

Forcing Modernisation on the ‘one remaining really backward industry’¹: British Construction and the Politics of Progress and Ambiguous Assessment

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Significant attention has been paid recently to the importance attached by the Attlee governments (1945-51) to the modernisation of British industry. Despite its social and economic importance, however, the construction sector remains largely an enigma within this enquiry. Yet, contextually, the perception of the building industry as uniquely ‘backward’ was widely shared and transmitted by senior politicians and civil servants, the research community and the ‘modern’ architectural movement. Within the dualistic strategy of short-term stabilisation and raising industrial productivity, rescuing the building industry from its ‘mediaeval’ ways was deemed essential. ‘Low productivity in building [as the major investment goods industry], especially when productivity elsewhere is rising’, argued the government’s Central Economic Planning Staff (CEPS) in 1949, ‘is a very major factor in the present tendency for full employment to slip from time to time into inflation.’ As a consequence, capital investment planning, about which ministers likewise enthused, was also closely tied to building productivity levels.²

¹ PRO 229/471, Marris to Allen, 13 February 1949.

² *Ibid*; PRO T 229/471, Turnbull briefing re Gaitskell, Dec. 1950; CAB 134/456, IPC (WP) (51) 32, 15 Feb. 1951, ‘Demand for Investment and Resources available’, note by Turnbull.

In pursuing supply-side solutions for improving national productivity, it is argued, Labour rejected enforced structural change on private industry in favour of a tripartite co-operative framework, an extension of the ‘democratic’ approach brokered by the state during the war to help raise productivity.³ Where formal controls were retained beyond the post-war emergency period it was not for the ‘long-term development of industry, but rather to achieve short-term management of the economy’.⁴ Nor was this, revisionists argue, a time of consensus. Little agreement existed over industrial policy inside parliament, or between employers and trade unionists.⁵ It is hardly surprising, therefore, that Labour’s approach to modernisation proved problematic, for the combined macro, micro and political constraints were ‘formidable’.⁶

As a social and economic priority, heavily reliant on public spending, and as the candidate thought to be in greatest need, the building industry offers a ready litmus test

³ J. Tomlinson, *Democratic socialism and economic policy. The Attlee years, 1945-1951*, (Cambridge, 1997), pp. 139-40; C. Wrigley, ‘The Second World War and state intervention in industrial relations, 1939-45’, in C. Wrigley (ed), *A History of British Industrial Relations, 1939-1979*, (Cheltenham, 1996), pp. 12-41.

⁴ N. Rollings, ‘The Reichstag method of governing? The Attlee governments and permanent economic controls’, in H. Mercer, N. Rollings and J. Tomlinson (eds), *Labour Governments and Private Industry: The Experience of 1945-51*, (Edinburgh, 1992) p. 28; J. Tomlinson, ‘Mr Attlee’s supply-side socialism’, *Economic History Review* XLVI (1993), pp. 10-15.

⁵ N. Rollings, ‘Poor Mr Butskell: A Short Life, Wrecked by Schizophrenia’, *Twentieth Century British History* 5 (1994), pp. 183-205; N. Tiratsoo and J. Tomlinson, *Industrial Efficiency and State Intervention: Labour 1939-51*, (London, 1993), pp. 163-9.

⁶ Tomlinson, *op.cit.* (footnote 4), pp.19-20.

for Labour's commitment to a consensual restructuring of the private sector in a hostile environment. Yet whether a tangible 'backwardness' in construction existed outside of a spun political, scientific and architectural rhetoric remains questionable. Contemporaries certainly disagreed strongly in their diagnoses and over the remedial action necessary. Doubts were apparent, too, as to what exactly constituted 'up-to-date' methods in an industry noted for its lack of congruity with factory-based manufacturing. Taken together, this begs the question as to whether antithetical judgements on the industry's resistance to change were more prejudicial than factual. Employers, particularly, inclined to this view, and sought consistently to place clear water between an acknowledged post-war productivity shortfall and any broader structural failure. Lack of clarity, however, left undiminished a political determination to modernise the industry. Whether this was driven more by contextual expediencies than economic merit clearly warrants investigation.

I

Low output in construction has largely been associated with the small amounts, comparatively, of fixed capital able to be employed per worker. Thus, in 1951 on average gross capital stock in manufacturing stood at £1,420 per capita, but in construction it was

only £220.⁷ Contemporary capital formation levels (Table 1) place construction in no more favourable a light. This is true even if investment in new premises is discounted as being inappropriate to the industry's mode of production. Incorporated within is the

Table 1 Annual Gross Capital Formation Building and Manufacturing at 1951 prices

	1948	1949	1950	1951	1952	1953	1954	1957	1960	1965
Manufacturing										
Total £	293m	341m	410m	519m	610m	622m	669m	1253m	1370m	2177m
Per capita All fixed assets £	37.70	42.90	50.40	62.40	74.40	74.70	78.20	143.10	152.20	238.20
Ditto plant & vehicles £	27.70	32.10	37.90	48.60	57.30	57.90	60.10	102.10	115.40	188.80
Building										
Total £	19m	21m	23m	33m	40m	39m	51m	75m	88m	219m
Per capita All fixed assets £	12.70	14.30	15.40	22.20	26.70	26.30	33.40	47.20	53.90	114.50
Ditto plant & vehicles £	11.30	13.10	13.30	18.80	24.00	22.10	28.20	39.90	48.80	103.30

Sources: *National Income and Expenditure* (1963 & 1974); Feinstein, *op.cit.* (footnote 7).

association that the building industry remained essentially 'pre-industrially' orientated. Such was the linear authority of perceived 'backwardness' that even as industrialised building and investment expanded rapidly into the 1960s, construction was still being characterised historically as: being 'notable for its slow [technical] development', where site methods had changed 'only to a limited extent', with some mechanisation and prefabrication, leaving the building crafts 'little affected.'⁸ Such judgements are not untested. It is argued that inter-industries comparisons with construction are

⁷ D.A. Turin (ed), *Aspects of the Economics of Construction*, (London, 1975), p. 4; C. H. Feinstein, *National Income, Expenditure and Output of the United Kingdom 1855-1965*, (Cambridge, 1972), T99, 101, 129, 133.

