Building Capitalism: historical change and the labour process in the production of the built environment

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EMAR

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Aneurin Bevin - 1946

"When the honourable member says that the number of completed houses is not so great as he had hoped it would be, he must enquire for the reason into the organisation of the building industry, and not in the government's plan for housing"

Division of labour and wage relations

"The greatest improvement in the production process 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"

Adam Smith, Wealth of Nations, 1776

"If we examine the features which distinguish wages as they are paid today from other ways in which work in time 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 system is faced."

Maurice Dobb 1927

Distinct Qualities of Labour and their implications for VET (Biernacki 1995)

Trade or craft labour ('Embodied labour' – Adam Smith)
= defined in relation to particular workplace tasks and given output, with worker possessing skills of individual work process and having (physical) ability to fulfil task and produce given output

- → wage = price for product (output) of labour e.g. piecework
  → 'deskilling', fragmentation/intensification of division of labour
- → workers employed for what they produce not *capacity* to produce

Developed wage labour ('Labour power') = defined in relation to qualities of labour, with worker possessing capabilities and know-how of collective labour process, socially constructed, collectively negotiated and recognised

- → higher level, more integrated division of labour and 'upskilling'
- →wage = price paid for working day/time of labour (based on quality/potential of labour)
- → employer appropriates and transforms attributes and occupational capacity of workers

	Key issues	Division of labour	Vocational Education and Training (VET)	Wage forms/ relations	Industrial organisation
Free collective bargaining 1890s-1940s	-working day - piecework	Craft/ labourer/ apprentice	Apprenticeship: age, length, numbers restrictions	Hourly, Time-based	Craft and labourer unions, NFBTO & NFBTE
State intervention 1940s-1970s	Lump, nationalisation	Skilled/ semi-skilled / labourers/ trainees	Government Training Centres, Construction Industry Training Board	Bonus and plus rates, social wage (Working Rule Agreement)	Local shop stewards/ national organisation
State regulation 1970s-2000	Self/direct-employment, training, CSCS	Skill grades, labourer, trainees	day + block release	Shift/day rates, decline in social wage	UCATT, TGWU, AMICUS
Occupational labour market 2000→	Entry into labour market, social protection	Different skill and qualification levels	College/ workshop + work-based	Individual employment relation	Unite (UCATT)

Post WWII: Divergent wage relations and quality of labour

- Divergence in GB and FRG vocational education and training (VET) systems *related to wage relations*:
  - GB deregulated wage/labour market relatively indifferent to qualification, hence divorced from VET
  - FRG different qualification levels recognised through wage
- *And to different nature of labour* (Biernacki 1995):
  - GB 'embodied labour', as commodity ('property') based on performance output, whose reproduction not responsibility of state or employers despite 1964 Industrial Training Act
  - FRG 'labour power' based on capacity and potential abilities whose development is shared state/social partner responsibility (1969 Berufsbildungsgesetz)

Post-war situation in FRG and GB: a sharp contrast

Federal Republic Germany

- *Einheitsgewerkschaft* denied by British Military Government
- 16 industrial sectors
- Social partnership constituted edifice
- Construction union = IGBau

Great Britain

- Myriad of trades (local and national)
- General, craft and industrial trade unions, including in construction
- Construction umbrella organisations = NFBTO and NFBTE

Post-war VET development in Britain (1)

- *1943 Training Act*, distancing apprenticeship from mainstream education: "apprenticeship training … will not be provided and paid for by the State… traditionally settled by the industry itself". (Cmnd 6428)
- *1944 Education Act*: provision for local authorities to provide training; setting up National Joint Apprenticeship Boards; day release in employers' time
- Harold Clay, Assistant General Secretary of the TGWU, 1947:

  "There has got to be consideration of issues beyond the individual, beyond the firm, even beyond the industry …. We have to get away from the idea that schemes of education and training represent something that a benevolent employer provides for his worker."

Post-war VET development in Britain (2)

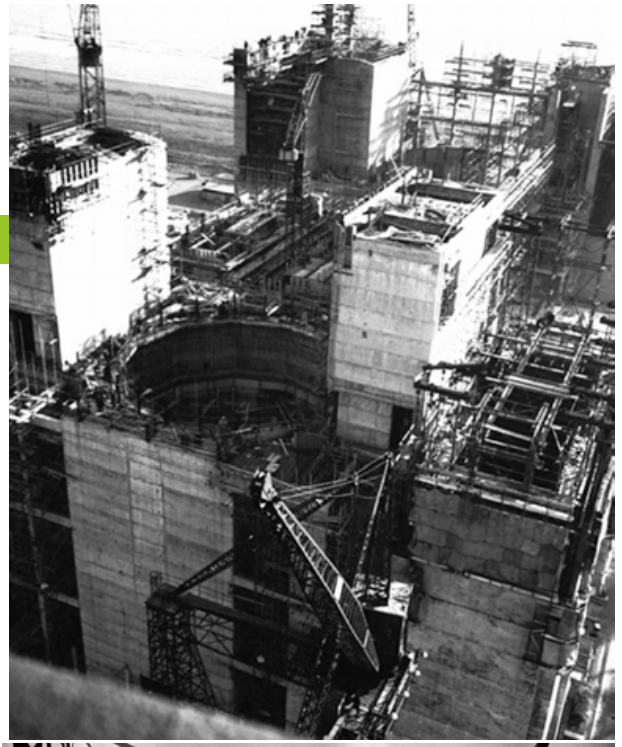
- 1964 Industrial Training Act ('the first attempt to formulate a modern industrial manpower policy' Perry 1976):
  - Tripartite statutory Industrial Training boards (27 by 1969)
  - Levy-grant mechanism
  - Establishing training policy, standards and curricula, trainee registration and FE college attendance
- A West German perspective on British VET:

"Both sides of industry are frequently unable to free themselves of the traditional notion that special skills can only be gained through experience. It is often hard to convince them that systematic teaching and learning methods can considerably shorten the time required to instil certain forms of knowledge." (OECD FRG delegation 1964)

- Levy-grant abandoned early 1970s except CITB and ECITB

Post-war development of British construction sector

- *Reconstruction* on colossal scale
- *Shortage of labour*
- *Increasing mechanisation* (e.g. cranes, diggers) and prefabrication
- *Change in division of labour* and new occupations (concreting, shuttering, crane driving, steel fixing, scaffolding, machine operation etc.)
- *Changes in construction training*
  - 1963 BRS investigation found 50% of construction workforce with no formal training
  - 1964 Construction Industry Training Board focused training effort on craft occupations



