect the rate which he must pay for labour:



(N.B.: broken lines show indeterminate relationship.)

The real degree of technical skill, dexterity or knowledge used by the worker at any given time, therefore, may be less relevant to ‘valorization’ than the extent to which he has, or has not been accepted as skilled within the politics of the workplace. The most recent Marxist analyses admit that valorization is affected by ‘specific exigencies’, among them the degree to which workers can organize an effective resistance to the extraction of surplus value. (Elger 1979; Friedmann 1977.) In doing so they merely confront and reformulate the problem set out at the beginning of the paper. Is it possible to distinguish the technical from the political/social input into

skill and further to say which in the last instance determines *either* the fate of a particular group of workers *or* the evolution of the class structure of capitalism?

A second source of criticism is the failure of existing discussions to recognize the difference in levels of analysis involved in moving from statements about skill requirements within *individual* firms and processes to statements about class structure as a whole. Both Marxists and non-Marxists focus attention principally upon threats to the worker's position in society which emanate from factors internal to the labour process. Yet as Rubery observes of Braverman, for example, many hypotheses about the direction of change in the labour process can only be considered after a detailed examination of the changing nature of the *external* structure of industrial activity and demand for grades of labour has been carried out. (Rubery 1978). This is not simply a matter of controlling 'extraneous factors' before getting down to the real business of relating changes in skill requirements to the evolution of class structure. The notion of class itself calls for an awareness of the situation of particular groups of workers *vis à vis* broad systemic forces operating across the whole of society. Included among these forces are changes in aggregate demand and the level of employment, the growth of new industries and products and changes in the inter-regional balance of economic activity.

The same point may be arrived at in another way, one which is crucial for the argument of the whole paper. The notion of skill may, of course, refer *either* to the requirements of the job *or* to the capabilities of the worker. Failure to indicate precisely which sense of the word is intended in a given context will cause an unjustifiable confusion of levels of analysis. Braverman, for example, writes as if the 'degradation of labour' and the 'deskilling of workers' were interchangeable terms, whereas in fact they are not. Even within the workplace, the extent to which *workers* are affected by *job* changes consequent on the reshaping of production methods is not given. The outcome will depend on a large number of factors including, as we have seen, the possibility of worker resistance. But in any case workers' options are not necessarily determined solely at workplace level. Their fate will also vary according to the external availability of employment which, as has also been argued, is subject to a wide range of influences. Furthermore, if one is primarily interested in such issues as the proletarianization of the labour force, or the changing composition of the working class it is surely the total opportunity workers have to exercise their skills which is of central significance.²

The distinction, then, between (de)skilled jobs and (de)skilled workers has important implications for any theory which sets out to establish a relationship between changes in the proportion of skilled labour used in production (whether up or down) and changes in class structure as a whole. It shows that such a theory requires the investigator to move from one level of analysis to another. Quite simply the theory will be incomplete unless it also specifies the manner in which this analytical transition is to be made.

In fact the means is already at hand, both conceptually and in actual practice, for relating one level to the next. I refer of course to the curious set of social arrangements denoted by the term 'labour market'. Failure to conceptualize the labour market in depth is the most serious weakness of the discussions of skill which I

have been considering. It would, for one thing, be ridiculous to treat aggregate ebbs and flows in the employment of various categories of worker as if they were merely derivative of the economic and technical calculations of individual capitalists on one hand, or the exploitation of custom and practice by organized labour on the other. All of the above authors are in one way or another obliged to be concerned with the influences on the cost of skilled labour to employers, however, and this makes the cursoriness of their attention to labour market factors particularly hard to understand. The deficiencies in their analysis of skill which arise from this neglect may be illustrated with regard to the question of the efficacy of 'restrictive practices/worker resistance' in preserving craft jobs and earnings. Differences in the emphasis given to 'real' job requirements as against socially constructed ones leads the writers in question to opposite assessments of the relative strength of labour as against capital. Yet, research on informal 'restrictive' practices has provided strong evidence that the extent to which workers are shielded from the direct impact of market forces is a key element in explaining the pattern of incidence or non-incidence of strong workgroup controls. (Lupton 1963.) Agreed, the introduction of more formally organized industrial relations on the shop floor clearly brings new factors into the situation, but it would be naive to ignore the role that market factors may play in this very development itself.

Now, these observations do appear to reverse the drift of certain forms of theoretical argument in current sociology and political economy. The aim in these cases has been to assert the primacy of the exploitation of the worker at the point of production and to disparage interpretations which emphasize the labour market as a key factor in the class position of labour (e.g. Crompton and Gubbay 1977.) Really, however, the antithesis is false. Ever since Baldamus wrote his pathbreaking study of 'effort bargaining' it has surely been appreciated that the production process is overlain by the market process – that the labour contract is in practice being renegotiated every second of the working day. (Baldamus 1961; Fox 1974: 181-206; Eldridge 1973: 49-64.) Is this not the fundamental reason why restrictive practices exist at all? Conversely, the form in which employers organize production and labour's effort is supervised – whether directly, by Responsible Autonomy (Freidmann 1977), or by a system of sub-contracts – will play an important part in constituting and reinforcing the characteristics of the labour market as a whole. And finally, of course, the nature of the product and the demand for it will be of crucial significance in the same context.

Obviously, the labour market so-called is not a 'market' in the ordinary sense at all. Certainly for present purposes it will be more convenient to regard it as a *series* of social filters intervening between productive skill and class structure. This series should be grouped into categories defined by their relationship to each other. The need for such subdivision is indicated, for example, by the distinction currently made between internal and external labour markets (Doeringer and Piore 1971). The phenomena which have to be analyzed, however, are too complex to permit reduction to such simple terms. We do better, therefore to borrow the somewhat subtler framework that has been developed by 'manpower' economists and statisticians when analyzing and forecasting changes in occupational structure. In

such work it is usual to pick out three components – called ‘effects’ or ‘shifts’ – which make up the total available amount of employment. They can be shown to be statistically independent and, of course, in need of separate causal explanation. They are usually categorized as ‘industry’, ‘cyclical’ and ‘occupational’ shifts: all entail consequences for the analysis of change in the labour market for a grade of labour and *pari passu* for class relationships and structure.