⁸ M.C. Fleming, 'The Long-Term Measurement of Construction Costs in the United Kingdom', *Journal of Royal Statistical Society* 12 (1966), pp. 535-6.

inappropriate, and/or that the ‘problem of mechanisation’ has been mis-specified.⁹

Clarke, instead of ‘fetishizing’ on construction’s lack of a factory comparable manufacturing and assembly system, selects as her measuring criteria the inter-related complexity of the combined off and on site building process, and the advanced social productive form this requires.¹⁰ Ball identifies the applicability of Taylorism and Fordism as the defining crux of the ‘backwardness-because-of-physical-constraints’ thesis. Even the latter principles, he posits, are implicit within good site management practice: so that ‘the plan of work takes the place of the production line in determining the pace’, as labour and plant flow continually and repetitively from one task to the next. ‘All that can be said empirically’, he concludes, ‘is that building work is different from other productive activities and uses considerable amounts of labour’.¹¹

Broadening the criteria, however, offers no immediate clarity. It only begs further questions of contemporary diffusion, measurable comparability and contextual location: ignoring, for example, the questionable desirability of the British adoption of American manufacturing methodology, or, rhetoric aside, the limited degrees to which scientific management was accepted by British industry generally in the immediate post-war

⁹ S. Groák and G. Ive, ‘Economics and Technological Change: Some Implication for the Study of the Building Industry’, *Habitat International* 10 (1986), pp. 124-5.

¹⁰ L. Clarke, *Building Capitalism: Historical Change and the Labour Process*, (London, 1992), pp. 16-18.

¹¹ M. Ball, *Rebuilding Construction: Economic and the British construction industry*, (London, 1988), pp. 30-2. See also M. Bowley, *The British Building Industry: Four Studies in Response and Resistance to Change*, (Cambridge, 1966), p. 316.

‘modernising’ period.¹² When asking if, in fact, the building industry was backward, and how best may this be measured, the Building Research Station (BRS) concluded: ‘the most worthwhile [test] is merely to consider what is the trend of productivity....’

Opinions may differ and arguments can rage, but it is indisputable that productivity in the industry in the year 1950 is certainly no higher than it was 15 years ago, or 15 years before that.¹³ ‘Backwardness’ might indeed best be assessed historically, for this bypasses building’s ‘peculiarity’ as an industrial process. As an objective measure, however, it remains heavily constrained by coexistent preoccupations: in post-war Britain, for example, that poor productivity was impeding much needed reconstruction, which was primarily why the question was raised. Accepting that social context is central to scientific/technical development and diffusion;¹⁴ it is equally important to our appreciation of ‘backwardness’, and, especially, to explanations of such shortcomings. Here contemporary needs and values, rather than construction’s past performance, set the narrative on which basis the charge-sheet was drawn up and read.¹⁵

On this list are components internalised to stimulate change. This is true, too, of backwardness’s corrective, modernisation (for both offer judgements on a nominal

¹² S. Broadberry, *The Productivity Race: British Manufacturing in international perspective, 1850-1990*, (Cambridge, 1997), pp. 395-8; Tiratsoo and Tomlinson, *op.cit.* (footnote 5), pp. 149-52; H. Gospel, *Markets, Firms, and the Management of Labour in Modern Britain*, (Cambridge, 1992), pp. 53-5, 119-21.

¹³ R. Fitzmaurice, *NB*, Oct. 1951.

¹⁴ Particularly, I. Inkster, ‘Motivations and Achievement: Technological Change and Creative Response in Comparative Industrial History’, *Journal of European Economic History* 27 (1998), pp. 29-66.

¹⁵ For a brief historiography re ‘backwardness’ and the post-war construction industry, see C. Powell, *The British Building Since 1800*, (London, 1996), pp. 210-12.

propensity to resist or welcome innovation). Addressing building trades unionists in 1948, one government minister typically offered one such invective contrast between ‘an ancient industry’ with much ‘ancient wisdom’ but also ‘a lot of ancient prejudice’, and ‘scientists [who] have made an immense number of discoveries, have accumulated all sorts of data and new practices, not known, not understood, not practised, not even tested by the industry.’¹⁶ High on such ‘shopping lists’ was the diffusion of prefabrication and mechanisation. But this, too, reflected the contemporary pre-occupations of prosecuting groups, rather than offering a widely accepted panacea. Employers, for example, were less convinced: believing ‘the supposed contrast between “modern” practices and “traditional” methods’ to be largely ‘spurious ... [for] building technique before the war, was constantly absorbing new ideas’ and would continue so to do.¹⁷

The pervasive influence of a contemporary mythology, through which politicians and the modern architectural movement combined to make exaggerated claims for associated non-traditional building techniques¹⁸ as part of a modernisation process, remains questionable: particularly because of the widespread, internal resistance to such ideas.¹⁹ Beyond doubt, however, is its omnipresence in advocating a fundamental realignment of

¹⁶ Evan Durbin, *BO*, Sept. 1948.