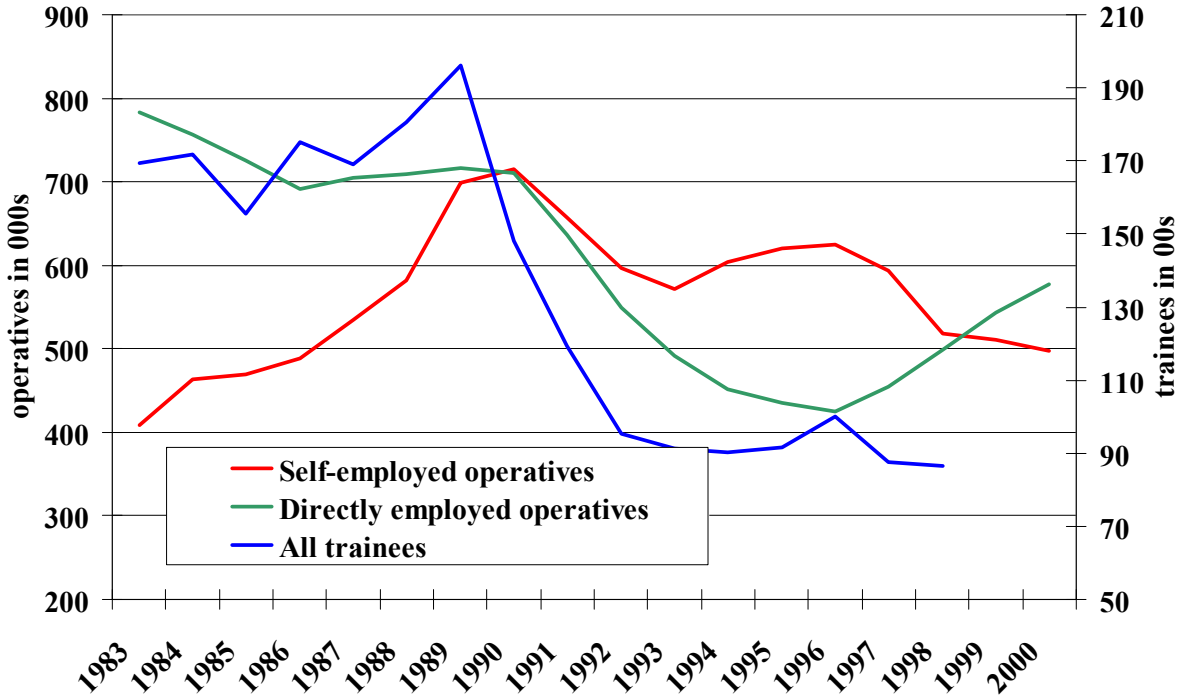
1970s-1990s: Development of GB construction industry

- *Acceptance of 'payment by results'* and emergence of 'lump' → bonus ever-increasing wage component (up to 100%) and widening wage differentials
- *Labour-only subcontracting and 'self-employment'* replacing direct employment, especially traditional trades
- *Declining number of apprenticeships*
- *VET in ever-narrower traditional trades*, underpinning knowledge less and separation theoretical and practical
- *Ever-wider unrecognised skill areas* for VET purposes
- *Qualifications not linked to wage*

Construction Training and employment in Britain 1980s & 1990s

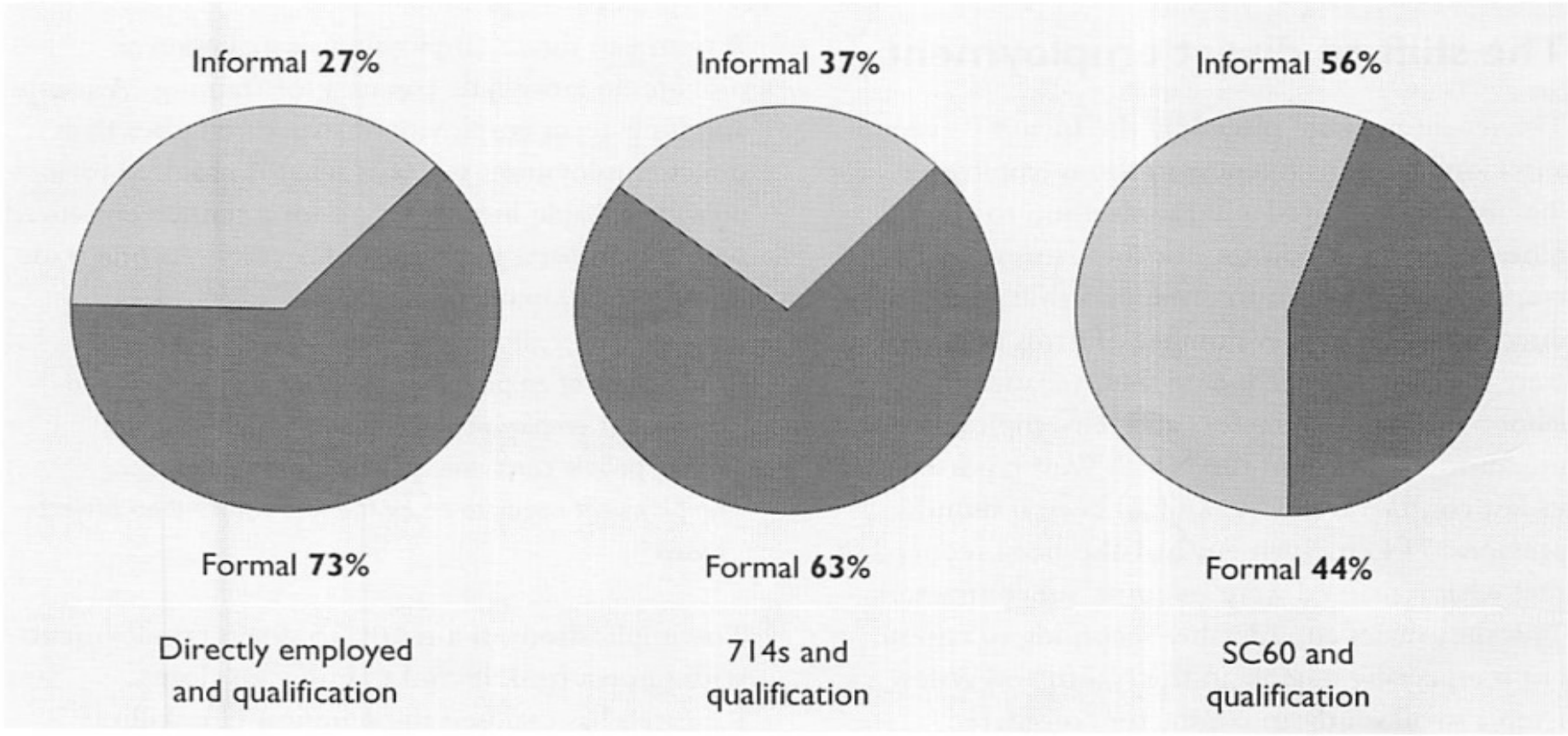
- NVQs introduced 1986 based on competence standards and learning outcomes, mid 1990s →downgrading most training to NVQ2
- Despite 52 NVQs for construction by 1996, 78% completions in 4 traditional occupations of bricklaying, carpentry and joinery, painting and decorating, plastering

- majority workforce 'self-employed'
- large firms increasingly ceased to employ operatives
- large-scale use of labour-only subcontractors, not taking on trainees