The first two reflect what I have been referring to as *systemic* (i.e. external) changes in the overall size and interdependence of labour markets in varying times and places. Whole categories of both capital and labour find themselves involved, largely regardless of the market decisions that individual employers or workers may have made, viz:

Industry shifts. This term is reserved for changes over time in the industry mix of an economy (or the changed weighting of sub-sectors within industry groups). Industry shifts arise from the development of new products and associated processes and their effect on the structure of employment is very complex. They may be subclassified into two kinds: (a) *absolute* – where new industry by-passes older products, progressively undercuts their market and destroys related employment. (b) *relative* – where the growth of new industry alongside the old merely means the addition of a new sector of jobs to the total structure of employment. It is of great importance to note that the impact of both types of industry shift will depend on the extent to which they involve geographical movement or cut across political boundaries. Industry shifts, and their non-coincidence with community units may have enormous implications for local social structure.

Cyclical shifts. This concept refers to the consequences for employment of both general and localized fluctuations in the level of economic activity. It represents a particularly important set of factors which obviously must be allowed for prior to any generalizations about the impact of labour process change on society.

Occupational shifts. In contrast with these systemic forms of change, the third category listed above denotes labour market forces which do operate (i.e. are internal to) the point of production. But studying occupational effects on employment still obliges one to continue distinguishing between deskilled workers and deskilled jobs. Economists and others who work in this area undoubtedly use the concept in a quantitative fashion, as a summary of the total impact on the labour market of *all* influences on labour utilization within the relevant unit of analysis, e.g. the individual establishment, firms, or industries. As such it has many components including not only the ‘degradation of work’ itself of course, but also subtle changes in product technology and use of materials. Hence, a job may be downgraded, for example, but the resulting technical change may so expand product volume that displaced skilled workers get reabsorbed elsewhere, still performing skilled work. How far we may ask, does the notion of labour process change embodied in Marxist accounts of ‘valorization’ extend to such phenomena or does it exclude them altogether? Comparison of the two concepts suggests that it is the latter which needs to be thought through more rigorously. Unless we assume an ineluctable ‘metaphysical pathos’ of deskilling, the connection between job redesign

(degradation) and valorization (extraction of surplus value from labour) must be seen as highly contingent and essentially an empirical problem. (By a similar argument, I think it could be shown that the connection between individual processes of valorization and systemic processes of accumulation of capital involves an articulation of different levels of analysis. The latter are not reducible to the real skill mix used in production in any simple way and much analysis would be needed to show that such a relationship existed.)

Conceptual distinctions are only of use, of course, if they aid empirical research. Let us now use the above framework to examine the case which obviously is critical – namely, the impact of mechanization on craft labour in Britain. Quite apart from any interest this example may have in its own right for students of the ‘social construction’ of skill, it has figured prominently in recent discussions about long term changes in class structure, as is borne out by the extensive literature on the labour aristocracy; to say nothing of the issue which chiefly concerns us here, the so-called deskilling thesis. Braverman’s influential restatement of the latter relied on a comparison of what he believed to be the original situation of the craft trades in both Britain and the USA with the impact of Taylorite systems in the USA alone. If one follows through the fate of craft labour in Britain up to the present instead it is clear, as I now hope to show, that the concept of ‘deskilling’ itself is too unspecific. Viewed in the light of the framework set out above it would appear to be essential to discontinue using the term deskilling without qualifying it appropriately: that is, distinguishing between systemic (‘cyclical’ + ‘industrial’) and occupational deskilling.

In the next section (B) I shall seek (i) to illustrate the systemic changes which have deskilled craft workers in this country during the twentieth century, (ii) to offer a crude demonstration of the relative importance, in quantitative terms, of these systemic effects as against occupational shifts reflecting the overall utilization of craftsmen within production. Section C goes beyond quantitative measurement. It asks whether any modifications have to be made to the argument once one takes into account the possibility that conflict between capital and labour in industry may alter the meaning of occupational labels over time.

B. *Craft deskilling and the systemic components of change in employment*

In this section our focus is largely quantitative. It seeks principally to disaggregate trends in craft employment during the course of this century. It must be stressed that for this purpose the investigator is not in a position to discuss qualitative aspects of skill at all and must, therefore, hold them constant. The published employment statistics upon which one is obliged to rely can in any case only tell us about jobs-as-recorded (and presumably recognized and paid for) by individual employers. Nevertheless what quantitative analysis *will* reveal is the role of the labour market as a distributor among potential recipients of a finite if variable supply of occupational labels carrying a skill connotation in this sense. The consequence, as several authors have lately realized is that the labour market can and often does become a source of deskilling in its own right (e.g. Friedmann 1977: *passim*; Littler 1978).