¹⁷ Ernest Jones, (Employers’ Secretary, National Joint Council), *NB*, May, 1945.

¹⁸ Houses where normally steel or concrete, either as cladding or structurally, was used for the outer shell.

¹⁹ N. Hayes, ‘Making Homes By Machine: Images, Ideas and Myths in the Diffusion of Non-Traditional Housing in Britain 1942-1954’, *Twentieth Century British History* 10 (1999), pp. 282-309.

construction technique.²⁰ Prefabrication—viewed positively or negatively—became 'the question of the moment in building circles' and official discussions. Transferring housing production from the building site to the factory—making construction conform more readily to a manufacturing norm—captured the popular imagination: spurred by a wartime belief in British technical inventiveness and a 'romance' with American prefabricated building methods.²¹ And central to this combative discourse was the deconstruction of the industry's traditional and anti-modern shortcomings, deprecating bespoke design and crafts based on-site practices as being expensive and intrinsically 'backward'.

In a broader context, the charge of conservativeness was not uniquely attributed to construction; nor did Labour come to government in 1945 lacking an agenda for improving business efficiency.²² The Second World War did much to puncture British industrial self-confidence, amplifying criticism (particularly American criticism) of Britain's 'backwardness'. These concerns initially focused on technological deficiencies but, from the early 1950s, concentrated on reforming broader aspects of Britain's business environment and culture, because 'technical knowledge alone was irrelevant if those in

²⁰ *Ibid.*; B. Finnimore, *Houses From The Factory: System Building and the Welfare State*, (London, 1989), pp. 20-47.

²¹ *Architects' Journal*, 3 Feb. 44, 18 Jan. 1945; 'US Wartime Housing', *Architectural Review*, Aug. 1944; 'Fifty Thousand Brides Envy Her', *Picture Post*, 27 Oct. 1945. For a contemporary study which presented new techniques as a natural, historical and scientific progression, see H. Antony (pseudonym), *Houses Permanence and Prefabrication*, (London, 1945).

²² For Labour's pre-1945 views, see, Tiratsoo and Tomlinson, *op.cit.* (footnote 5), ch.1 & 2.

industry remained unable or unwilling to use it.²³ Yet present, too, in the recent historiography is the strong hint that British industrial shortcomings were largely illusory, promulgated by a self-serving and powerful scientific and technological lobby.²⁴

This is not to discount 'legitimate' concerns which, as already noted, were central to contemporary understanding. Building productivity had fallen steeply during and immediately after the war (on average, by 2.5 per cent p.a. between 1937-51).²⁵ In 1947 it still stood some 30 per cent below pre-war levels. This provided an immediate touchstone for judging post-war performance, so that, by default, the inter-war period acquired a largely untarnished 'gold standard' reputation for accomplishment. The

²³ N. Tiratsoo and J. Tomlinson, 'Exporting the "Gospel of Productivity": United States Technical Assistance and British Industry 1945-1960', *Business History Review* 71 (1997), pp. 43-6. See also S. Broadberry, 'The Impact of the world wars on the long run performance of the British economy', *Oxford Review of Economic Policy* 4 (1988), p. 32.

²⁴ D. Edgerton, *Science, technology and the British industrial "decline" 1870-1970*, (Cambridge, 1996), pp. 68-9. The literature on British industrial 'failure' is vast. Edgerton's work above, and his 'The Decline of Declinism', *Business History Review* 71 (1997), pp. 201-6, provides a succinct, albeit controversial, overview. For post-war Britain, see also B. Supple, 'British economic decline since 1945', in R. Floud and D. McCloskey, *The Economic History of Britain Since 1700. Vol.3, 1939-1992* (Cambridge, 1994 2nd Edn.), pp. 318-46. The linkages between political agenda setting and declinism (and modernisation) are admirably explored in J. Tomlinson, 'Inventing "decline": the falling behind of the British economy in the postwar years', *Economic History Review*, XLIX (1996), pp. 731-57.

²⁵ R.C.O. Mathews, C.H. Feinstein & J.C. Odling-Smee, *British Economic Growth 1856-1973*, (Stanford, 1982), pp. 208, 228, 236, 587. Comparably, building productivity grew by 1.3% (1924-37) and by 1.8% (1951-64).

Girwood Committee (1948), for example, commended the ‘greater degree of efficiency attained by the building industry by 1939 ... as compared with the low level in 1914.’ It had ‘shewn itself capable of building houses in large numbers and at a low cost.’²⁶ Yet, as even critics of the industry noted, this was achieved with ‘no more than half a horsepower’ per worker of machinery, compared with ‘2½ horsepower for all manufacturing industries’. More interestingly still, most authorities pre-war considered the organisation and methods of the building industry to be ‘grossly inefficient’, arguing that major cost reductions could have been achieved by the ‘widespread adoption of best-practice techniques’.²⁷

Whether this volumous trans-war fall was related specifically to ‘backwardness’ remains open to conjecture and definition. Within Mathews’ *et al*’s analysis lies an underlying assumption that construction ‘suffered’ exceptionally from the changed post-war move to full employment. This reduced the already marginal war blighted quality of the workforce, lessened the tendency to lay off labour in an industry prone to temporary disruption, and diminished market disciplines generally. Noted, too, is the move from speculative to public sector work (which reduced incentives to efficiency), and that direct government controls—which were omnipresent in construction in the form of building

²⁶ Min. of Health, *The Cost of House Building: First Report*, (London, 1948), pp. 5-6, 22; S. Broadberry, ‘Forging Ahead, Falling Behind and Catching-Up: A Sectoral Analysis of Anglo-American Productivity Differences, 1870-1990’, *Research in Economic History* 17 (1997), pp. 12-13.