Employment status, skills and qualification by 1990s in Britain

Figure 2: Employment status, skills and qualifications



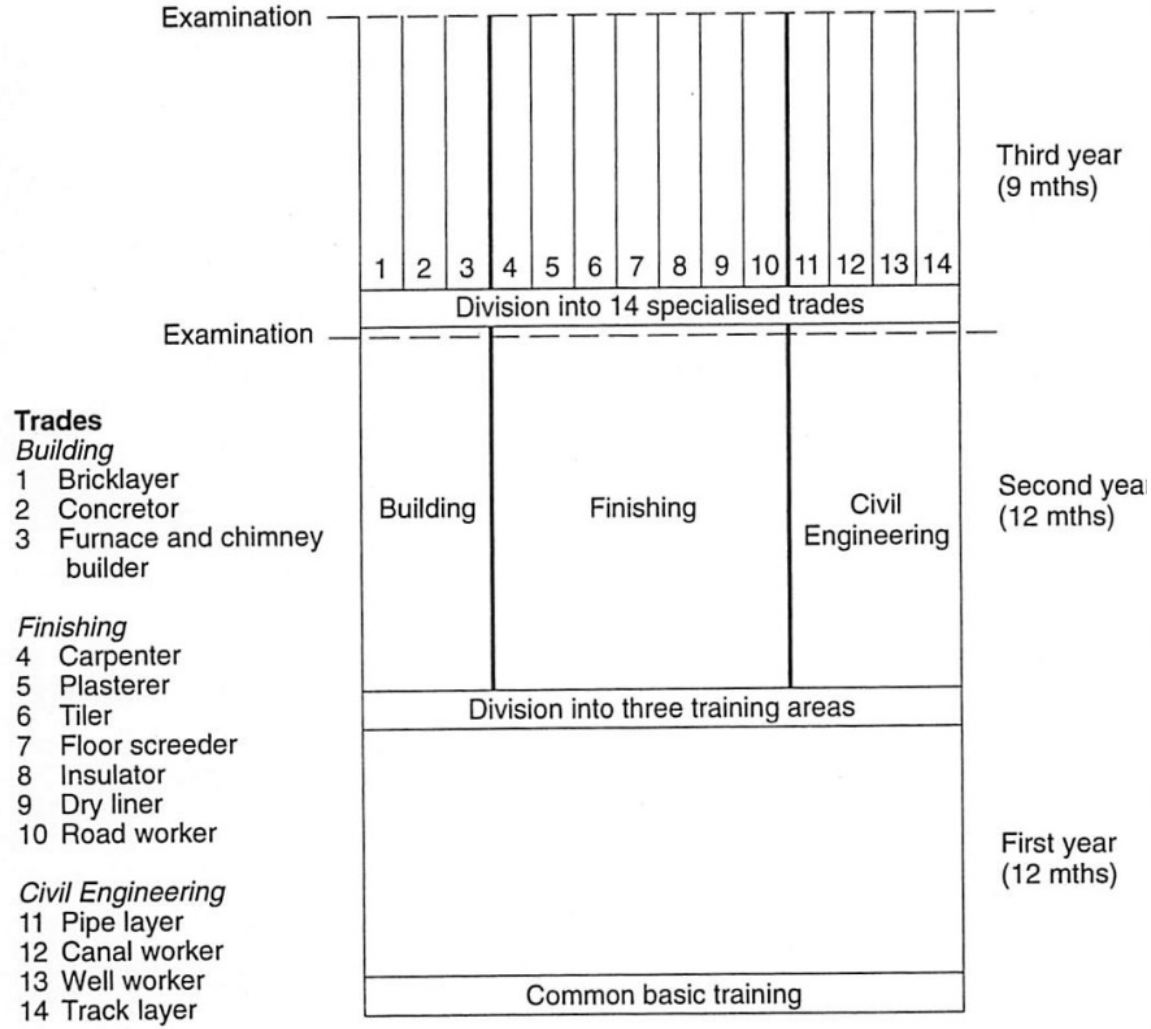
Source: Survey of operatives carried out as part of an international project 'Disparities in wage relations and skills reproduction in the construction industry' (Clarke and Harvey, 1996)

Comparing VET for different construction occupations: D, NL, DK and UK late 1990s

- Highest levels in Denmark, lowest UK
- More bricklaying and concreting trainees in W. Germany, carpentry in NL
- Bricklaying dominant occupation Germany, carpentry in NL

Occupation	Germany 1996-2000 averaged		The Netherlands In 1997		Denmark in 1997		UK in 1997	
	Employed operatives in 000s	Trainees in 00s	Employed operatives in 000s	Trainees in 00s	Employed operatives in 000s	Trainees in 00s	Employed operatives in 000s	Trainees in 00s
Carpenter	63.3	17.4	67	6.2	22.3	4.56	186.8	8.37
Bricklayer	202.8	42.3	20.4	1.4	11.8	1.86	110.7	4.66
Concrete worker	27.2	4.9	2.6	0.3				
Training ratio for above trades	22 %		8.7 %		18.2 %		3.9 %	

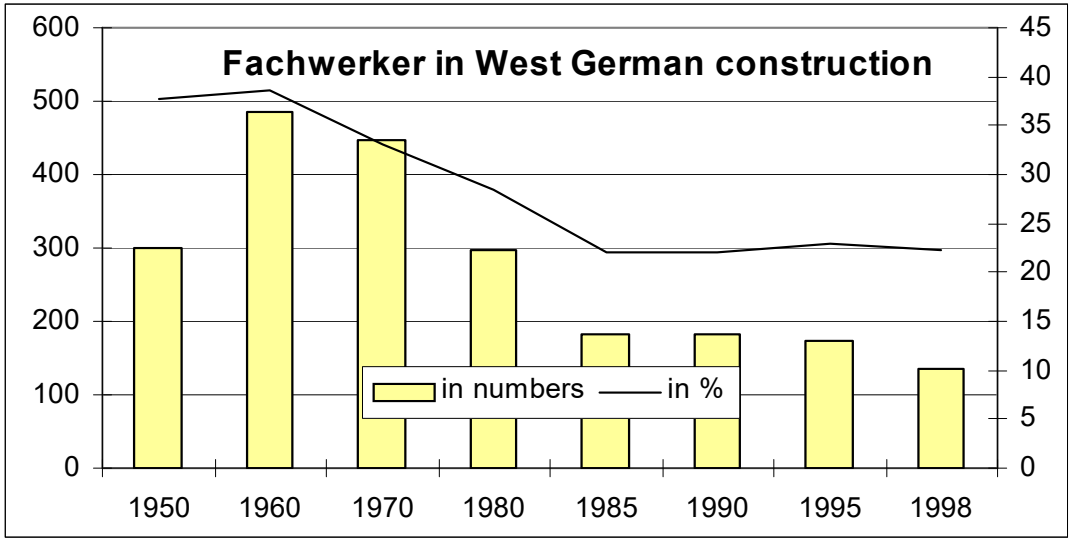
Explaining the differences: the German dual VET system for construction

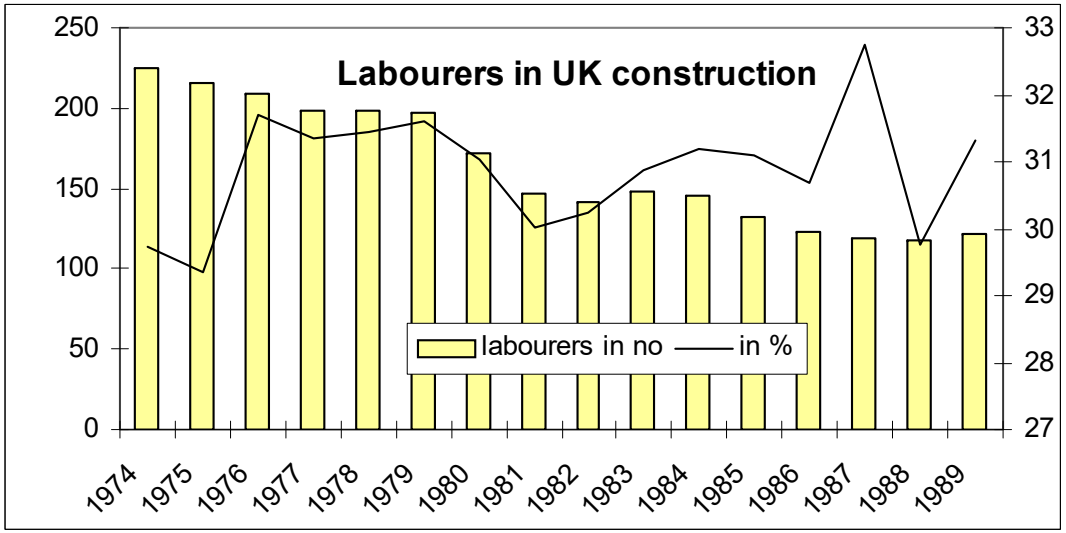


Source: Streeck and Hilbert (1991)