In order to apply this reasoning to the case of craft labour it will be necessary to make some caveats regarding the empirical scope of the discussion. First, to employ manpower analysis over any length of time is, of course, fraught with difficulties, with the result that none of the mathematical techniques which have been built up around it are particularly appropriate. The basic problem is the lack of suitable data, particularly of a quantitative kind, compounded with the limited attention the topic has received from social and economic historians. The material presented below, therefore, must be treated cautiously and is not intended as an exhaustive discussion. Secondly, it is quite impossible to consider all areas of craft employment, even in the specific sense used here. It is commonly agreed that the industries in which the apprenticeship tradition remains important are four in number, viz: engineering, especially mechanical engineering, shipbuilding, construction and printing. In each of these cases substantial numbers of craftsmen are employed on production work. In printing, an industry for which compilation of manpower series is comparatively recent, the proportion of craft operatives within the manual workforce is currently thought to be around fifty per cent for general printing and somewhat less for the publication of newspapers and periodicals. (BPIF 1976.) Data for the remaining three trades are more extensive and are presented in Table 1 below on page 64. It will be seen that in each case the percentage of 'skilled' operatives is high. The very broad definition of 'engineering' we are obliged to use in a time series of this kind conceals the fact that in machine tools the figure is almost 55% whereas in certain forms of electrical manufacture it is as low as 13%. According to various enquiries the majority of these skilled workers are and always have been, in a formal sense at least, time-served men (e.g. EITB 1975; Phelps Brown 1968: 44). Of course, various groups of craft tradesmen are employed outside of these particular industries. Unfortunately, tracing the location and distribution of the relevant workers is made impossible by the fact that, in industries outside those already listed, the available data, mostly governmental, rarely separate out the numbers of strictly time-served men from other groups loosely described as 'skilled', to whom the apprenticeship system may not apply.³ For present purposes, however, it will be adequate to concentrate on the 'craft' industries *per se*.

Having set out the limitations of our empirical material let us now attempt to demonstrate the significance for workers in apprenticed trades of the systemic modes by which they may be said to have been 'deskilled'.

(i) *Industrial (versus occupational) deskilling*

The arguments of Braverman and his school dwell chiefly on the way in which multi-process craft operations are given over, because of the pressure of capital accumulation on labour costs, to detail workers. In doing so they have given the impression that the latter *typically* make their appearance within the same industry as that originally employing craftsmen. Without denying that this may sometimes happen, however, it is far from clear why we should assume this to be the only or even the most usual method by which technical development occurs. An alternative theme in the literature, found in the work of Schumpeter in particular, would have it, *pace* both orthodox and Marxist economics, that the industrial capitalist is not a

TABLE I

Great Britain: Relative and Absolute changes in skilled employment in the Private Construction and Engineering and Related Industries, 1965-1976.

	Private Construction				General Engineering		Shipbuilding and Marine Engineering	
	'Traditional' trades ¹ 000's	% of operatives	All skilled 000's	% of operatives	All skilled ² 000's	% of operatives	All skilled ² 000's	% of operatives
1965	533.0	47.1	630.7	55.7	969.1	37.4	83.7	56.4
1966	407.1	46.5	610.6	55.9	971.5	36.6	83.0	56.4
1967	491.7	46.2	601.7	56.5	937.4	36.5	82.1	56.6
1968	473.4	45.8	594.6	57.6	928.8	36.2	81.8	56.4
1969	432.7	45.5	556.1	58.4	904.4	34.6	77.6	56.1
1970 ³	383.9	44.4	506.7	58.6	920.1	34.4	76.9	56.0
1971	374.5	45.6	489.2	59.6	901.4	34.7	76.5	56.7
1972	371.9	44.3	486.5	57.9	852.3	34.5	76.0	57.4
A 1973	375.7	43.5	492.0					
B	396.4	43.7	520.7	57.0	723.3 ⁵	30.7 ⁵	67.7 ⁵	54.2 ⁵
1974	379.5	44.2	493.4	57.5	709.5	30.2	64.9	53.8
1975	364.0	44.4	492.5	60.0	738.8	30.3	71.3	53.2
1976	344.1 ⁶	44.4 ⁶	466.8	60.2	716.1	30.5	⁶	⁶

Sources:

Column 1: *Private Contractors' Construction Census*, HMSO for the years shown.

Columns 4-8: British Labour Statistics, HMSO, 1968-1972, *Tables of Occupations in Engineering and Related Industries*, Department of Employment *Gazette* for subsequent years.

Notes:

1. That is, carpenters, joiners, bricklayers, masons, roof slaters and tilers, plasterers, painters, plumbers and gasfitters, heating and ventilating fitters, glaziers and paviours.
2. Defined as craftsmen in skilled occupations whose normal method of entry is by apprenticeship or equivalent training - males only.
3. Change of SIC 1958 to SIC 1968 from June 1969 effective from the 1970 enquiry.
4. Change from estimates derived from National Insurance counts to estimates derived from Annual Censuses of Employment - this tended to reduce the absolute numbers in each category, see *DE Gazette*, March 1974, p. 234, Table 1. The *Private Contractors' Census* widened its coverage in 1973 and two sets of figures are given for that year.
5. Figures for 1973 onward exclude foremen who constituted a further 3-4% of these categories in these years.
6. The series for private construction and shipbuilding are no longer available in this form with effect from 1977 in the first case and 1976 in the latter.

ready innovator in response to price competition and frequently does not even possess any reliable method of forward planning of machinery or manpower. (Schumpeter 1976: chap. 7.) Consequently new techniques of production are

developed in periods of what Schumpeter euphemistically called 'Creative Destruction' in which new enterprise by-passes ossified sectors of the economy.