²⁷ Building Research Congress, *BO*, Jan./Feb. 1952; H.W Richardson & D.H. Aldcroft, *Building in the British Economy between the Wars*, (London, 1968), pp. 156-7.

licensing and raw materials allocations—impaired pre-planning.²⁸ Such an evaluation closely follows contemporary assessment (for example the Girwood and Working Party (1950) reports). Important also were the political demands placed on construction after 1945 and consequential tendency to overload within an already ‘fully-employed’ sector, despite the direct controls available. It was only after the financial crisis of 1947 that the stricter application of investment controls over the public and private building sectors, more readily marrying output to available resources, had any discernible impact.²⁹ Acute factor shortages and consequent continual site disruption resulted in an ‘appalling waste of building manpower.’ ‘Scarcity of building materials since the war’, the Building Working Party concluded, ‘contributed perhaps more than any other single factor to the fall in productive efficiency’.³⁰

That productivity fluctuated markedly after the war suggests, not only the industry’s responsiveness to such contingencies, but their primacy. For example, Labour productivity rose by some ten per cent p.a. on traditional housing contracts mid-dated August 1947 to October 1948: ‘as the supply of both materials and labour improved considerably’. Yet it also fell by four per cent p.a. on contracts dated October 1948 to December 1949 when, aside from certain goods, there were ‘no real shortages’. Such

²⁸ Mathews et al, *op.cit.* (footnote 25), p. 228, 236. F. Zweig, *Productivity and Trade Unions*, (Oxford, 1951), p.77. Zweig claims that output per man year in speculative housing to be 20-25 % higher than in local authority work pre-war.

²⁹ A. Cairncross, *Years of Recovery*, (London, 1985), pp. 451-62 N. Rosenberg, *Economic Planning in the British Building Industry 1945-49*, (Philadelphia, 1960).

³⁰ Rosenberg, *op.cit.* (footnote 29), p. 139; *WPRB*, p. 14.

conundrums were explained in catchall terms: notably that there had ‘undoubtedly been a great relaxation of effort on the part of building workers’ (indeed the American productivity advantage over Britain in construction was ascribed primarily to the ‘psychological factors’ induced by greater individual enterprise, and positive attitudes to work and collaboration).³¹ The overall state of materials supply, therefore, offered no ‘crystal ball guide’ to productivity. Nor, perhaps, was this surprising in an industry noted for its high dependency on bought in goods and services, where individual shortages set project completion rates.³² Indeed, it was always accepted by some advisors that it was going to ‘take a long time to make good the loss of morale, the disorganisation, etc. brought about by insufficient and irregular supplies’.³³

At the same time, ‘great variations existed in the labour required on different contracts for the same work’. This was attributed to the quality of supervision, the organisation of the work on site, and the introduction of incentive payments.³⁴ Within this parameter, construction management’s ‘backwardness’, if such it can be called, was differentiated and partial. Yet industries with above average pre-war rates of unemployment, the CEPS observed in 1949, ‘are those which today experience the greatest [productivity] difficulties.’ With high unemployment ‘the employee, especially

³¹ NBSSR No.18: *Productivity in House-Building*, (London, 1950), pp. 8, 13; W.J. Reiners and H.F.

Broughton, NBSSR No. 21: *Productivity in House-Building, 2nd Report*, (London, 1953), pp. 24, 27; PRO T/229/471, Cairncross & Ellis, ‘Note on Productivity in Building Industry’, 18 March 1949; Anglo-American Council on Productivity, *Productivity Team Report: Building*, (London, 1950), pp. 55-6, 63.

³² J.D. Sugden, ‘The Place of Construction in the Economy’, in Turin, *op.cit* (footnote 7), pp. 16-17.

³³ PRO T/229/471, Vinter to Ellis, 29 March 1949; Vinter to Turner re PC(49)37, 29 March 1949.

in building, learns to play ca'canny and develops generally bad relations with his employer.' He 'has always relied ... on fear of the sack to get work out of his employee' and is 'quite helpless when full employment comes'. Although an expanding industry before the war, building's 'unemployment record was quite appalling.... a very large part of the present sad tale.'³⁵ Certainly employers perennially complained that the 'assurances of full employment have largely discounted' that fear which formerly acted as a 'spur to endeavour'.³⁶ Thus, within an emerging analytical consensus linking productivity performance to continual expansion, in 'an expanding but backward [building] industry', low productivity was attributed to its previous reliance on 'high unemployment', its 'technical nature [which] ... could not be expected to thrive under full employment', and materials shortages.³⁷

Certainly pre-war site working conditions were 'anachronistic' alongside modern factory provision. Employment was generally casual (frequently by the day for unskilled labour) or short-term and seasonal.³⁸ That government induced wartime welfare practices were later adopted suggests that the industry was perceived—externally and internally—

³⁴ *NBSSR No. 21, op.cit* (footnote 31), p. 27. See also *WPRB*, p. 20.