- *Berufsbildungsgesetz* 1969 due to major economic crisis
- Distancing VET (*Berufsbilding)* from apprenticeship (*Lehre)*
- *Berufsbildung* as sector of tertiary education
- Construction *Stufenausbildung*
- 14 (now 16) construction occupations/*Berufe*
- Levy-grant

Explaining the differences: untrained labour in construction in Germany and UK





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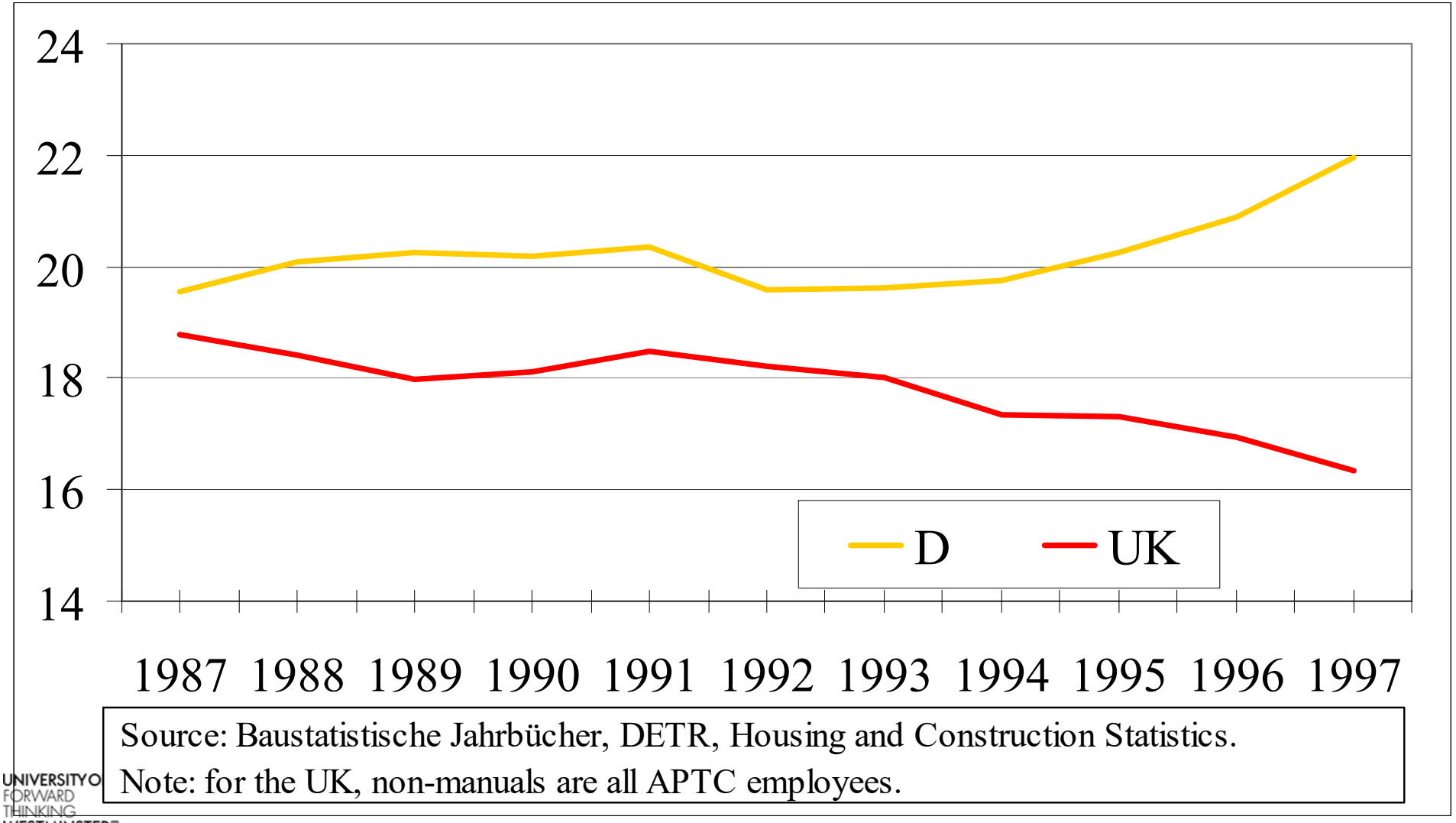
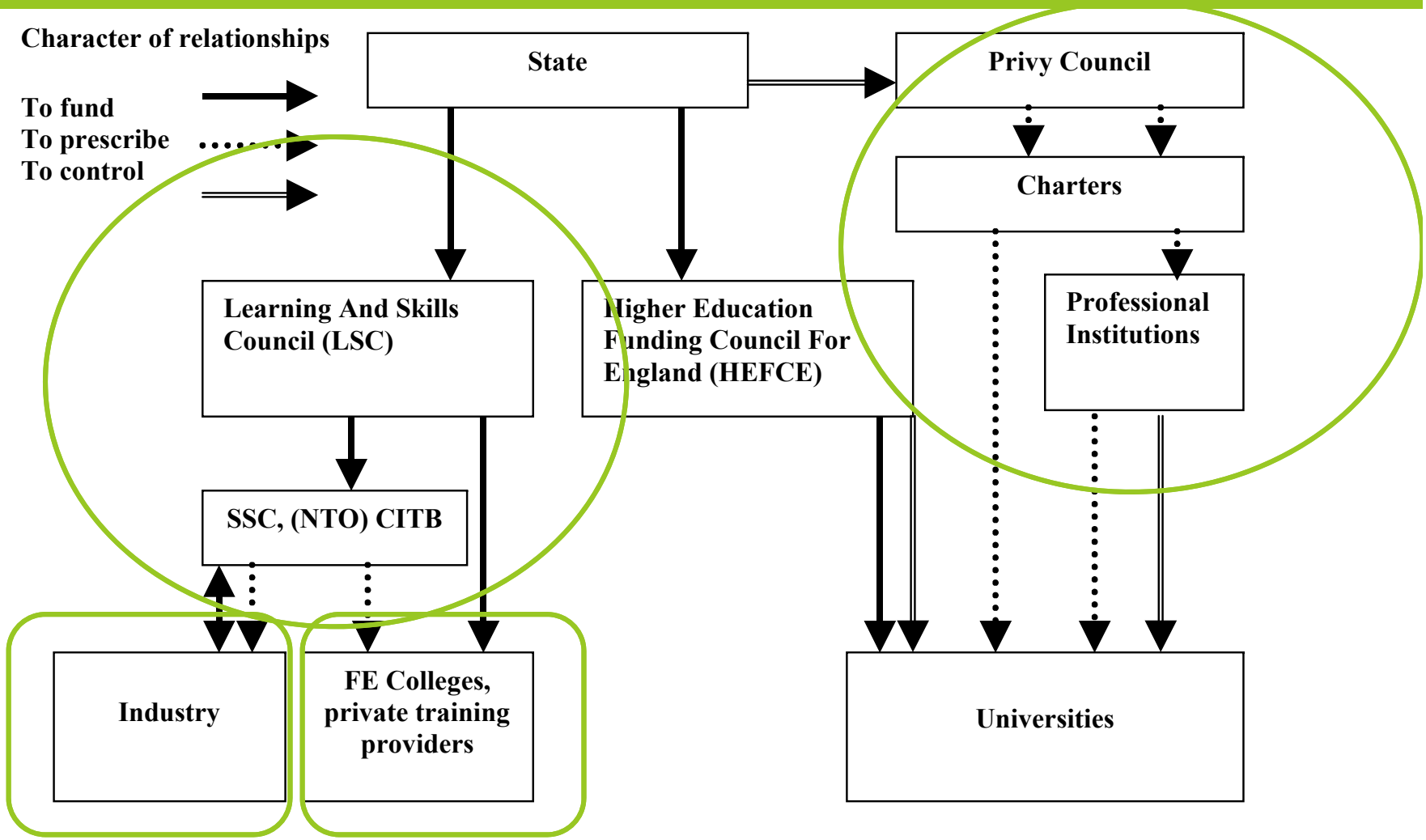
Explaining the differences: % of non-manual construction employment, D and UK 1987-97



Source: Baustatistische Jahrbücher, DETR, Housing and Construction Statistics.
Note: for the UK, non-manuals are all APTC employees.