Inertia should certainly be borne in mind when one is considering the effects of technological change on the British economy and its labour force. It may explain why the history of the craft trades in particular provides plenty of examples of the kind of by-passing implied by Schumpeter's model. Moreover, the deskilling effect in many of these cases seems to have been *relative* rather than absolute. In the nineteenth century, for instance, paper making, furniture and shoe manufacture may all be cited as examples where mechanization created new branches of the trade for the mass market but did not immediately and dramatically undermine the market for the quality products of the hand worker. During the present century the 'engineering' industry, as it is known, has undoubtedly experienced similar phenomena – although few discussions of the changing position of the engineering craftsman seem to have given the point sufficient attention. Most statistical sources and many discussions in fact treat what is a large, amorphous and evolving agglomeration of firms as if it possessed an essential unity and comparability over time. Proceeding solely on this assumption it would appear that the percentage of craft labour employed in engineering *has* declined over the century (from about 50% of the operative workforce to present day levels) in favour of a much higher proportion of semi-skilled occupations.⁴ It is a tempting but false conclusion to take this as an indication of the decline of engineering skill as a result of the direct introduction of semi-skilled machining. In fact most of the apparent trend may in the author's view be ascribed to *relative* industry shifts, the growth of new spheres and modes of employment. Activity in the skill-intensive general engineering sector remained at best static before the later 1930's and investment levels insufficient to produce a radical technological deskilling. By contrast, growth in employment and investment in, say, motor vehicle and cycle production, electrical engineering, aircraft manufacture, though not dramatic (Buxton 1975) would certainly have impinged on estimates of overall skill use in the industry as a whole.⁵ Incidentally, there is a certain amount of evidence that post-war full employment, by expanding investment in all sectors, actually *increased* the relative employment of craft labour in engineering (Department of Employment 1965/1970: No. 2, 15-17).

The recent history of the printing industry suggests another case where absolute and relative change are inextricably mixed. It would appear that new technical processes developed as a result of a relative industry shift caused by the growth of new mass circulation forms of publishing. Book printing remained unaffected by these processes, although it is now conventional wisdom in the industry that the new technologies are at last cutting into this and other products hitherto the prerogative of traditional print crafts.

Two additional points are worth making. First, insufficient recognition is given to the fact that new industries, though they may employ large numbers of detail workers, nevertheless create in themselves a certain amount of new job opportunity for traditional crafts. According to the May 1978 *Employment Gazette*, for example, the number of mechanical engineering craftsmen employed *on production alone* in the electrical engineering industry exceeded the number of skilled electricians similarly

engaged by just over forty per cent. The traditional engineering and building trades have also made their reappearance in, say, motor manufacture, plastics moulding, aeronautics, oil refineries and chemical plants. Secondly, these very examples should remind us that new technologies and products also create new skills, electricians themselves being an obvious example (for examples within building see Jeanes 1966). The growth of these must be offset against the putative deskilling of the older crafts. The interesting question for the student of class structure, therefore, is not simply one of the 'objective' changes in the skill content of jobs brought about by shifts in the industrial locus of employment. It also involves asking the question of whether as in the case of electricians, worker organization is able to ensure that the 'new' expertise is actually *recognized* in workers' rate of earnings. Before turning to the question of trade unionism, however, we must consider the other systemic mode of deskilling.

(ii) *Cyclical (versus occupational) deskilling*

The relevance of recession and cyclical factors generally for the study of deskilling has perhaps been rather neglected because such developments typically occur at times when the sort of labour process changes more usually associated with the term de-skilling are held back in the economy at large. Downswings are usually associated with a fall in the levels of investment necessary for the introduction of labour saving plant and machinery. Moreover, the long term impact of economic cycles on the composition of the working class appears to be self cancelling. For example, the loss of total absolute employment in craft trades in Britain caused by the inter-war slump was more than wiped out by (i) subsequent re-armament and post-war reconstruction (ii) simultaneous demographic changes in the working population as a whole.

It is legitimate nevertheless to describe cyclically caused unemployment of craftsmen in recessions as a form of de-skilling for three reasons. First, for many groups of *workers* the severance from skilled work is likely to be permanent, especially if the recession has revealed an underlying lack of competitiveness in the basic industry. This effect may also be produced or compounded if the worker is beyond a particular stage in the life-cycle; or if the search for alternative employment leads him to become enmeshed in a separate internal labour market from which it is difficult for him to revert to his previous skilled job.⁶ Secondly, any process of recovery, though it may replace the stock of jobs lost in the downswing of the cycle, may nevertheless fail to do so without causing substantial dislocations to individual *workers* through organizational, financial and geographical shifts in the locus of employment. Thirdly, and in consequence, recession (and not labour process deskilling) provides the most direct and tangible form in which the initially relatively privileged groups such as skilled workers experience proletarianization. In short, cyclical deskilling is likely to be highly relevant for understanding how key groups of *workers* experience the unfolding of class relationships in a society. Their response to that experience may of course take some surprising forms.⁷

To illustrate the actual operation of cyclical deskilling among the British craft labour force it is important to show both (a) the magnitude of its impact on workers' employment prospects and (b) its independence, in a statistical sense, of other,

particularly occupational, deskilling factors. The first objective can be approached simply from a study of trends in the absolute numbers employed – holding industry type constant to control for ‘industry shifts’. The second calls for an entirely separate measure of ‘occupational’ shifts involving ideally, extended mathematical treatment going well beyond the scope of the present paper and the data available to us (for an example see Wabe 1977). As a crude control of the ‘occupational’ effect, however, one can utilize the percentage (i.e. the relative representation) of craft workers within each separate industry. I shall argue that this figure appears to remain fairly constant over long periods. The chances are, therefore, that the availability of craft employment in Britain has depended far less upon changes internal to each industry, in its use of different categories of labour, than upon the general state of economic activity to which all workers are vulnerable.

First the question of magnitude. There have been two major occasions during the time span covered by our enquiries when large numbers of craftsmen were effectively deskilled as the result of cyclical factors: in the years surrounding the slump of the thirties, and subsequently during the current recession beginning in the 1970s. It is only for the second of these periods, and even then only for the industries and period shown in Table 1 that any statistically reasonable time series is available.

There is, nevertheless, enough information in the Table to show that the absolute number of skilled employees has fallen dramatically since the start of the series (1964). Moreover, surveys of skilled labour shortages have indicated that skilled tradesmen who are pushed out of jobs, especially as the result of redundancy, are mostly lost to skilled employment altogether (NEDO 1977; Department of Employment 1979). There need be little doubt, therefore, about the deskilling effect of the recession.

