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FROM CRAFT TO QUALIFIED LABOUR IN BRITAIN

A COMPARATIVE APPROACH (PP1)

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1. Introduction (VI)

As the title suggests, my talk is about the transition from craft labour to qualified labour and I want to discuss this both historically, in terms of the development of labour through the centuries, and geographically, in terms of disparities in Europe. My aim is to pinpoint the present position of labour in Britain, or, more precisely, the present position of building labour – which is and always has been my special area. And I shall do this by examining two aspects, the first, wage relations – which show us how labour is socially integrated into production, and the second, the skills or divisions of labour that reveals the quality of labour.

1.1 Wage relations

Both are of course intricately linked. Wage relations go together with different categories of labour, to which are attached different conditions of employment, forms of contract, labour legislation, collective agreement, etc. At the same time they regulate the exchange of labour by specifying different systems of payment, whether piece time or task, so indicating the means by which relations between working time and output are to be evaluated and measured. As Maurice Dobb in his 1927 book on wages stressed (*PP2*):

If we examine the features which distinguish wages as they are paid today from other ways in which work in the past was performed and paid for and seek to define the character of the wage system in these terms, we shall see that some fundamental distinctions exist which give a unique character to the actual problems with which the modern industrial world is faced. (Dobb 1927)

If we trace the development of wage labour from feudalism, two qualitatively distinct wage forms are discernible, each with a different origin. **(PP3)** The first is a price paid for the product of labour extracted from nature, which assumed the form of piecework and was rooted in artisan or craft production. The second wage form is a price for a working day as a redemption from feudal service or payment for occasional work, such as work on the demesne or statute labour on the roads which was gradually converted into wage labour based on time. **(V2)**

1.2 Definitions of skill

Bound up with different wage relations are different qualities of labour, different divisions and hierarchies, different understandings of skill. The usual British notion of skills is one associated with the first wage form and given wonderful expression by Adam Smith, in his examples of pin and nail making. It is the ability, usually physical, to fulfil a particular task in order to produce a given output and is associated with progressive fragmentation or intensification of the division of labour. Smith's introduction to the *Wealth of Nations* **(PP4)** begins:

The greatest improvement in the productive power of labour, and the greatest part of the skill, dexterity and judgement with which it is anywhere directed or applied, seems to have been the effects of the division of labour. (Smith 1776).

This is a highly disputable notion. One problem is the assumption that development is grounded in a greater rather than a lesser division of labour, whereas there is much evidence to the contrary, for example, with building services where the divisions between heating and ventilating, plumbing and electrical work, become increasingly blurred. The concept of skills, too, is firmly attached to a particular output and so relates to the tasks or activities of the individual workplace and workperson, whether between the man drawing out the wire for the pin or the one straightening it. **(PP5)**

This concept of skills is not to do with the division of labour in society between, for instance, carpenters and bricklayers, a division that is the product of collective negotiation and is institutionally cemented through schemes of education and training or, in earlier days, of apprenticeship. Such skill divisions are socially defined and depend as much on labour and industrial organisation in general as on specific employment and working conditions. Skills in this sense can be defined as socially

constructed, negotiated and acquired knowledge and collective, physical and mental attributes associated with the division and hierarchies of a particular construction process.

1.3 The importance of building

The building industry is ideal for examining the development of these two aspects of labour, its divisions and wage relations. Indeed, it is a sector that in origin is virtually synonymous with wage labour. The 1349 Statute of Labourers, for example, the first major regulation of labour in England, refers only to building wages, including masons, carpenters, tilers and plasterers. And even with the 1562 Statute of Artificers, regulating wage labour and apprenticeships throughout the realm, building remained the predominant sector regulated through a rate for the day as compared to husbandry which could be regulated through piece, day or annual rates. It is also a sector that has equal importance in each country in Europe, employing about 10% of the working population and critical to housing, education, health, commercial and infrastructure provision.

1.4 Labour as determinant

In order to situate building labour in Britain in its historical and geographical context, I intend to outline the stages through which it has developed and to identify the degree of divergence and convergence, and the rationale for this, with other leading European countries, especially Germany. In so doing I shall also try to show how the development of wage labour has been and is determinant to the development of the production process. Some studies regard technical conditions as determinant to development, some state regulation, some managerial control, and others trade and the market. What I hope to illustrate is that improvements in technology, innovation or productivity are a direct result of the social development of labour and that when this development of labour stagnates or even goes backwards so too does the entire production process.

The premise that labour is the determinant factor in the process of development is also one that is critical to the transition debate, the long-standing debate that began with the two economists Dobb and Sweeney and concerns whether the transition from feudalism to capitalism revolved around the extension of the market or the dominance

of production by wage labour. Production by wage labour is the very antithesis of peasant, or artisan or craft production because it represents the want of land or workshop and a release from the duties of feudal service. But if capitalism represents the dominance of wage labour in this sense, does this mean that craft production is feudally based? And if there is a clear and higher development of labour, does this not also transform, transcend and even dissolve the regulatory framework, as occurred in England in the mid-sixteenth century when wage labour became dominant and the gentry superseded the landed aristocracy? This has implications for any comparison with other countries since, though a certain identity can be presumed between the state legal apparatus, this can be transformed with the further development of wage labour.