Explaining the differences: the regulation and institutional structure of learning in UK



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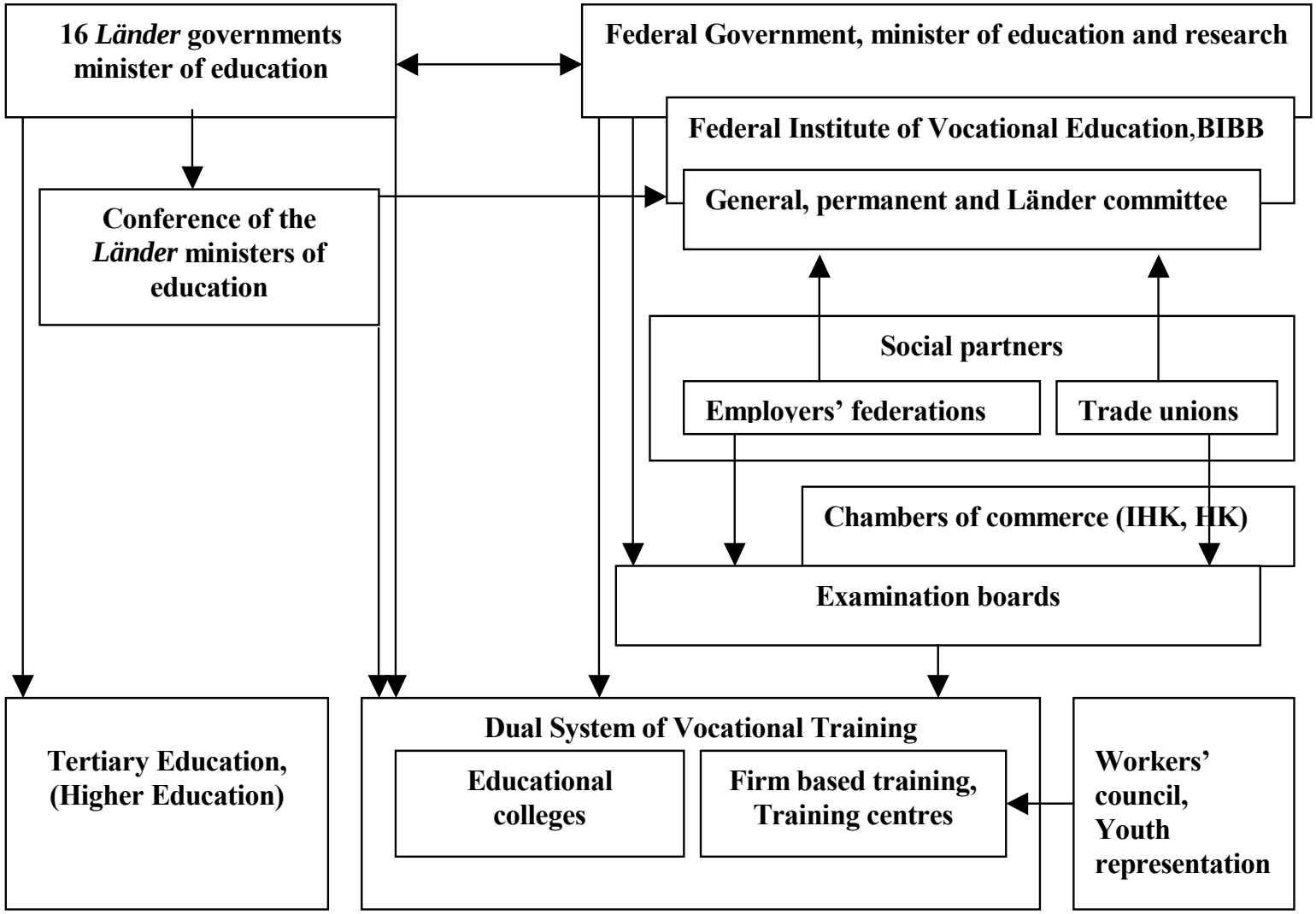
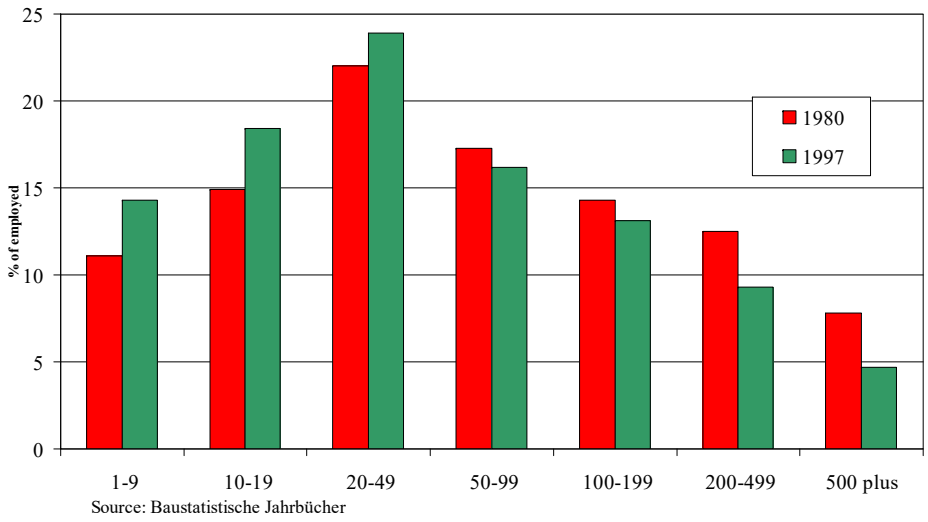


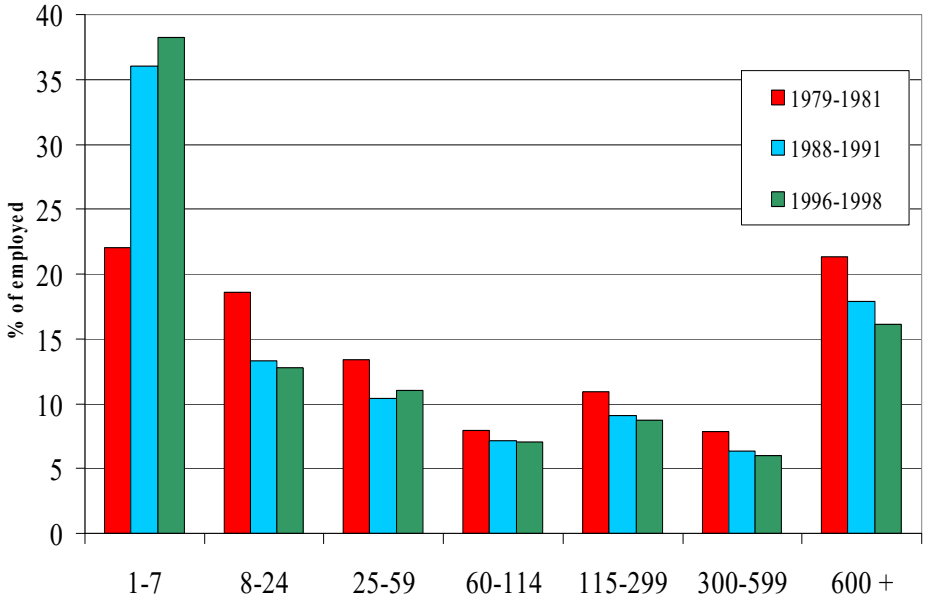
Explaining the differences: Employment in Construction by Size of Firm