³⁵ PRO T/229/471, Marris to Allen, 13 Feb. 1949. See also Zweig, *op.cit.* (footnote 28), pp. 103-8. For attitudes exemplifying this, see MRC MSS 1874/2/14, NFBTE 1949 Ann. Report, p. 9.

³⁶ MRC MSS 187/4/2/13-15, NFBTE Ann. Report(s) 1948, p. 29; 1949, p. 13; 1950, p. 29.

³⁷ PRO T/229/471, Marris to Allen, 13 Feb. 1949. S. Pollard, *The Development of the British Economy*, (London, 1983 3rd Edn.), p.252; L. Rosta, 'Changes in the Productivity of British Industry, 1945-50', *Economic Journal* 62 (1952), p. 23.

³⁸ Powell, *op.cit.* (footnote 15), p. 128.

to be behind the times.³⁹ The war also cajoled construction into the ‘modern’ world in other ways: where government, through its package of controls and incentives, undermined ‘the principles on which the craft [trade union] organisations had been constructed.’⁴⁰ Indeed, overall, construction had a ‘bad’ war, not only because of falling productivity, but because the industry felt itself slighted: publicly unacknowledged for its self-perceived ‘magnificent achievements’ and discussed widely only in terms of its shortcomings, particularly its ‘clinging to what are called “traditional” practices and resisting the introduction of various up-to-date methods’.⁴¹

II

‘Backwardness’ may best be viewed, therefore, as a construct driven by contemporary preoccupations and perceptions: illustrated, but not necessarily illuminated, through comparisons with past performance and the cross-industry economic contrasts then being pioneered. Such a construct, nonetheless, had a constraining impact—contextually—on industrial vitality. It was also linked causally to an enthused governmental interest in the technology and management of construction. Examples included a new penchant for

³⁹ S.H. Home, *Structural Engineer*, 8 May 1943; MRC MSS 187/4/2/12, NFBTE Ann. Report 1947, p. 37; *BO*, 1948, *passim*.

⁴⁰ J. Drucker, ‘The History of Construction Unions: The Process of Structural Change’, *Product of the Built Environment* 1 (1980), pp. 71-2.

⁴¹ MRC MSS 187/4/2/9, NFBTE Ann Report 1944, pp.7-8.

research into site-based performance so that rational choices could be made between competing old and new construction methodologies.⁴² Other ‘modernising’ discourses could be singularly more impressionistic, or just slanted, so that a large overlap existed where partial ‘fact’ (in both senses of the word) masqueraded as researched truth.

Construction’s lack of mechanisation provides an obvious case in point, where partial exploration, authorised by a ‘modernising’ discourse, became a pervasive ‘truth’ signifying innate backwardness. This held implicitly that low levels of mechanisation were prejudicially rooted: as one contemporary enquiry concluded, there existed ‘a strong inborn industrial conservatism on both sides, that of the managers and of the men. Their mental attitude is such they want the machines to prove to be failures’, despite other joint industrial reports concluding that it was ‘vital that British contractors should be persuaded of the advantages of more intensive mechanisation’.⁴³ The Department of Industrial and Scientific Research thought the ‘building industry suffers from a lack of sufficient background of modern technical knowledge to enable it to absorb new ideas readily’. The slow progress made in introducing mechanical plant ‘was probably of a psychological nature since its use is only justified if the output of labour is correspondingly increased.’ But then building was, after all, in a ‘primitive’ state: where ‘our unskilled labourers are our machines’. Promoting technical progress for its own sake was underwritten by the self-serving belief that ‘expenditure on building research brings a

⁴² Hayes, *op.cit.* (footnote 19).

⁴³ Zweig, *op.cit.* (footnote 28), p. 99; Anglo-American Council, *op.cit.* (footnote 31), p.34.

good return', which would be yet higher if the industry was not so 'unwilling to learn'.⁴⁴

Trading in such fixed concepts meant even 'good news'—for example, that the number of mechanical excavators had increased from two to five thousand within a decade—was greeted sceptically by senior Labour politicians because it was sector specific. As Morrison (Lord President and the Minister for Science) read it, the building industry remained the 'least mechanised we have', and in its 'efficiency and outlook' it 'was still backward.'⁴⁵

To counter this the industry faced a barrage of 'modernising' government led promotional activity. The high attendance at plant exhibitions, for example, suggests a significant impact in stimulating an active curiosity in new developments.⁴⁶ There were, however, practical difficulties: not the least being that any enthusiasm for substitution was undermined because plant was unavailable or subject to heavily extended delivery schedules. Some fifty per cent was also being exported.⁴⁷ Yet the key question for builders was not one of modernisation per se but, contrary to recent speculation, whether substitution would reduce costs. This appreciation was central to the MOW's literature,

⁴⁴ PRO CAB 124/554, Comments by Sir Ben Lockspeiser, 7 May 1949; Lockspeiser, Building Research Congress, reprinted in *BO*, Jan./Feb. 1952.

⁴⁵ PRO CAB 124/554, Morrison to Key, 25 April 1949; CAB 132/11, LP (49) 11, 13 May 1949.

⁴⁶ See, for example, MRC MSS 187/4/2/12, NFBTE Ann. Report 1947, p. 13 & MSS 187/4/2/15, NFBTE Ann. Report 1950, p. 19; also DSIR, *Report of Building Research Board 1950*, (London, 1951), p. 3. For promotional activity, see MOW, *Advisory Council on Building Research and Development: First Report*, (London, 1949), pp.17-19.