2. Stages in the development of wage labour

Through a brief run through the different stages of development of wage labour we can identify historically the significance and decline of the craft form of production, that is one based on selling the product of labour. *(PP6)* What is to be observed is the superseding the one by the other of very different processes and means of valorisation and their progressive collectivisation, culminating in a developed form of wage labour, based on more abstract and technical skills, as indicated by the increased importance attached to formal training.

2.1 The feudal craft stage (PP7)

The earliest stage of wage labour beginning in the fourteenth century represented the overlapping of husbandry and craft production. *(V3)* It went together with the commutation of feudal service, which the lord could now buy as landless labour. In its later development in the countryside a master, for instance, of brickmaking, might set up a kiln, take on an apprentice, maybe employ day labourers and be paid per thousand bricks with the clay raw material coming from the landed estate. In the towns the craft master paid a fee to the trade company and took on an apprentice and maybe day labourers, the status of both being “working for wages” and was thus regulated through the 1349 Statute of Labourers. The companies in turn issued ordinances limiting the length of apprenticeship to seven years, the age to 21 and the numbers employed according to the master’s status. The companies were divided according to trades, themselves related primarily to different materials, whether

carpenters to wood, plumbers to lead, bricklayers to clay or masons to stone, that the companies had the royal privilege to sell. One reason for the demise of the system was the increasing lack of allegiance to particular trades, as masters became members of other companies, bound apprentices to other companies and took on more apprentices than permitted. Another was increasing employment of so-called “forrens”, that is those outside company jurisdiction, marking a further development of wage labour, not bound in any way to the land and so freed from mere subsistence.

2.2 Statutory trade stage (PP8)

The next discernible stage comes in the sixteenth century with the further integration and consolidation of wage labour, cemented through the Statute of Artificers of 1562, which represented an attempt to bind the wage earner to the locality. Regulation of day rate wages and apprenticeship was in the hands of the Justices of the Peace and extended throughout the realm, with journeymen subject to local ordinances. This Statute served to progressively undermine the trade company system by extending to many occupations such as brickmaking not covered by trade companies and by weakening control over entry into the trades and crafts. (V4) Apprenticeship was still for seven years, not to be completed before 21 years of age, uniformly applied and with a limitation of numbers of three apprentices to one journeyman. The Statute was so successful that apprenticeship became the rule rather than the exception in villages and towns and a specialised building force was established to facilitate the great rebuilding of the sixteenth century and the rebuilding of London after the Great Fire of 1666, when non-freemen were given the same liberties as freemen.

By these means, coupled with the commutation of statute labour and enclosures, production by wage labour had become the dominant form by the seventeenth century. A labour process with strong artisanal characteristics was established, with most apprentices having served their time working as journeymen just because of the difficulty and increasing resources required to set up as masters. (V5-V8) Increasingly individual artisans unrestricted by city and statutory authorities produced more than required for their own subsistence and so hired wage labour.

As Dobb described it (PP9):

The road of advancement to the journeyman or even the small master was all but blocked without any deliberate restriction or freedom to a trade, simply by the use of capital required to initiate production. (Dobb 1963)

The growing number of large establishments meant a breakdown in the old division of labour between master, journeyman, apprentice and labourer. Master builders began to complete buildings through individual contracts at gross and employed large bodies of workmen, paying according to a measured day rate no longer regulated by JPs.

With JPs ceasing to control either wages or apprenticeships, the statutory system declined and, fuelled by Adam Smith and the Committee of Manufacturers, opposition to it mounted. Apprenticeship was claimed by him to be part of the “Policy of Europe”, in representing the “exclusive privileges of corporations” established to prevent any reduction in prices, offering no guarantee of quality and restricting competition through its length and limitations on numbers. And those on piecework were claimed to be more “industrious” and to practice “with more diligence and attention” than those on regulated day rates. Attempts to extend the Statute to cover new trades and “to prevent masters from employing those persons who have not served an apprenticeship” failed. And in 1813 the wage-fixing clauses of the Statute were repealed, effectively meaning the end of the journeyman status, followed in 1814 by repeal of the apprenticeship clauses, making for unrestricted entry into the building trades and legalising the position of masters who had not served an apprenticeship.

2.3 The collectively-bargained stage

Appeals to JPs for wage regulation became increasingly rare and ineffective and strikes were directed instead against the new capitalist employer. So began the next stage in the development of wage labour (*PP10*), the stage of voluntarism with respect to apprenticeship and adherence to collective agreements. By the 1820s a standard London rate was established and in 1860 the hourly rate was tied to a fixed working day and working week, leading directly to the legal constitution of trade unions and the establishment of the National Federation of Associated Employers of Labour. The success of labour in the British building industry in the last half of the nineteenth century was arguably more advanced than anywhere in the world, culminating in the 1891 London carpenters’ strike for an 8-hour day, alongside demands for increased

wages and restrictions on piecework, subcontractors and overtime. (V9) But not till the end of the nineteenth century was a 50-hour working week established and collective agreements began to set standard rates, and not until the 1920s was this reduced to 44 hours and a national standard rate for the building industry achieved – ahead of many other industries.

The employment relationship rested essentially on a free contract between the master and the workforce, including the apprentices. Given this lack of obligation on the part of employers, apprenticeship in this stage in any regulated form was bound up with the development and strength of the trade unions and collective bargaining.