This is even more apparent if, secondly, we examine the relative representation of skilled workers. This has remained, in comparison, virtually constant – such changes as are evident in the table being attributable to the crude aggregation and administrative adjustments to the data base. Put another way, it would appear that the relative *rate* of decline in skilled employment – which we are using as a rough index of occupational deskilling – has been at most only very slightly greater than the general fall in the employment of all operatives. To establish this conclusion on a more sophisticated basis would require more extensive investigation and resources. We are, therefore, fortunate that in one case – engineering – such work has been carried out and its conclusions are wholly consistent with those presented here (Wabe 1977). In short, the recent data confirm the importance of recognizing a distinct ‘cyclical’ mode of deskilling of workers.

Unfortunately it is much harder to identify the impact of ‘pure’ cyclical deskilling upon craft employment before World War II. Statistical sources are poor but in any case the impact of the recession on the same industries as appear in Table 1 was more divergent. Shipbuilding and the heavier sectors of engineering underwent a rapid decline in employment. On the other hand newer areas of engineering, with the exception of the period 1929–32, experienced a gradual growth. Likewise the building trade as a whole underwent a major expansion. And, we have so far failed to consider the position of the printing trade which enjoyed a much more equable

pattern of employment both before and after the Second World War. Even in these cases, however, individual groups of workers were still vulnerable to dislocation brought by quasi-cyclical factors. Gillespie (1953: 51), for example, describes how the tendency for publishing to gravitate to London during the inter-war years brought about a decline in the Edinburgh book trade, resulting in a net loss of printing employment in that city despite an increase in numbers in the Scottish trade as a whole. Similar examples occurred in building because of disparities between regions in the extent of participation in the interwar construction boom (e.g. Connelly 1960).

It also seems likely that the pre-war impact of *occupational* shifts upon the market for craft labour was equally insignificant as in more recent times. Let us take the cases of two major industries, building and engineering. In the first, the Ministry of Labour did in fact publish an annual occupational series between the wars, from which it is possible to calculate that the proportion of traditional building trades employed apparently remained unchanged, despite the overall expansion of the industry.⁸ In the second case, engineering, we have merely to restate the conclusion reached under the heading of 'industrial' deskilling. Orthodoxy has it that the work of the engineering craftsmen was *directly* deskilled by machines during the twentieth century. But this ignores the need to control for long term industrial shifts in the composition of the industry itself. A comparison of like with like – the sectors covered, say, in the 1906 Board of Trade Wages Census with their counterparts in the 1930's or even after the Second World War – would, if it were feasible, be likely to reveal that occupational deskilling was not extensive in engineering – if only because one is considering the 'traditional' sectors of the industry where investment had been falling for much of the time.

In this section, then, I have been emphasizing the *systemic* effects (industrial, cyclical) which impinge upon the employment of craft workers. For the student of class structure and industrial relations there are important implications in the result, whether one is attempting to interpret the position of this particular group of workers or predict the general direction of change in class structure and composition. The data indicate that the deskilling impact of systemic factors is, in this case at least, of far greater consequence for individual workers than changes in the relative usage of skilled labour at the point of production.

But before such a result and its relevance for theory can be accepted and considered it is essential to consider in greater depth the relationship between the purely quantitative concept of occupational effects on employment and actual qualitative changes in technology and work organization.

Craft deskilling and qualitative labour process change

Naturally, the investigation of any occupational change demands much more than mere head counting from published sources. In the craft context the major problem is to ascertain how far a surplus of spurious craft employment – in excess of technical 'requirements' – has been encouraged in British industry because of the activity of organized labour; and, if so, whether this phenomenon has increased over time,

especially during the period of post-war prosperity. I shall try to show that in fact a necessary condition for the effective exercise of union and shop floor power over the recognition of craft skills is that the worker's activities should contain a genuine technical use-value for the employer. The implication of this position is that where craft workers are recognized as 'skilled', their jobs will *not* have been technically deskilled – though they may have been redefined. (Inevitably there are some exceptions to this generalization, the most important of which will be discussed at the end of the section.)

Conventional wisdom has been somewhat facile in its assessment of what 'technical requirements' have actually been at any given time. There is the widely quoted judgement of H. A. Turner, for example, that workers are skilled or unskilled: 'according to whether or not entry to their occupations is deliberately restricted and not in the first place according to the nature of the occupation itself'. (Turner 1962: 184.) It is essential to modify the apparent extremism of this widely cited statement which has been used to support (a) generalizations about the historical period in which British craft unions consolidated their control; and (b) assertions about craft control in a much wider range of historical and industrial contexts. In neither case, however, should it be accepted without careful consideration. In an important critique of the applicability of Turner's analysis to the situation of craft labour in the period 1870–1914, for example, Charles More argues that:

- (i) the ability of craft trade unions to 'socially construct' was constrained by their low level of organization at that time and they were certainly in no position generally to impose expensive overmanning and job descriptions upon reluctant employers (cf. also Zeitlin 1979: 264).
- (ii) formal apprenticeship survived not primarily because it became a device for union entry control but because it yielded genuine returns to employers financially, technically and in terms of labour force recruitment and management.
- (iii) the distinctive positions of craft workers rested essentially on the fact that the bulk of them possessed *real* skills of salience to employers which were not subject to such an extensive deskilling at the time (or even as a result of the First World War) as has been widely believed. (More 1979: chap. 7.)

A comparison of More's results with the pattern of subsequent developments suggests that the above three points have continued, contrary to conventional wisdom, to shape the relationship between, on the one hand, skill and, on the other, the kind of recognition accorded to it – *such as, for example, would be likely to be reflected, albeit imprecisely, in official employment returns*. I will briefly take each point in turn.