⁴⁷ PRO HLG 36/21, CHAC mins, 25 April 1947; HLG 101/172, notes on meeting 16 April 1952, Sir Percy Mills; *Board of Trade Journal Supplement*, 14 April 1951.

such that it provided detailed costings identifying the operational circumstances under which machinery could, or could not, be profitably employed.⁴⁸

The Working Party's own defensive evaluation was that there was

no ground for saying that mechanical aids are not in general used in this country so far as they are readily available and can be profitably employed. The expense of the more costly plant can be borne only if it is possible to keep the machines in more or less continuous use, and many [smaller] contracting firms ... have difficulty in providing the necessary sequence of operations to justify the initial outlay. This difficulty is accentuated by interruptions in programmes of work.⁴⁹

This report was not, as we shall see later, welcomed by Labour ministers. Nevertheless its reading was not wholly dissimilar to the government's own technical internal briefings, albeit that these came from a 'modernising' vantage. Ministry officials were slightly more optimistic about substitutional potential, but noted the 'doubts in the minds of employers as to whether machines do in fact save money, at any rate with present labour costs.' It was also predicted that, in terms of productivity increases, there was 'not much to be hoped for from more extensive use of machinery.'⁵⁰ The one exception was the greater use on site of electric hand tools. Yet this required cheap on-site power of a

⁴⁸ Groák and Ive, *op.cit.* (footnote 9), p. 122; for example, MOW, *Machines for the Modern Builder*, (London, 1950), esp. pp. 8-12.

⁴⁹ *WPRB*, p. 40.

⁵⁰ PRO CAB 130/59, Officials' 'Working Party on Future Policy Towards the Building Industry' re Minister's meeting 2 May 1950; T 229/471, Cairncross and Ellis, note on productivity in building industry, 18 March 1949.

safe and universal voltage. The government's key Investment Programme Committee, however, judged that providing this was 'not really an economic proposition, and a much greater increase in productivity could no doubt be achieved by improving organisation on site.'⁵¹

Thus, as some government agencies acknowledged, the 'problem was not one of trying to overcome organised resistance to the introduction of new methods'—which had been adopted to the 'fullest possible extent'—but one of availability, cautiousness and the ready diffusion of information.⁵² The NFBTE, however, emphasised the distinction between prudence, and the pervasive suggestion that the industry was unduly 'conservative and unprogressive'.⁵³ In fact, investment in construction was to rise consistently through the 1950s and into the 1960s at a historically exceptional rate averaging over 6.0 per cent p.a.⁵⁴ Nevertheless, judged even by the standard of new capital deployed per worker, this still left a 'backward' building industry heavily disadvantaged (Table 1).

Against this 'cautiousness' was placed the investment made by non-traditional housing producers seeking new markets because traditional production was limited by

⁵¹ Sir George Burt, *NB*, March 1944; Anglo-American Council, *op.cit.* (footnote 31), p. 34; PRO T229/471, re IPC (50) 17, 10 Feb. 1950.

⁵² MOW, *Advisory Council on Building Research and Development. First Report*, (London, 1949), p. 7.

⁵³ MRC MSS 187/4/2/15, NFBTE Ann. Report 1950, p. 19.

⁵⁴ Mathews et al, *op.cit.* (footnote 25), pp. 228, 236.

Capital investment p.a. in construction grew at 1.6% (1924-37), 2.4% (1937-51), 6.2% (1951-64), 6.4% (1964-73),. The corresponding figures for manufacturing are 1.0 (1924-37), 2.9% (1937-51), 3.3% (1951-64), 3.3% (1964-73).

resources shortages.⁵⁵ This was not an insignificant sector. At its peak in 1948, non-traditionals accounted for thirty per cent of public sector completions. Modern movement values rested comfortably alongside, and were an integral component of, the ‘modernising’ process of greater scientific investigation into construction activity.⁵⁶ As one prominent building economist predicted, now there was ‘some reason for believing that at last the building industry has embarked on a more rapid phase its industrial revolution.... [That] a genuine revolution in technique is almost bound to take place.’⁵⁷ Contextually, the positive associations of conservativeness – preserving ‘whatever has been tested and found by experience to be good and worthy of retention’ and exhibiting a cautiousness towards untried materials and methods – acquired a dissonant piquancy against such assumptions.⁵⁸ Yet the flowering of a ‘new’ non-traditional low rise technology produced very few designs offering commercial savings over traditional methods.⁵⁹ The expectations of modernists, government and ‘impartial’ investigators also varied markedly, so that no common scale benchmark existed against which

⁵⁵ PRO HLG 101/371, Hickinbotham to Wilkinson, 4 Feb. 1952.

The typical investment required to establish a factory producing 1,000 houses per year was some £60,000. See also Bowley, *op.cit.* (footnote 11), pp. 207-22; Finnimore, *op.cit.* (footnote 20), pp. 32-41.

⁵⁶ For example, R. Fitzmaurice, ‘Scientific Research on Alternative Methods of Construction for Permanent Houses’, *RIBA Journal*, April & May 1947; J.M. Richards, *Modern Architecture*, (Harmondsworth, 1951 2nd Edn.), pp. 10-28.

⁵⁷ PRO DSIR 4/592, I. Bowen, ‘Productivity in the Building Industry’. See also Groák and Ive, *op.cit.* (footnote 9), pp. 124-5.

⁵⁸ H. Scott-Hume, ‘Organisation for Production’, *NB*, Jan. 1945.