Throughout the nineteenth century trade union demands are for a limitation in the number of apprentices, to prevent their use of cheap labour, controlling the discretion of employers in the selection of foremen and the prohibition of piecework. But even though these were non-exclusive unions of non-society men, they tended to refer back to the old statutory apprenticeship systems in terms of length, age restrictions, limitations in numbers and the occupations covered, though these rules became increasingly difficult to maintain. Much of the responsibility for teaching a trade fell upon journeymen who often resented training those who would replace them. In effect the old hierarchy of master/journeyman/apprentice/labourer broke down, especially in the large contracting organisations, to be replaced by a new hierarchy of foreman/skilled worker/semi-skilled worker and labourer into which it was unclear where the apprentice was to be inserted. With no formal skill requirement, and the reliance on learning on the job, the tendency was anyway to train for the needs of yesterday, the rules of thumb, “wrinkles” and “dodges” of specific firms or work processes, or to use the apprentice as cheap labour.

Though the traditional trades had become assimilated to capitalism to become sections of wage labour, with particular abilities and privileges to work with tools related to particular materials, this remained essentially a craft system. The only method of accommodating to change was for new processes to be “claimed” by a craft union as within their potential remit, such as cement floors and breeze-block partitions variously by plasterers and bricklayers. Protectionism prevailed as trade unions maintained their own sectional interests and those outside the craft demarcations were not accepted but classified as labourers and did not begin to

organise separately until the end of the nineteenth century. As a result, by the early twentieth century there were thirteen labour federations for the building industry alone and 72 different unions, local and national, each attempting to regulate apprenticeship.

From the late nineteenth century until the end of the second world war the building trade unions were exemplary in their opposition to piecework. By the 1920s the construction industry was described by G.D.H. Cole as “a great example of a time-work industry”. Unlike engineering, the unions succeeded in maintaining a time-based wage, to which is attributable the remarkable uniformity of rates throughout the country, the lack of a wage drift, and the fixed differential between craftsmen and labourers of 80%. This was aided by the Fair Wages Resolution of 1891 setting an equal wage rate for public works in any locality, also ahead of other countries such as France, where the equivalent Millerand decree was not made until 1899.

In terms of wage relations, the counterpart to the standard time-based wage in this stage was the wage attached to output, above all piecework. In terms of training, the counterpart to reproducing craft skills was the use of apprentices as cheap labour. And as piecework was increasingly brought under control, so too did restricting apprentice numbers cease to be an issue for trade unions. Apprenticeship became increasingly regulated and standardised and a formal training element introduced. From the 1870s attempts were made to develop the crafts, partly inspired by the German model of a combination of theoretical and practical training, such as the setting up of the City and Guilds of London Institute for the Advancement of Technical Education in 1871 and the local trade schools of the local authorities in the early 1900s. The minority report of the Poor Law Commission and the LCC even argued that 15-18 year olds should have education half time.

With the formation of National Wages and Conditions Council for the Building Industry in 1921, the institutional basis was set for National Apprenticeship Agreements aimed at joint regulation of industrial training at national and local level through collectively agreed rates. And by the 1930s and 1940s the trade unions were proposing joint regulation, the attachment of the apprentice to industry rather than the individual employer, the involvement of education authorities and day release as a

right. The National Standard Apprenticeship Scheme agreed during the second world war by the NFBTO and NFBTE represented the culmination of the collectively agreed system. It was mainly for bricklayers and carpenters, extended for 4-5 years, involved day release, no overtime, national and local regulation through the National Joint Apprenticeship Board and a trust fund should the apprenticeship break down. The continued decline in apprenticeships in spite of this more coordinated effort demonstrated the inadequacy of a voluntary system.

However, even from the beginning of the twentieth century forces were at work to undermine the time-based standardised wage. Frederick Winslow Taylor's first large study was on the building sector and it was on the building industry that Frank Gilbreth carried out his time and motion studies. In 1947 trade union opposition to payment by results was overcome and a bonus element introduced, ostensibly to facilitate the post-war rebuilding programme. From this time on the bonus became an ever-increasing proportion of the wage, up to 100%, and wage differentials widened.

The state's refusal to take responsibility for training, adherence to increasingly inappropriate trade divisions, the growth of the lump or labour-only subcontracting and a serious drift between the collectively agreed wage and the actual wage paid – all contributed to the collapse of the collectively agreed and voluntarist system by the last third of the twentieth century.

2.4 Social partnership stage

And so we arrive at the last stage of progressive development, *(VIO-VII)* which gradually emerged after the war, with a social wage, industrial training and an ever more prominent role played by the state. *(PPII)* In terms of wages, a guaranteed week of 32 hours overcoming the perennial problem of bad weather, breakdown of plant and non-arrival of materials, and the payment of various social components, including sickness, insurance and holiday pay, marked the beginnings of this stage for the building industry in Britain. In terms of training, it was marked by the setting up of the statutory tripartite Construction Industry Training Board, partly financed through levy, and responsible for establishing policy, standards, tests and courses of training, as well as paying out grants. Under the Standard Scheme of Training set up by the CITB in the 1970s and approved by the National Joint Council for the Building