Germany 1980-97



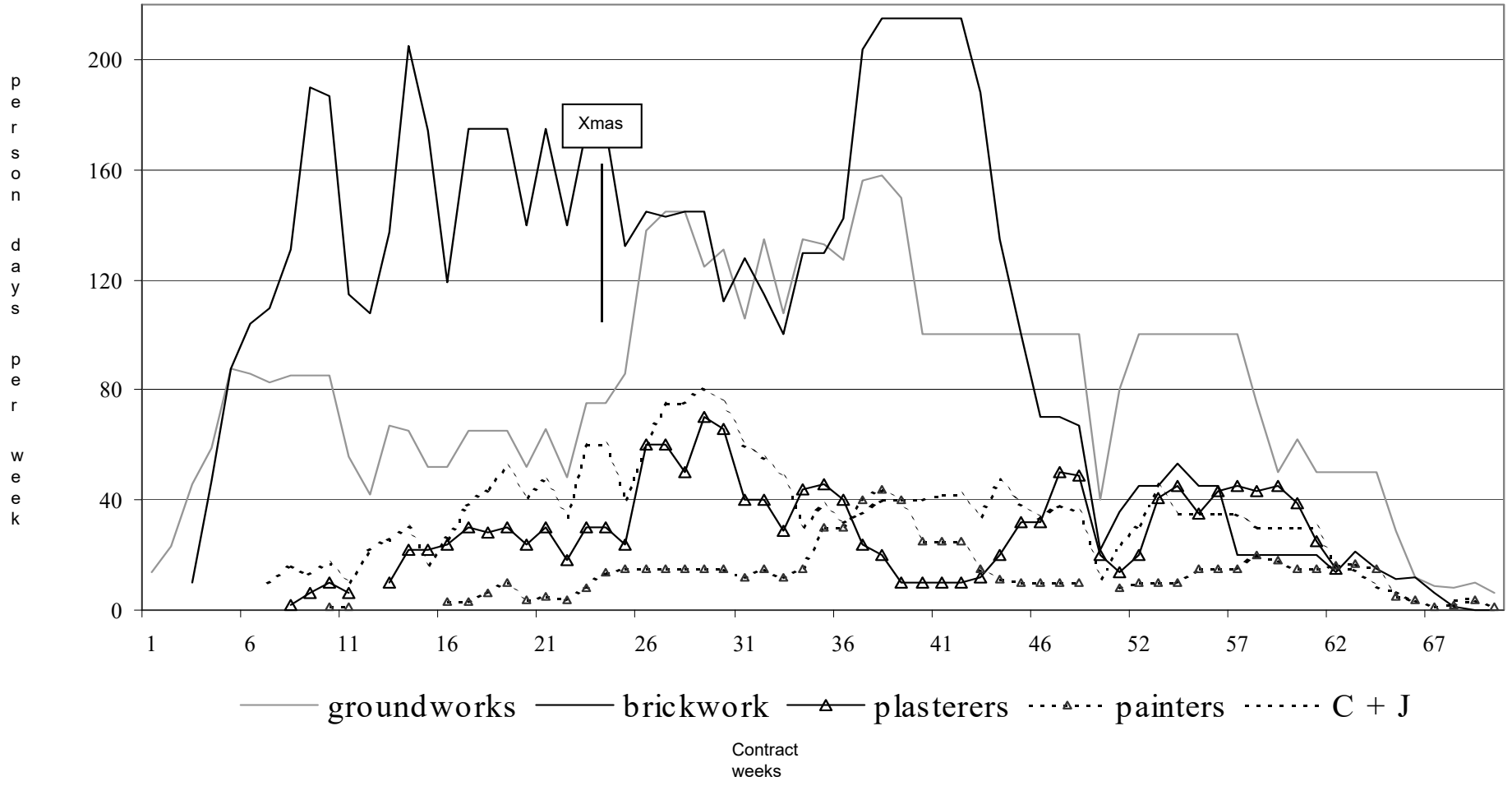
Source: Baustatistische Jahrbücher

UK 1979-98



Source: DETR, Housing and Construction Statistics

Explaining the differences: labour deployment on UK housing site, sequencing of main and finishing trades

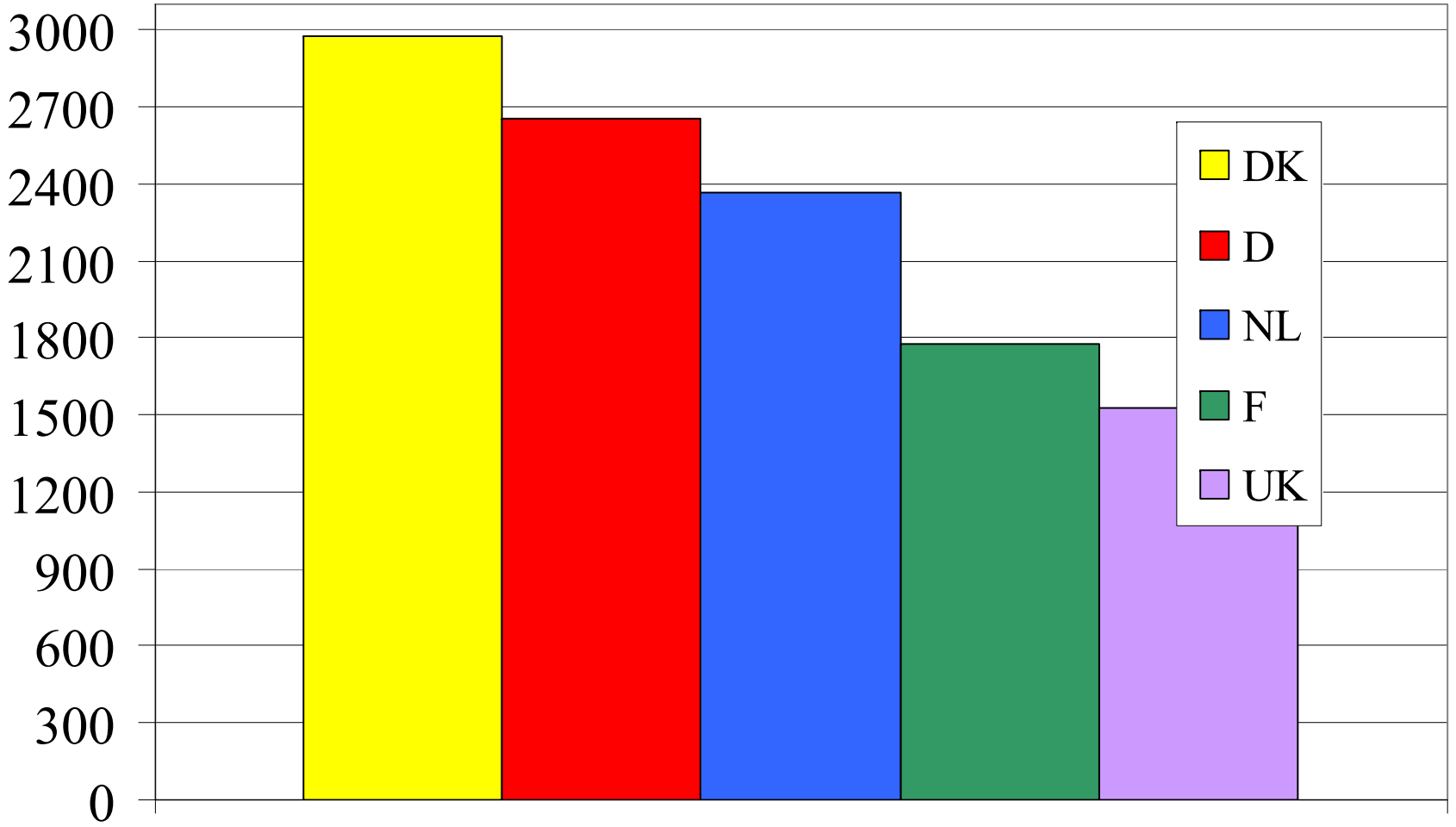


Explaining the differences: labour deployment on German housing site

Explaining the differences: productivity comparisons of English, German and Danish housing projects