(i) Union weakness and union power

Despite the net growth of union membership, More's conclusions about craft union weakness certainly remain *generally* valid for the inter-war years because of the unemployment situation. A searching enquiry, industry by industry, in the 'thirties states: 'very few cases of the price of a particular type of labour being raised by a

deliberate limitation of its supply have been discovered and/or reported'. (Hilton 1935: 324). The period since World War Two is of course a different matter. That some cases have arisen of jobs being preserved as crafts, or elevated to that status simply by the effects of craft unionism and the growth of plant bargaining, is indisputable. But for present purposes it is necessary to discuss the *extent* of such practices, the *motives* for which they are carried out, and the *background* against which they still occur. With regard to extent it is essential to recognize that unionization of the craft labour force has been far from complete in many trades and as against those cases where it appeared strong, one must set those like building which have actually experienced a marked decline in strength since 1945 (Taylor 1978: 7-8). Likewise where membership growth and the conclusion of closed shop agreements *have* occurred one cannot assume that widespread enforcement of craft control over job descriptions was the inevitable consequence. Such an assumption relies on a theory of the motivation behind craft exclusiveness which, in our view, inverts the correct relationship of means to end. It implies that control of entry into the craft has been a tactic for socially constructing 'unrealistic' job, pay and status differentials. This is to neglect a large body of evidence⁹ and the statements of union leaders themselves that, traditionally, recruitment control has constituted an important end in itself. The reason for this lay in the persistent oversupply of craft labour especially in certain areas which led to endemic unemployment right up to the late 'thirties in both booms and slumps in trade. That this entry control aided the erection of pay and status differentials for those in employment in other areas – where it actually happened – was a derivative phenomenon.¹⁰

In fact during the post war period, craft unions were under considerable background pressures which led to the gradual and partial relinquishment of the entry control policy. The first was the growth of plant bargaining itself of course culminating in the system of productivity agreements. The whole process implied some abandonment of 'restrictive practices' for wage increases, closed shop agreements and secure recognition and recruitment. (McKersie and Hunter 1973: 291-5.) Underlying this, however, was the more important fact of post war prosperity, technical change and labour shortage. These made it increasingly impossible to maintain 'irrational' controls over job descriptions unilaterally. Survey evidence has indicated that scarcity of skilled labour *weakens* a union's ability to monitor cases of dilution (AEU 1968; Department of Employment 1971; Phelps Brown 1968: 43; Mackay *et al* 1971: 277 and 301). Furthermore, the work of Mackay and his co-authors (*ibid*: 283) implies that other inroads on unilateral control are caused by technological change occurring via industry shifts. In their study, mechanized production using machine-setters had entailed not so much 'deskilling' as the development of alternative engineering skills. Consequently an element of ambiguity existed as to the meaning of apparent movements between skilled and semi-skilled jobs by workers in the local labour market. In all of these examples craft control of entry had in fact disappeared or become severely attenuated. Where it did survive in the post war period it was, as trade unionists themselves claimed, defensive not offensive in origin. It was associated with continued unemployment and/or oversupply of craft labour. This, in turn, was caused by the fact that important

sectors of the principal craft industries continued to differ in significant ways from the stereotype of modern industrial organization projected by the full employment ethos. The result has been continued employment insecurity attributable to one or more of the following: regional decline; fluctuations in government spending; materials shortages; casualization and labour-only subcontracting; the dominance of small firms with poor employment conditions and high bankruptcy rates in the industry. These are all factors conducive to weakness in labour organization and we may thus continue to remain sceptical about widespread union ability to impose artificially inflated job descriptions on employers. Nor is this any 'loss of control' brought by 'monopoly capitalism' but a constant feature of British industrial life going back into the nineteenth century.

(ii) *Apprenticeship*

The survival of apprenticeship in its traditional form actually provides further evidence of the limited extent of union ability to 'socially construct'. Neither at local nor national level have craft unions been able to impinge successfully on employers' 'right to manage' industrial training and enhance the content or status of apprenticeship. (Lee 1979.) As a result throughout this century to the present day apprentice numbers have fluctuated with the state of trade and have frequently fallen *below* such quotas as have been set out in union rule books. Likewise the content of training has essentially been fixed by the immediate production needs of individual firms.¹¹

Standard academic accounts of the apprenticeship system are misleading. Quite frequently they maintain simultaneously two conflicting propositions (i) that unions have created labour shortages and restricted training opportunities unnecessarily and (ii) that unions have created opportunities surplus to requirements for the ex-apprenticed. They also underplay the extent to which the traditional system has received the tacit support of employers over the years. The length and low wages associated with apprenticeship offer a variety of advantages depending on the circumstances of the employer. There are still examples of apprentices providing a ready source of cheap juvenile labour especially in small firms. (Lee 1972; Ryrice: 1976.) Even in those cases where training has had planned content, managements have not automatically favoured the shortening and reform of the apprenticeship period (e.g. Williams 1958: chap. 6.) Such a development would have made it much harder to recoup the costs of training and obliged firms to pay the full adult rate at, say, 18 instead of 21. Even in more recent times, the claim by craft unions that the long period of apprenticeship still confers vital skills and experience is reflected in managerial recruitment behaviour. Though firms complain, for example, about union restrictions on the upgrading of semi-skilled workers, Mackay *et al* concluded (1971: 309) that in engineering a much more fundamental hindrance to extensive upgrading has been technological limitations on the use of non-apprenticed labour in craft jobs. Similar considerations have apparently made employers reluctant to engage Government trainees. (Hunter 1978: chap. 7.) This brings us to:

(iii) *The salience of real skill*

In practice, the impact of mechanization on workers' skill is not one-sided or unambiguous in its effects. In the engineering industry employers have long

maintained hopes of eliminating craftsmen in favour of production by unskilled machinists. But experience repeatedly showed that the machines created craft jobs and tasks to offset ones which had been lost. The recent past has been no exception. A very exhaustive in-depth study of manpower changes in the industry during the 'sixties concluded that changes in process structure had been relatively slow in their effect on employment. (Bell 1972.) Likewise the impact of even the latest kind of computerised machine tools has modified rather than wholly destroyed traditional skill. In general the effect of technical change appears to shift the manual skill requirement from production to job planning and maintenance (Jones 1979; Isherwood and Senker 1978.) The result is that the technical component of *workers'* skills possesses a protean quality that is not actively discouraged by employers and defies easy generalization. In any case, a surprising number of craft jobs themselves have for a long time remained resistant to mechanization. The most obvious cause is the essential variability of production which continues to apply to important sectors of engineering, shipbuilding and of course, construction. A definitive study of the last example revealed a task structure remarkably akin to the picture of the industry given by More for the turn of the century (Jeanes 1966). Diversity of recruitment and precariousness of employment have prevailed throughout the period and, perhaps because of this, the building trades have been notable for the prevalence of different 'classes' of work. Essentially, however, the growth of the industry has been predicated on the expansion of the existing labour force structure composed of traditional craftsmen and labourers. It is a situation which mechanization and system building are slowly changing. But even in this and other contexts where mechanization of craft jobs becomes technically possible, the overall impact on workers is mitigated by the survival of so-called marginal producers using the old methods. The presence of – mostly small – concerns, undertaking various kinds of jobbing work that can be carried out with rather small inputs of capital and technology seems to be permanent and still very important feature of the craft-based industries. The individual survival rate among this group of firms is usually low but the market forces which keep it in being transcend individual case histories. Examples may be found in important sectors of engineering; and in both construction and printing, firms with fewer than 100 employees account for approximately half of all employment in the private sector.

Printing of course is a special case. Along with certain occupations in the shipbuilding industry it provides relatively clear and well documented examples of 'social construction', but the very peculiarity of these cases and the rather small fraction of the total craft labour force in Britain which they comprise is in its way testimony to the rarity of the model of union-organized social construction which prevails in so much industrial relations writing. Moreover, there are a number of points to be made about this social construction. First, it is not anything new or aggravated by post-war conditions but has been a constant feature dating back to the origins of the relevant occupations themselves (e.g. Zeitlin 1979: 266). If anything, post-war circumstances have made the system *more* rather than less precarious. Secondly, though social construction may be union-organized it cannot be regarded in either case as wholly union imposed. Employers have been prepared to tolerate its existence because:

- (a) they have been protected from fluctuations in international trade and/or could afford wage concessions.
- (b) the system took wages out of competition in a fragmented competitive industry with a tight labour market.
- (c) the nature of the product has in effect caused labour subcontracting to cope with frequent (even daily) variations in work flow and
- (d) for this and other structural reasons the union has functioned as a 'labour exchange' controlling the supply of labour. (Bloor 1965; McCarthy, 1964: 38 and 50; Sisson, 1975: 76.) It is important to note additionally that, according to some authorities, the spread of mechanization and machine minding tasks in printing has tended to increase rather than decrease skill input into the industry. Whereas the newer technologies call for some adaptability and sophistication from the operative, the skill basis of the original crafts has always been overstated (cf. More, 1979: 192).

Summary and Conclusions: Skill and Class Structuration

In the foregoing sections, then, I have tried to identify, by means of both conceptual argument and an empirical case study, some key factors in the relationship between skill and class structure.

The main thrust of the conceptual discussion has been to emphasize the complexity of the social filters intervening between (i) changes in the technical content of modern work and (ii) the unfolding of class and class relationships. In order to analyze this complexity it is essential to recognize the transition in levels of analysis involved in moving from one to the other. The inadequacies contained within prominent discussions of skill in orthodox and radical social science, I have argued, stem from their neglect of this problem.

The ramifications of such a position, however, extend well beyond the inevitably narrow range of writings considered here. This may best be illustrated, perhaps, by the familiar concept of 'market situation' from which neo-Weberian theories of class structure derive. As Giddens (1973) observes, the difficulty presented by Weber's account of class is one of how to make 'the theoretical transition from a totally disaggregated set of market positions or capacities to the identification of classes as structured forms' (p. 104). To study class in its empirical manifestations, he argues, is to look at contingent questions about class *structuration* within a particular society. Now, what Giddens has identified here is the fact that there are two different levels of analysis involved, i.e., two forms of market capacity. It is in the relationship between them, rather than between 'market' and 'social' forces, that many of the key questions of class structuration primarily reside. It is, consequently regrettable that Giddens fails to sustain and build upon his own distinction but instead tends, like Weber, to elide *individual* market capacity with the situation of already-constituted *groups* deriving from systemic inequalities of economic power. A specific framework of concepts, of the kind proposed and used above, is required if the individual and systemic (or structural) levels are to receive an integrated analysis.

The empirical part of this paper has attempted to show the utility of such a framework. Applied to the crucial case of craft labour it yields results that are

important for understanding both the distinctive class position of this particular occupation; and the determinants of the class structure of the advanced industrial societies. Under the first head, it has been possible to bring out the systemic labour market forces, as against the merely occupational ingredients of 'market capacity', through which craft workers rather than craft jobs become deskilled. As for the second, the implication, though 'obvious', is that technical change will have differentiating consequences for the societies of the capitalist world and the tendencies inherent in their class structures. Hence the apparent absence of marked occupational shifts in craft employment in Britain stems, I suggest, from the fact that various market factors have slowed down the pace of innovation in this country relative to the USA and the technical, strategic and social position of craft labour has thus been less liable to change. Braverman, under the influence of Babbage and, ultimately, Marx, assumes too readily that the effect of price competition on individual employers will always be the same. Yet in Britain the individual capitalist has not always been a ready innovator in response to such pressures. This is a result at odds with the latent convergence thesis – I have called it 'metaphysical pathos' – which lurks behind concepts like 'deskilling' and the 'degradation of work'.