Industry, that is the social partners (trade unions and employer associations), formal block-release vocational training was integrated into work-based training, allowing for the gradual reduction of training to be a skilled worker to three years. A plan of training was devised to encompass all areas of building activity and the main trade unions merged to become one industrial union, UCATT, in 1971. *(VI2-VI4)*

All the elements were, therefore, in place for the further progressive development of building labour. But for this, we need to look instead to other Europe countries, to Germany or the Netherlands for instance, where the social components of the wage by the end of the twentieth century included benefits covering sickness, old age, training, winter compensation, holiday and bad weather and where training covered all those in the industry and was increasingly off-site. In Britain, even those elements that had been put in place were dismantled, with the gradual metamorphosis of the CITB to become an employer-led rather than a bipartite institution; continued adherence to traditional trade divisions, both in training and qualification schemes and in wages; a consequent restatement of the distinction between craftsmen and labourers; the reassertion of management prerogative and lack of adherence to collective agreements; the decline of direct employment and the legitimacy given to casual or so-called self-employment; and a dramatic decline in training.

3. Disparities in wage relations

The remainder of this talk will examine how and why this has occurred and in what ways the building industry in Britain, leading in Europe in certain respects in the nineteenth century, is now dramatically out of step with other leading European countries. But before doing so, a little digression. We have seen how the development of labour over 650 years has passed through qualitatively distinct stages, each extending over generations. We have also seen how each has been undermined and given rise to a new higher development of the social relations of production. But we should not assume that these exist as chronological chunks, that wage forms and apprenticeship systems developed at an earlier stage did not continue to exist side by side and in combination. Nor should we assume that the dominant form of social relations of production at any one time is necessarily that which is determinant for development.

This is clear from a more detailed examination of the situation in the early nineteenth century, a time that has remarkable parallels with today and when most building work was carried out by artisans paid at day rates. (VI5) These rates were based on customary output and built into price lists for each of the traditional trades, allowing a Bill of Measurement to be produced listing the total quantities and values of each trade separately. In hindsight we can see that change in the building sector lay not with artisan production based on this measure and value system but with time-based labour employed at hourly rates. One reason was that productivity through artisan production could only be improved through more intensive exploitation. Thus, though contracting organisations were numerically insignificant at the time, given the vast numbers of small masters, they still constituted leading elements in the production process because it was through them that productivity increased and new social relations and a new division of labour emerged. Those tied to the old methods inevitably suffered. The radical craftsman who wanted not to win something new but to reclaim “ancient and natural rights” has to be set against the new class of labourer whose struggle for an improvement in position was only realised much later.

Even by the 1770s in London the day-rated artisan was employed on a casual basis, as described by Adam Smith: “Almost all journeymen artificers are liable to be called upon and dismissed by masters from day to day and from week to week in the same manner as day labourers in other places.” In contrast, the newly emerging hourly time-based wage was generally associated with new areas of wage labour made possible through Improvement Acts and enclosures, the commutation of statute labour and various transfers of individual responsibility to new collective authorities, such as Turnpike Trusts, Paving Committees, Bridge Committees, etc. From the turn of the eighteenth century, contractors taking on construction from these semi-public bodies for a lump sum exhibited a vast increase in activity, in turnover and in fixed capital formation. (VI6-VI7) One paving contractor named Johnson, for instance, that I studied increased his 1790s turnover during the war-stricken first decade of the nineteenth century by 200% and amassed sufficient capital to build well-equipped industrial workshops in Westminster, including an engine house, steam engine, furnaces, forges and docking facilities. By the early 1820s he was not just a paving contractor but a scavenger, road builder, housing developer, granite quarrier, railway builder and civil engineering contractor. Thomas Cubitt at the same time became well

established as a housebuilder, refusing to subcontract, and employing a workforce of about 2,000 directly at hourly or weekly rates on his various developments, with each gang working under a trade foreman who in turn came under a general foreman.

This particular period, the early nineteenth century, is one frequently regarded by historians as critical to understanding the early development of capitalism. The wage data from the period too – a mixture of day, hourly, weekly and annual rates and usually related to building labour simply because it is here that records are retained – have been used and used again to prove or disprove the theory of the immiseration of the working classes under capitalism, culminating in two American historians lumping every available piece of data together, whether referring to lawyers or labourers, to produce the final proof. An examination of these various wage data for London building workers available from 1786-1831 gives a clear indication of the improvement of the hourly-rated worker. (*PP12*) In the 1780s the hourly rate for carpenters was much lower than its day-rate equivalent, to the extent that an hourly-rated carpenter had to work over 16 hours a day to earn the same as a carpenter on day rates – who was anyway lucky if he had regular work and was unlikely to have a regular working week. By 1811 the carpenter on hourly rates only needed to work 9½ hours to earn the equivalent of the day rate, that is the hourly rate increased by 40% over the period whilst the day rate declined by 16%. The differential with labourers, too, narrows over the same period for hourly rated, though not for day rated.

By 1828 the Select Committee of the Office of Works had ruled in favour of general contracting, that is all trades contracts related to sums for whole buildings as opposed to the old system that depended on after measurement of each separate trade based on price lists. One reason given was that it prevented inter-trade contractual disputes, another that it improved supervision, and yet another that those undertaking it had more capital. In effect this meant the official acceptance of a division of labour related not to the separate trades of the artisan form of production but to building capital as a whole in the form of the general contractor. The trade thereby ceased to dominate the processing and assembly of its respective materials, the master craftsman became a foreman, subcontractor or small builder, and the journeyman a building worker.