	Operative hours per sq. m.	Index of labour input (DK=100)	Operative hours per dwelling	Sq.m. completed per day
UK1	19.3	149.6%	1,355	28.4
D1	13.9	107.8%	1,170	20.8
DK1	12.9	100%	1,114	20.8

Construction output per inhabitant (averaged, 1996-2000 in Euros)

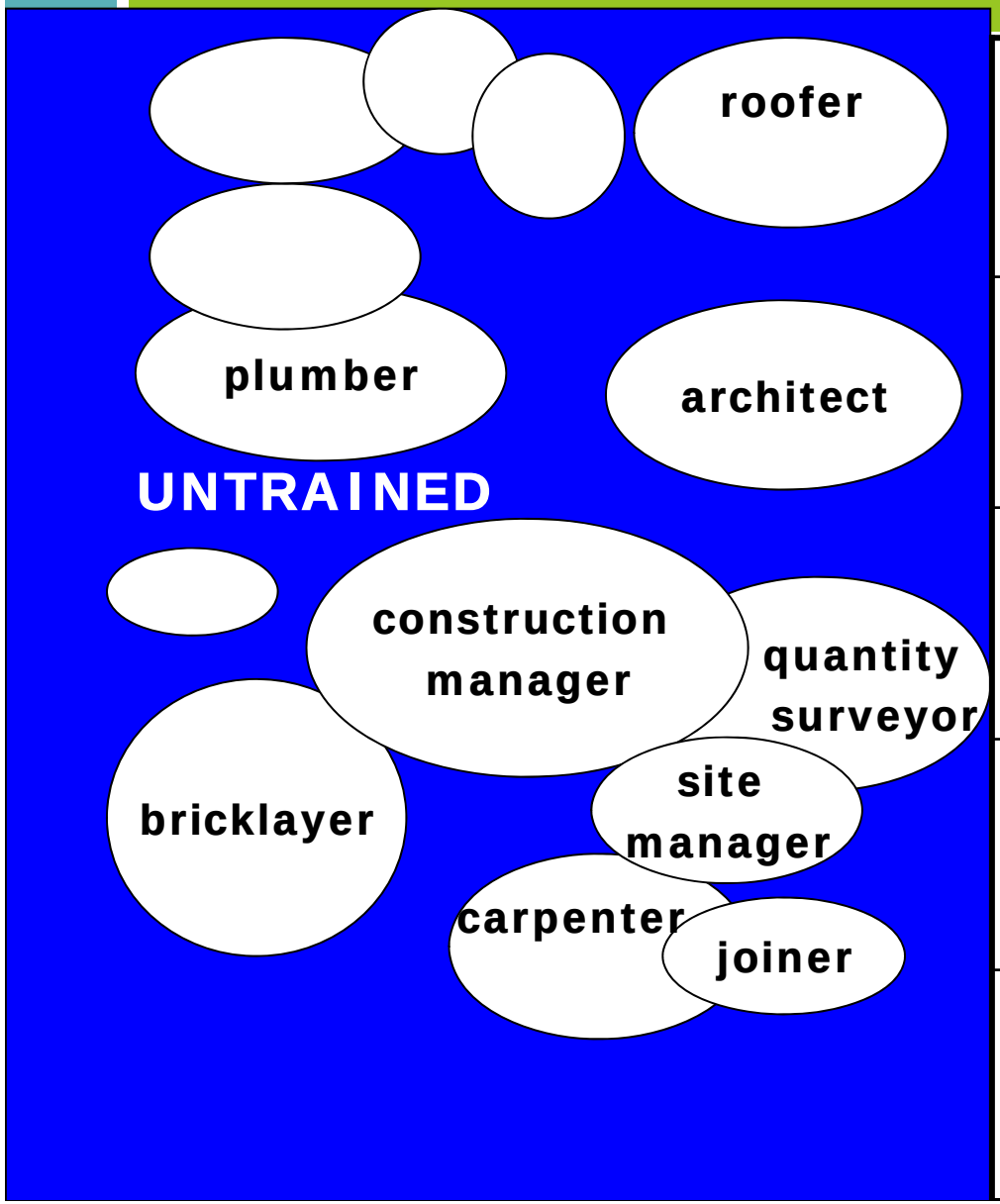


Source Euroconstruct 2000

Collective agreement coverage in construction Germany and UK

	General Category	UK		GERMANY	
		Type of Agreement			
		Individual	Collective	Individual	Collective
Office	Director • Managing • General • Contracts				
	Manager • Department • Divisional • Contracts				
	Assistant Manager Technicians Support/Admin				
Site	Manager • Project • Site				
	Trades Foreperson Operatives Labourers				

Explaining the differences: conceptual skills vs qualifications



Carpenter	Joiner			
Bricklayer	Concrete worker		Plumber	
Site Manager		Roofer		
Building engineer	Architect			

Understanding differences in occupational qualifications: education vs training models

- Occupational qualification signifies owner has knowledge, skills, competences associated with an occupation and recognised by education system
  i.e. bridge/construct between education & labour market

- Very different nature whether:
  - *Grounded in education system* (e.g. D), so that:
    - related to curriculum
    - VET as continuation of general education with substantial underpinning
  - *Grounded in labour market* (e.g. England), so that:
    - Based on employer demand
    - Minimal educational content, focused on performance of output

Occupational (e.g. Beruf) vs skill/trade-based VET

Occupational:

- statutory framework
- social partnership
- recognised qualifications
- comprehensive, broad and recognised VET programmes
- multi-dimensional competence
- 'occupational capacity' and knowledge
- general and civic education
- permeability
- OLM – qualification-based system with defined entry route
- learning outcome as educational standard

Skill-based:

- weak statutory framework
- marginalisation of stakeholder interests, employer-based
- weak labour market currency of many qualifications
- fragmented narrow skills sets
- functionalist-behavourist conception of competence built on task descriptors
- minimal underpinning knowledge
- remedial functional skills
- neglect general/ civic education
- lack of permeability
- learning outcome as performance criteria related to defined workplace tasks