⁵⁹ *NBSSR Nos.4 & 10: New Methods of House Construction*, (London, 1948 & 1949).

‘modernisation’ as a process could be re-evaluated. Like ‘backwardness’, it too existed through different contemporary understandings.

This was ably illustrated in the drive for greater standardisation, being a key agenda item in the modernist’s armoury for industrialising construction. Promoting standardisation was central to the political campaign for greater productivity in all industries. The Anglo-American reports into British productivity differentials thought it the most important commercial factor affecting low performance, although employers, by and large, were reluctant to implement this. Yet building employers (albeit as customers) welcomed initiatives for the greater standardisation of building components. Likewise, the President of the NFBTO thought crafts like plumbing had been ‘revolutionised’ by the influx of standardised parts, and that this should reduce apprenticeship periods.⁶⁰

Architectural opinion was more diffuse. Strong support existed for the manufacture of stock prefabricated components upon which all could draw, avoiding any ‘fatal cleavage in the trade’ between non-traditional and traditional builders.⁶¹ Modernists tenaciously advocated modular co-ordination: locking standardisation, inter-changeability and prefabrication together.⁶² They were particularly disparaging of government for not imposing this, despite the acknowledged ‘complexity of the problem’ and the lack of

⁶⁰ UMIST, NJCBI mins, 20 Oct. 1949.

⁶¹ *Architects’ Journal*, 20 Dec. 1945.

⁶² *Ibid*; D. Harrison, *An Introduction to Standards in Building*, (London, 1947), pp. 52-3 – but see also Antony, *op.cit.* (footnote 21), pp. 46-50 for a more conciliatory approach. Scientific advisors also vigorously supported the associated principles, see particularly PRO HLG 101/54, re the deliberation of Bernal Comm., esp. its recommendations, Appendix C.

agreement over which standards and grids to adopt, but instead delegating responsibility to a voluntary agency, the British Standards Institute.⁶³ Imposition, anyway, was strongly opposed by building and engineering employers, who valued highly the BSI's traditional autonomy.⁶⁴

Architectural criticism of government laxity also contained an inner irony. The profession's self-view reflected its status as building 'team' leaders: which included an unwillingness to accept limitations to their design freedom in which economic rationality played little part.⁶⁵ Rhetoric aside, theirs was a position 'that the minimum amount of standardisation consistent with efficiency should be the aim'. This was to be aesthetically arbitrated by the profession, which lambasted official interference in this context.⁶⁶

Balancing manufacturing needs, at a time of acute shortages, even within a cross-sectional desire not to impose 'a pauper's uniform' on construction, was actively hindered by an architectural pedantry which opposed wholesale the standardisation of external components like doors and windows. Limiting choice was described by one prominent architectural advisor as making 'impossible in future all those small alterations on which good design depends.'⁶⁷ Clearly 'modernisation' carried not just different but also contradictory, self-selecting meanings within a contemporary vocabulary.

⁶³ O. Arup, *Architects' Journal*, 14 June 1945; PRO HLG 102/39, Modular Co-ordination.

⁶⁴ MRC MSS 187/4/2/14, NFBTE Ann. Report 1949, p. 59; Tiratsoo and Tomlinson, *op.cit* (footnote 23), p. 69.

⁶⁵ Bowley, *op.cit.* (footnote 11), *passim*.

⁶⁶ Harrison, *op.cit* (footnote 62), pp. 58, 78-81.

⁶⁷ PRO HLG 36/19, CHAC mins, 19 Jan. 1945, 20 April 1945, 19 July 1946.

The government's own appreciation of the achievements made in building standardisation was wholly different: where overall the industry occupied a front rank. Bevan (Minister of Health), for example, argued that the standardisation of building components had made 'very swift and extensive progress' in the post-war years. Greater standardisation has been identified as one of the notable areas where the Ministry of Supply, particularly, was prepared to use its authority, through its control over purchasing, to force the issue of modernisation.⁶⁸ This impetus found a general applicability throughout in modernising construction, where the influence of the Ministries of Works and Health held sway. Indeed, imposition had a wider currency than is commonly supposed. Morrison, before and after his authority for co-ordinating economic planning diminished, actively campaigned for the abandonment of voluntarism to impose, for example, greater standardisation into British production. These arguments were largely rehearsed in the context of government expenditure on construction, and ministers' predilection for 'educating' local authorities.⁶⁹ Precedents to standardise local authority purchases already existed, but wartime necessity and the anticipated limitations of post-war supply, promoted further studies to revise the minima of standards necessary. Whereas before 1939 some forty different types and sizes of cast-iron domestic baths were available, after the war only four remained. Of over 500 new British standards issued, of which 280 applied to housing, the Ministry of Health instructed that 129 be compulsorily applied to local authority work—enforced under the threat of non-payment

⁶⁸ PRO HLG 102/44, Bevan to Cripps, 5 April 1948; Tomlinson, *op.cit.* (footnote 3), pp. 71-2, 91.

⁶⁹ K. O. Morgan, *Labour in Power 1945-1951* (Oxford, 1984), pp. 348-55; PRO HLG 102/44, Morrison to Cripps, 24 Nov. 1947; Bevan to Cripps, 5 April 1948.

of the housing subsidy. Indeed, the ‘principal difficulty’ preventing ‘making the whole 280 compulsory’ was ‘inadequate supplies’.⁷⁰

Within Whitehall and Westminster it was generally accepted that because ‘a great deal’ had already been achieved in construction: ‘the scope for future standardisation’ was ‘not immediately significant.’ Ministers seemed content to mould commercial activity through the aegis of intermediary agencies like local authorities, but were more resistant to engaging directly in any compulsory enforcement over private manufacturers.⁷¹ It is to this aspect that we now turn.