4. Disparities in social relations of building production in Europe today

Just as in the early nineteenth century clear disparities existed in social relations of building production, so too do they exist in Europe today. They become especially apparent if we compare the dominant form of building production in Britain with that in, for instance, Germany. But this does not mean that the system in Britain is homogeneous. There exists, for example, a sharp disparity between the production system of engineering construction, involving the construction of power stations, steel bridges, etc. and construction proper; as expressed in qualitative differences in the wages and conditions of those employed in the two sectors.

4.1 Trade-based versus industrial skills

The first notable characteristic of the dominant form in the British construction industry is its strong trade basis. Originally, as we have seen, trades were accessed through apprenticeship and defined through materials. Only under the Elizabethan system was the scope of apprenticeships significantly extended to cover occupations previously regarded as labouring work. Later, under the system of free collective bargaining, new areas became socially recognised through the process of “claiming”, involving negotiation between trade unions and employers’ associations. With the setting up of the CITB on a tripartite basis with the remit to devise an industry-wide training system, the possibility existed to redefine trade boundaries through negotiation between the social partners so as to incorporate the growing number of new occupations, such as suspended ceiling work, into the trades and to open up all areas of building activity to formal training linked with the wage structure. This is, in fact, what occurred with the development of industry-wide systems in Germany and the Netherlands. **(PPI3)** In Britain, in contrast, the industry remained wedded to the traditional trades, which has meant large areas where skills remain unrecognised, including groundwork, concreting, paving, and machine operation and cladding. These are all skilled areas in Germany and the Netherlands but still to all intents and purposes regarded and paid as labourer’s work in Britain, most prominently in civil engineering. True, there is a General Construction Operative NVQ but qualifications in Britain, unlike most European countries are not linked either to the wage structure or to training. In spite of changes to the collective agreement to introduce a new skilled labourer status on sites, the distinction between craftsperson and labourer remains and labourers constitute well over 30% of the workforce. **(PPI4)** In

Germany, in contrast, few activities remain outside the realm of the skilled worker, so that the labourer is fast becoming marginal on building sites – the hod carrier disappeared long ago, as in the Netherlands, where labourers represent only 7% of the workforce. (VI8)

The large area of building activity in Britain that remains unrecognised contributes to the low proportion of the manual construction workforce that is qualified, only 36%, compared with 83% in the German workforce. NVQs are part of the problem in the sense that their rationale is to certify the ability to produce a given output, embodying an essentially craft notion of skills, with the tools of the trade defining the nature of work undertaken. Lobbying by trade and employer associations has much to do with whether NVQs are devised for particular occupations. As a result there exist over 50 NVQs for construction, symbolising more than anything else Adam Smith's extensive divisions of labour. About 80% of those awarded are however in the four traditional trades, for which Further Education Colleges largely cater: bricklaying, carpentry and joinery, painting and decorating, and plastering. In Germany, in contrast, all construction activity is covered by 14 occupations, each encompassing a wide range of skills and grouped into three areas for training purposes: building, civil engineering, and finishing. The bricklayer is the universal building worker, representing 20% of all operatives and 40% of trainees and able to undertake most of the tasks in a small building firm; in the Netherlands the carpenter is the universal building worker. In the UK, whilst carpentry remains dominant, the trades do not exhibit this universality and remain synonymous with contractual divisions, especially through labour-only subcontracting.

The craft nature of the division of labour in Britain is manifest also on sites. Interfaces, for instance between the door and the wall, tend to be defined by trade and are simple and the trades in turn are often employed through labour-only subcontractors, whether for brickwork, carpentry or steel fixing. This makes for significant problems of coordination and high levels of supervision, related to the quality of output. In contrast, in Germany for instance, though there are many specialist subcontractors employed especially on the finishing work, labour-only subcontracting is illegal and interfaces are not defined by trade. Thus whereas in the UK only a bricklayer is involved in producing an external wall, in Germany we find a

concretor, external plasterer and in the Netherlands a concretor, insulator and bricklayer. Skilled operatives in Germany are trained in advanced techniques and to a definite standard, and are expected to be responsible for planning, carrying out and controlling the work they undertaken, so require little supervision. And the degree of prefabrication and levels of mechanisation are much higher than in the British case.

The trade-based nature of the construction process in Britain is a considerable deterrent to innovation and extensions to prefabrication because skills are relatively narrow, manual and often firm specific. *(V19-V22)* Without the appropriate skill sets and divisions though innovations are difficult to introduce, such as the bathroom pod, installed on 60% of all Danish housing schemes. The skills of the machine operator clearing earth are far less manual and abstract than those of the labourer shovelling, just as prefabrication necessitates high precision skills and careful planning and setting out. In this context of increasingly abstract skills the craft conception of skills as an aggregate of physical, observable tasks attached to particular trades is inappropriate. In Germany and the Netherlands skills deployed have become more and more transferable between different activities and at the same time abstract and technical. *(V23-V25)* The construction process in Germany has become less and less a manual process, whereas in Britain the converse is the case and the indications are that the proportion of manual workers in the workforce is increasing relative to non-manual. *(PP15)*