Bricklaying example: Disparate systems

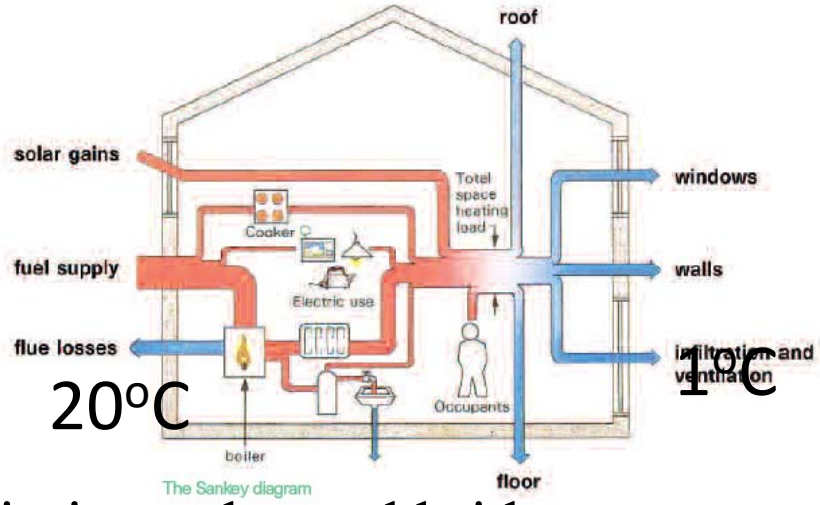
Continental system	**English system**
Occupational status embedded in sector	Trade
Broad competencies (knowledge, skills + personal/civic development)	Narrow, bounded skills
VET- dual system, 3+ years, dominant entry route, education based, permeability	Training, weak integration of educational elements, 2 routes: a) apprenticeship; b) full-time college (problem of work experience) Lack of permeability
Social partner-based, collective bargaining	Employer-based, low currency, often informal learning on job

Long term crisis in construction VET system in Britain

Estimated 31,350 new construction workers required in the UK every year, many in highly qualified areas but:

- *Decline in construction apprenticeships* in England completions 16,890 2009/10 ➔ 8,030 2013/4
- *Increase in full-time college construction training* though overall entrants declining: 47,188 2005 ➔ 14,121 2015; 11,586 'craft' trainees', with only 35% on work-based training and only 16% on Level 3 courses
- *Lack of training infrastructure* due to fragmentation and firms and extensive subcontracting: 273,775 firms – 92% under 13 employees, 0.4% over 80, 0.04% 600+; ('bogus') self-employment, c50%; 924,000 CIS
- *Employer disengagement*, though employer-based system, with trade unions marginalised (blacklisted)
- *Exclusive:* women 99.7%; ethnic minorities 2.8%; more in training than labour market
- *Reliance on short training courses*, fragmentation of certification and awarding bodies + private training providers
- *Increasing reliance on migrant labour, 'poaching':* estimated 12%+ construction workforce migrants; concentration in London (50%)

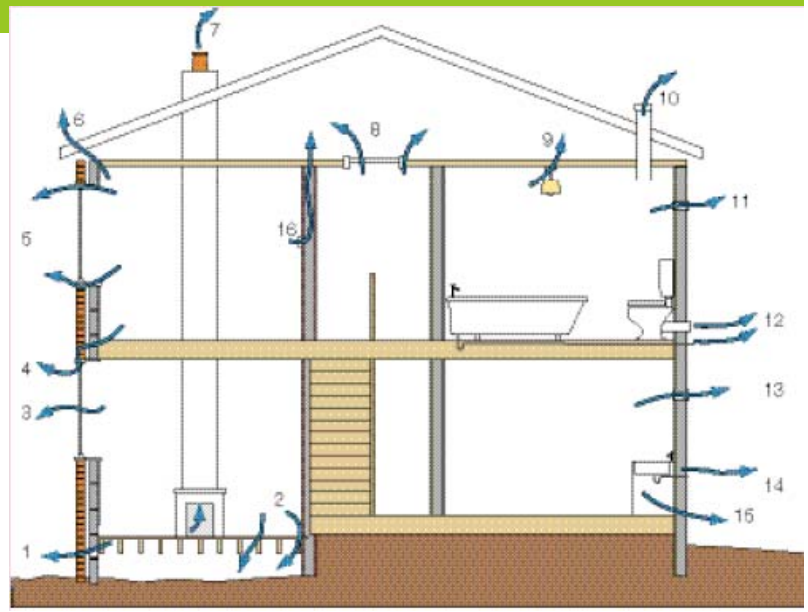
Expertise needed for low energy construction

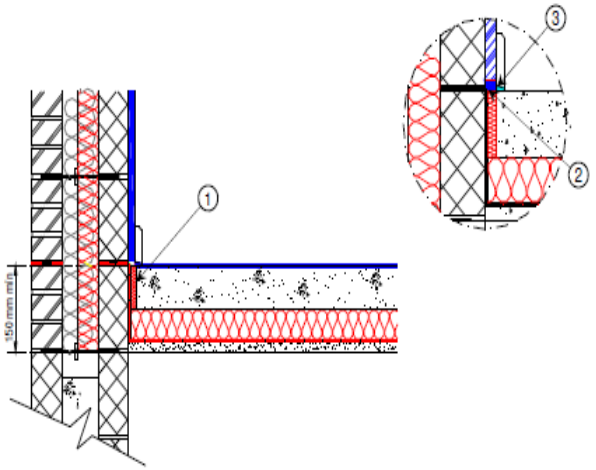


- **Need for 'knowledge'** (e.g. how to eliminate thermal bridges, physics) and **'know how'** (e.g. task specific competences needed for thermal performance) not generally in curriculum,
- →**Transformation of VET to develop occupational capacity** to understand overall project and occupational interactions i.e. comprehensive, high standard VET with broad occupational profiles
- **Bridge professional-operative divide** and create permeability
- **Integrated teamworking** through regulating subcontract chain and direct employment
- **Involving and valuing labour**, including educationalists, employees, trade unions

Problems with the construction labour process for energy inefficiency in buildings

- building envelope occupations (e.g. insulation, materials) key to emissions reductions but many workers without formal qualification
- construction industry factional professional silos, trades, and fragmented labour process
- contractual divisions: agency labour/ self-employed, labour-only subcontracting, long supply chains
  - reinforcing trade/ sectoral divisions
  - impeding integrated teamwork needed





What is the way forward for VET in Britain?

- *New comprehensive, regulated, inclusive and statutory* VET system based on social partnership, with extensive investment in Further Educations workshops and trainers, geared to developing individual capacity over working life and ability to adapt to change/innovate
- *Controlling for qualification levels* through extending requirements for Construction Skills Certification Scheme (CSCS) and making these mandatory (currently 2 million NVQ based card holders)
- *Work-based learning requires direct employment*, effective implementation of EU employment Directives (e.g. Working Time, CDM), auditing subcontractors and subcontracting tiers, and wage system geared to building potential not just rewarding output
- *Need for new approach to construction VET and labour process*, including integrated teamworking on sites to create technically advanced and energy efficient eco industry

What can be achieved:
City Building (Glasgow) - 2017

- Direct labour force – 2,200 employed
- Large-scale training provision and workshops
- Manufacturing arm – 60% with disabilities
- Highly unionised
- Social housing combining green technologies & traditional building
- Own repair and maintenance team
- Joint Trade union Council, local authority + housing association (Wheatley)

Significance of DLOs for GB construction

- Providing complete building service, from design to construction to repair and maintenance
- Building good quality housing together under stable employment, safe working conditions and fair wages
- Direct employment of labour, reduced subcontracting, no 'lump', and high levels of union organisation
- Good quality and high levels of training
- Inclusive, challenging exclusivity of construction sector
- Politically and economically accountable
- Maintaining housing new build and R&M programme when private sector putting in exorbitant tenders or bankrupt
- Check on private contractors

Questions of a reading worker (Bertold Brecht)

- Who built seven-doored Thebes?
- In the books are the names of kings.
- Did the kings haul the rocks?
- And Babylon, many times destroyed-
- who built it up these many times?
- In which houses of golden-gleaming Lima
- did the construction workers live?
- In the evening, when the Chinese wall was finished,
- where did the masons go?
- The great Rome is full of triumphal arches.
- Who erected them?
- Who did the caesars triumph over?