Secondly, the case of craft skills in Britain demonstrates how important is the structure and behaviour of the labour/product market in setting out the parameters within which industrial conflict occurs. Labour in all sectors of the economy is presented with basic employment conditions as a *fait accompli*. Unions can and do conduct a 'guerrilla campaign' against them, no doubt, but there is nothing especially new about that. In general, the evidence in support of the view that the recognition of craft skills has ever been imposed on reluctant employers by the 'social construction' practices of unions alone is, at best, highly selective in focus. It is, in fact, at least as convincing to argue, from a broad perspective on the craft labour market in Britain, in favour of the opinion expressed by J. T. Dunlop, in a review of Turner's book: '... technology and strategic position lead to apprenticed trades rather than the reverse. It is true that demarcations would be less sharp in the absence of apprenticeship but job classification and occupations are derived primarily from job requirements'. (Dunlop, 1964.) It would follow from this that the presence of recognized craftsmen as a relatively stable and enduring component of the British working class reflects their continued technical and strategic capacity within both internal and external labour markets.

One cannot in any case assume, without a great deal more comparative research that net skills in the working class as a whole are either rising or falling. I have tried to show that this is a variable whose magnitude has many complex components. Both radical and conventional theories of skill tend to equate in a simple way the disappearance of traditional craft jobs with the removal of all skill from modern life.¹² This is to share the reluctance of many employers to give skill due recognition and may do a great disservice to the workers concerned.^{13, 14}

Notes

1. For important summaries and examples see (Aldridge 1976: 13-21; Liepman 1958: chap. 9; Turner 1962: 184; Williams 1958).

2. It is not the intention of this passage to suggest that Braverman wholly ignores phenomena such as industrial change or unemployment. As an inspection of his book will show, however, he appears to assume, wrongly, that their occurrence may be wholly explained by *reduction* to the deskilling tendencies of labour process change (see 1974: 386-8).
3. Women have been consciously and deliberately excluded from this discussion. Not only are very few women apprenticed craft workers in the sense used in this paper but their recruitment and recognition as skilled has long been a thorny issue in the craft trades, one requiring quite separate analysis and discussion.
4. Such discussions in any case involve the fallacious assumptions (cf. below p. 66) that such percentages can be used as a direct measure of occupational shifts and in turn deskilling of jobs and work processes. See, for example, the classic discussion by Yates (1937) and Jeffereys (1945, 207).
5. However, semi- and unskilled workers are equally or even more liable than craftsmen to suffer dislocation as a result of industry shifts – an additional consideration which makes it important to distinguish the absolute deskilling of a skilled craft from its deskilling relative to employment opportunities for other grades of worker.
6. Examples include craft workers who have exchanged intrinsically satisfying work for higher pay rates on semi-skilled work; or ex-craftsmen who have become enmeshed in job specific promotion chains.
7. In practice, insecurities and unemployment of the kind described here have on the whole tended not to heighten the class consciousness but to reinforce the sectionalism of organized craft labour in Britain. Both at the present time and in the inter-war years they have strengthened rather than weakened the case for the exclusion of dilutees and 'foreigners' from the diminishing pool of job opportunity.
8. These appeared monthly in the *Ministry of Labour Gazette* under the heading 'Detailed Reports on Employment in some of the Principal Industries'; occupational breakdowns for other industries were not given however.
9. Pre-war sources include the standard works of Pelling (1968); Jefferys (1945) (Engineering); Child (1961) (Printing) and Pollard (1969: 108) (Building). Post-war examples will be found in Williams (1958: 68-9); Marsh (1965: 107); Roberts (1967: 12-13); Mackay *et al* (1971: 298-323) and Hunter (1978: 58-60).
10. The salience of union recruitment controls by themselves in establishing the craftsman's differential is questionable. That differential in its heyday rested on far more than its functions for the recipient: for there have been clear advantages for non-craft unions in having their pay pegged to skilled earnings (e.g. Cole 1939: 354 ff.) and employer adherence to custom and the introduction of piecework have both played their part. Likewise skilled labour shortages have existed at all times (even in recessions) and scarcity of skilled workmen should therefore have helped to bid up their relative wages. In modern times craft earnings differentials have been under considerable attack (Taylor, 1978: 215; NEDO 1977: chap. 4 and appendix B esp.: 30 and, for a contrary view, Hart and Mackay 1978: 39). General unions have displayed as great preoccupation with their members' relative status as have the traditional craft societies (e.g. Gallie, 1978: 275-6).
11. One of the most recent studies to reach this conclusion is the sophisticated econometric analysis of Lindley (1975) which see for reference to earlier literature. See also references to work by myself, Liepman (1958) and Williams (1958).
12. The work of Blackburn and Mann (1979) should not necessarily be considered as evidence against this point. The structure of job opportunities in the Peterborough labour market which they studied appears to be unusual in many respects and numerous examples of so-called semi-skilled jobs requiring a high skill content will be found (see e.g. Mackay (1971); Jeanes (1966); Bell (1972)).

13. Since writing this paper I have encountered recent work on deskilling by Erik Ohlin Wright of the University of Wisconsin. Wright deploys an analytical framework to discuss Braverman which is in some ways analogous to that used in my Section A. Nevertheless, there are important differences between our two approaches and as anyone familiar with Erik Wright's work will be aware, in the scope and conclusions of our respective enquiries.
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