4.2 Wages for output versus wages for the quality of labour

Compared with other countries, therefore, construction labour remains strongly craft based. But why? What is it that holds back development to a more advanced, qualified and industrial labour force? One explanation is the wage structure. The key means for skills to be socially recognised is through the collectively agreed wage between the social partners, that is trade unions and employers' associations. In Germany, for instance, there are eight grades each linked to a particular skill and training level, in the Netherlands five, although 80% are on just two. If new skills are recognised, with appropriate training, this is reflected in the wage. In some sectors, such as building services and engineering construction, the collectively regulated wage continues to apply, though even here, as in the building and civil engineering sector, it remains much more undeveloped than Germany and the Netherlands, without the range of

social components, such as winter compensation, work-related indemnities, pensions, vocational training or a 13th month salary, which can constitute 50% of the wage. Building and civil engineering are the least advanced, without any direct link to training and qualifications, civil engineering being built around the role of the labourer, with semi-skilled occupations governed by a range of plus rates.

One key difference is also with respect to bonus payments, which, though going through various processes of consolidation, still constitute an essential part of the wage package in Britain – unlike in Germany, for instance, where they do not exceed 10%. This is indicative of the continued craft nature of even the regulated wage, geared to the product of labour rather than its quality and skills. Another key difference between the collectively agreed wage in Britain and that in Germany and the Netherlands is that it covers a much smaller part of the workforce. (*PPI6*) In Germany, for instance, all those employed up to managing director level, including technicians and estimating staff, are covered by the collectively agreed wage for the industry, providing an important means and incentive for progression through further training. In Britain, where applied, it is confined to operative level.

The regulated wage, however undeveloped and narrowly applied in Britain, refers only to those directly employed in firms or by local authorities. The problem really is that a large proportion of those working in the industry do so on a casual or self-employed basis, outside the regulated framework under day rates – in a manner not dissimilar to the artisan of the eighteenth century. Many are employed through the “lump” or labour-only subcontracting, which has been an important feature of the industry since the war, though it can be traced back to the butty and gang system of the nineteenth century. It is estimated to include 200,000 by 1965 and nearly half a million by 1973. The decision in 1974 to legitimise the lump through the issue of special tax certificates, allowing operatives to be responsible for their own tax and insurance or to have them deducted at source, appears to have only facilitated the conversion from direct to self employment. Those covered by these certificates are basically under a contract for services outside the social wage and without employment protection and, though holidays are supposed to be paid for under the Working Time Directive, they are often not. By 1996 over 60% of the workforce was

classified as self-employed and though this has reduced slightly since it is still estimated at about 40% of the workforce. *(PPI7)*

The first points to note about this unregulated wage form are its relative indifference to skill and the very wide differentials. Carpenters might be found at the top or the bottom of the range. Employment is essentially for a given task, irrespective of the potential range of skills embodied in the worker carrying it out. *(PPI8)* In effect a customary output is assumed and it is therefore unsurprising that the traditional trades of carpentry and joinery, bricklaying, plastering, and painting tend to be self-employed and come under labour-only subcontractors. *(V26-V27)* They tend to be attached to tried-and-tested areas and easily measurable methods, where any gains in productivity depend on intensification of work, such as laying more bricks, and thus have an absolute limit. The result has been to reinforce traditional trade divisions and methods of work and to deter innovation and investment.

In this domination of unregulated wage relations Britain is an exception, compared with France, Germany, Belgium, the Netherlands and other western and north European countries. There, not only is the social indirect wage a critical part of the wage structure, but payment is based on hours worked and qualifications, not output. Labour-only subcontracting is illegal and self-employment is much lower, averaging about 12%. In Germany it is only eligible to those who have a “Meister” certificate. Large contractors employ a core of directly employed, usually the structural trades, such as concretors, bricklayers and carpenters, and subcontract out the finishing work to specialist subcontractors who also directly employ labour.

In the context of Europe as a whole and historical developments, therefore, what is the significance of this individualised wage relation? Apart from the early nineteenth century system of artisan production, the closest parallel is the “tacheronât” system which caused havoc to the French construction industry in the nineteenth century. From the perspective of the progressive development of social relations, it is an archaic, transitory and eventually historically obsolete system, because it represents the least productive phase of a deteriorated labour process. In terms of today’s situation, however, this is unhelpful without establishing the grounds, the basis, for a new, more productive system to allow for the progressive development of labour.

4.3 Employer-led development versus social partnership

One explanation for increased disparity between the British and continental construction labour processes since the 1960s and 1970s is the decline and erosion of any form of industrial democracy. In Germany and the Netherlands, the system of social partnership and with it the role of the unions has developed significantly with the extension of the social wage and training provision. The converse has been the case in Britain. In Germany and many other European countries, including the Scandinavian and Benelux countries, the different industry funds, whether for training, holidays, winter compensation, or sickness are under joint committees of unions and employers operating at local, regional and national levels. The levy-based training organisations are tripartite with training committees at regional and local levels composed of educationalists, employer and employee representatives.

Most important of all, collective agreements made at national level are statutory and legally binding, so apply to the majority of the workforce. At firm level, too, their implementation is overseen by workers' councils. Agreement is also required of the workers' council on recruitment and any innovation in the methods of production. European Works Councils also exist in the larger German, French, Dutch and Swedish firms, following their success in other countries.

In contrast to this extensive social partnership, embedded in local networks, employee representation – always minimal – has been gradually excluded in Britain. Indeed, “industry” is now assumed to be synonymous with employers whilst elsewhere in Europe it is understood as constituting employers and employees. In Britain only the building and civil engineering benefits scheme, which is based on weekly credits (previously stamps) to cover for holidays and retirement payments, remains under joint control. On the 24-member CITB there was originally equal union and employer representation but there are now only two union members, rendering it effectively an employer-led body. Originally too apprentices had to register with the National Joint Council for the Building Industry (NJCBI) because apprenticeship was an integral part of the collective agreement. The Modern Apprenticeship is however not regulated through collective agreements and is therefore outside the control of the social partners. Workers councils do not exist, nor – given the poor record of large British

contractors in Europe – do European Works Councils in the construction industry. Collective agreements, anyway restricted in scope, remain voluntary and the strength of the building trade unions rests largely in the public not the private sector. Union membership, which increased during the 1970s to reach 350,000 in 1980, has declined to about 20% of the workforce. Self-employment by its nature anyway represents a denial of trade union-negotiated conditions.

The result has been a reassertion of managerial prerogative and voluntarism in both training and industrial relations, reminiscent of the nineteenth century collective-bargaining stage. This is reflected, for instance, in decreasing response either to employees' long-term interests to obtaining a well paid, respected, secure and satisfying career, through skills that are transferable and of value in the long term. Instead employers' specific and short-term demands take precedence, even over the general needs of the sector, and good employment conditions and training rest on the goodwill of the individual employer.

4.4 Trade versus industrial training

The most obvious indication of the failure of the current dominant system in Britain is the failure to train the workforce and to increase the level of skills. In 1966 at the beginning of the CITB the number of apprentices in the industry was 112,000: by 1985 the number of CITB YT entrants stood at 16,400, a figure reduced by half ten years later. This fall directly correlates with the decline of direct employees. The proportion of trainees to employees in the industry is 4%, compared with 18% in Denmark, 9% in the Netherlands and 22% in Germany. (*PP19*) Unlike the other countries, too, which have been systematically upskilling to produce entirely skilled workforces, the number of first-year entrants to construction training in Britain fell by 18% during the 1990s, compared with a rise of 65% in Germany over the same period – even though the number of skilled workers fell; in Denmark between 1992 and 1997 carpenter trainees rose by 73%, bricklayers by 19% and painters by 10%.

In terms of the depth and extent of training, Britain also contrasts, with the majority at trade level undertaking less than two years training to NVQ level 2, whilst in Germany and Denmark trade training is 3-3½ years. At the same time in Britain areas of abstract knowledge, such as mathematics, have disappeared from the curriculum.

Indeed, given the focus in British construction training on outputs in the form of task-based competences, knowledge has become an add-on. The system is marked by a separation of theoretical and practical knowledge and a general lack of underpinning skills essential to transferability, whether to higher progression to technical levels or for easy adaptation to new methods. In the other countries, in contrast, the focus is on the inputs into training and on imparting transferable skills, so the system is broader, integrating theoretical and practical work-based elements, and consisting of more general educational elements, such as languages. (V28)

Given the tripartite industry-wide organisation of training in both Germany and the Netherlands, there is less dependence on the single employer. Even the term “apprentice” has been discarded to be replaced by “trainee”, embedded within a system of skill grades rather than a craft system. The trainee is a trainee to the industry and training is divided into three locations, each with a distinct role, the college, the workshop and the site. The training workshops provide a broad introduction to practical activities and are industry-run by the social partners and funded through levy contributions and in Germany equipped by the state to training the most advanced methods. The premise is “product follows process”, which means establishing a high-level, broad and appropriate skills base through education and training in order for innovation to take place. (V29-V30) The role of site experience is seen simply as training “for the market”. Indeed, the long-term development of the training system has seen a gradual move away from “learning on the job”. “Learning by example” on site, the principle on which apprenticeship was formed, is increasingly difficult, especially when components and machinery used are more valuable, firms may be very specialist and the skills required become anyway more abstract, associated with planning, programming, calculating, setting out and measuring – all best taught in the classroom or workshop. (V31)

In contrast, in Britain rather than upskilling the workforce, efforts have been concentrated on certifying existing skills without significant investment in further training. Even though there are not the requisite operatives on site with stable employment in a position to supervise and train, there has even been a tendency to move back to the old “learning by example” principle and a return to day rather than block release. The Further Education sector has as a result become the main means to

obtain a thorough training in construction and even here the training provided results in a less-skilled workforce than is produced through the German system (Steedman 1997). One of the main problems in Britain is that the training system, being dependent on the individual employer to take on trainees, is based on the assumption that a stable, directly employed workforce exists able to guide and monitor trainees' progress. This quite simply rarely exists, though it does in the other countries. A second problem is that training is trade based, that is a trainee enters a particular trade, not the industry as a whole. This contrasts with Germany and the Netherlands, where training is industry based and training thus spans a range of industry-wide rather than just trade-specific knowledge and practice. Specialisation in Germany and the Netherlands into different occupations only comes later. Perhaps, however, the main difference lies in the obligation and rationale to train. In Britain, an employer's concern is with labour's immediate productive output, the skills required to fulfil a particular task, rather than with its long-term productive potential or with the reproduction of skills. Even the payment of the levy is frequently regarded as a payment to absolve firms from the responsibility to train. In the other countries it is rather regarded as a commitment to training and the amount paid well expresses this commitment, being in the Netherlands double the British level though the population is a quarter the size and in Germany five times the British level.

4.5 Class-divided versus integrated system

One of the most significant indicators of the craft nature of production in Britain is the size of firm. (**PP20**) The vast majority of the workforce are employed in very small firms in Britain and the number in medium-sized firms is now small. This contrasts strongly with the German situation (**PP21**), where the medium-sized firms are the most prominent employers compared with the small and large firms. The implication in Britain is a very much reduced investment potential, small firms not having the capacity either to innovate or to train. It is not surprising that all the construction firms we have researched in Germany and the Netherlands owned their own site plant; this was never the case in Britain.

The increased importance of small firms in the industry reflects too a division created by large firms shedding their directly-employed workforces and subcontracting all work. In effect small firms represent the productive capacity of the industry. This is

apparent in our research on construction firms, which shows that the production department of UK main contractors plays a considerably reduced role and the ratio of site to office personnel is low. The production department is the largest and most important department in German and Dutch firms and the ratio of site to office personnel is the reverse, indicating the continued prominence of employment rather than contract relations. In German firms the most prominent non-site staff are also technical, with commercial and production knowledge integrated through the building engineer. In Britain, in contrast, it is the costing staff who play the most prominent role, indicative of the prominence given to cost as separate from production considerations and to the management of contracts of service rather than of employment. Crudely, the main contractor's concerns and expertise are with cost and management; production knowledge and capacity are separated and subcontracted out, rather than integrated as in Germany and the Netherlands. This separation of the cost function is of course aggravated in the British case by the distinct role of the quantity surveyor, whereas in Germany, for instance, architects and engineers have both technical and costing competence.

The concentration of production expertise in small firms means that in Britain there is little possibility for operatives to progress to higher or technical levels. This has parallels in the eighteenth century, when the possibility for a journeyman to become a master became increasingly slim. The difficulties of progression for operatives to technical or managerial levels are also aggravated by the nature of the training given. Narrow and relatively untheoretical initial trade training can pose a considerable if not absolute obstacle to further promotion. In contrast in Germany and the Netherlands, where production functions remain integrated in contracting organisations and acquiring underpinning knowledge is critical to the training programme, the skilled construction worker is increasingly integrated with the technician and there is a smooth progression into supervisory roles. (V32)

There is another yet more absolute barrier to progression for the operative to higher and professional roles in the industry, which is again a British peculiarity. This is the constitutional divide between, on the one hand, responsibility for employment and training at operative level and, on the other, the professions. (PP22) Operative training comes directly under the government and its respective ministerial

departments, especially the Department for Education, Learning and Skills and through this the FEFC and FE colleges. The professions, on the other hand, including their educational function, come under the Privy Council, directly accountable to the monarchy through their charters giving them exclusive privilege over one particular skill area. The result is two distinct occupational hierarchies for the construction industry, one for professionals through the Privy Council and one for operatives through the state.

With this we return full circle to our historical analysis. The apparent imperviousness of the skill structure has a constitutional base, with professional skill recognition resting on the granting of royal privileges and operative skills recognition dependent on the employer trade associations or on what could be regarded as a remnant of master-servant relationships. Thus the constitutional structure established in 1688 after the English revolution comes home to roost.

5. Conclusion

So what may we conclude about the development of labour from this journey through time and space? From all the comparative research that our group has been engaged in it is apparent that the craft form of production that prevails in Britain and goes together with the relatively narrow and trade-based skills and a casually-employed workforce results in a less productive and slower process, geared to controlling the output of labour. In contrast, the industry form of production in Germany and the Netherlands goes together with a broadly-skilled, adaptable and stably-employed workforce and results in a more productive, innovative and speedier process, one that at the same time involves higher levels of mechanisation and prefabrication, gives greater autonomy and rights to the individual worker and requires lower levels of supervision. In one project we carried out, we found that 1.8 person days were required to produce a square metre in Britain compared with 1.6 days in Germany for a rather higher quality product and 0.8 days in the Netherlands. In our latest project, we found operative hours per square metre to be 19.3 in Britain, compared with 14.3 in Germany and 12.9 in Denmark. (*PP23*) Most serious of all is the low level of building output in Britain compared with the other countries – nearly half the Danish and German levels, though the building labour force is proportionally the same in each country.

In historical terms, we can conclude that the seventeenth century revolution in Britain established the domination of an early system of production by wage labour and cemented this through the constitutional arrangements of 1688. With this, skill remained, as under feudal relations, a form of property, even a privilege, rather than an object of negotiation. Notwithstanding, building labour did develop, in particular in the early nineteenth century through the early non-society trade unions and again following the struggles of the 1890s up until after the second world war through trade union insistence on a time-based industry, unlike engineering. Since then, development has stagnated, even fallen back, with labour resembling its eighteenth century artisan form, the form on which Adam Smith built his labour theories. Without equivalent leaps in the development of industrial democracy that were witnessed in the 1830s and again in the 1890s, however, it is difficult to see how construction labour in Britain can develop on a par with or beyond that in continental Europe such as we have seen in Germany or the Netherlands.