III

Labour’s tripartite ambitions to reorganise consensually the private sector were exemplified through its promotion of Development Councils (establishing one overarching body for each industry providing common services like R&D, marketing, standardisation and training). Like the Working Parties, these had an employer, employee and independent constituent. Only four were finally established, and these were imposed, categorising the ‘failure of Labour’s hopes to co-operate with industry and thus achieve modernization and industrial restructuring’. Employer hostility centred on the statutory function of the Councils which, they argued, impinged on their right to manage; although

⁷⁰ PRO CAB 124/554, memo from Key, 23/4/49; HLG 102/44, Stephens to Morrison, circa May 1949; Wilson to Cripps, 20 Feb. 1948; MOW, *Further Uses of Standards in Building*, (London, 1946).

⁷¹ PRP HLG 102/44, Clarke to Symons, 5 March 1948; Wilson to Cripps, 20 Feb. 1948.

they were also perceived as a first step to nationalisation.⁷² Yet consensual objectives broadly conditioned even the limited use of such coercive powers. Without adopting a much modified and greater authoritative stance, imposition—as a response to employer resistance—only risked further unco-operativeness from employers. Under such an agenda, too, discriminating between firms (in terms of preferential raw material supply for example) would equally have ‘undercut a crucial part of that consensus.’⁷³

Building employers were resolutely hostile to the establishment of a Development Council, or to any tripartite enquiry.⁷⁴ That the latter was established was rooted in a technocratic discourse linking the industry’s notoriety for ‘backwardness’ to its presumed incapacity to organise its own technical modernisation. Yet it also sprang from an existing lack of co-ordination in government funded research. What was required, an internal enquiry concluded, was a single representative body from both sides of industry, scientists and other parties to provide ‘a bridge between industry and science’.⁷⁵ Bitter disputes over inter-departmental responsibilities, the autonomy of the independent research bodies and employer suspicions over MOW encroachment, rumbled incessantly through 1947 without resolution.⁷⁶ Cumulatively, and as it was viewed internally, this forced ministers to ‘face up’ to the necessity for a broader enquiry into the ‘underlying

⁷² H. Mercer, ‘The Labour Governments of 1945-51 and private industry’, in N. Tiratsoo (ed), *The Attlee Years*, (London, 1991), pp. 78-83; Tiratsoo and Tomlinson, *op.cit.* (footnote 5), p. 166-8.

⁷³ Tomlinson, *op.cit* (footnote 3), p. 298.

⁷⁴ See, for example, *NB*, Aug. 1948, May 1950.

⁷⁵ PRO CAB 124/553, Tomlinson to Morrison, 7 Jan. 1946; ‘Building Research Working Party Report’, circa, 1945.

problem of modernising the building industry and putting pressure on it to become technically efficient'.⁷⁷

Unlike most earlier Working Party reports, however, that for construction further muddied the waters by opposing the formation of a Development Council. Ministers did not immediately accept this recommendation. They and civil servants always resisted delegating policy decisions to tripartite bodies.⁷⁸ Concurrently, Wilson (President of the Board of Trade) was now strongly advocating imposing a Development Council on construction (and other industries), all with enhanced powers. He was also arguing for more draconian measures still, including permanent price controls.⁷⁹ Yet the governing wisdom, and previous experience, suggested that government imposition would only further 'prejudice the prospects of the industry taking special steps itself to operate' the Working Party's other modernising recommendations. Ministers thus meandered between extremes: from strongly favouring direct political intervention (a response fuelled by past disappointments in other industries), to retaining the status quo of compromise and negotiation. Finally, however, ministers accepted that it would be counter-productive even to impose a levy on the industry to make it pay for its own research.⁸⁰ It might

⁷⁶ For the background see CAB 124/553 and HLG 101/672 generally.

⁷⁷ PRO CAB 124/553, Morrison to Key, June 1947; CAB 132/6 LP(47)23, 25 July 1947.

⁷⁸ P.D. Henderson, 'Development Councils: An Industrial Experiment', in G.D.N. Worswick and P.H. Ady (eds), *The British Economy 1945-50*, (Oxford, 1952), pp. 458-9; Tomlinson, *op.cit* (footnote 3), pp. 296-8.

⁷⁹ PRO CAB 134/644 PC(50)5, 31 March 1950; Mercer, *op.cit.* (footnote 72), p. 83; Rollings, *op.cit* (footnote 5), pp. 190-3.

⁸⁰ 'Working Party', *loc.cit.* (footnote 50); Tiratsoo and Tomlinson, *op.cit.* (footnote 5), p. 82.

initially be concluded, therefore, that consensual values apparently governed policy formation in construction, too.

It is also acknowledged in the literature that precisely ‘what “modernisation” meant never clearly emerged’.⁸¹ Nevertheless, although ill-defined, its enunciation in construction carried meanings which gave momentum and form to specific areas of activity as part of a technological and social impetus. Morrison, indeed, criticised his colleagues for not extolling this message publicly with sufficient energy: ‘to get the industry itself to adopt the improvements in building productivity which resulted from scientific research’ and better educational training.⁸² A reliance on exhortation, by argument or appeal, sets an important parameter to the argued for voluntarist ethos underpinning the Attlee government’s modernisation strategy. Beyond this, the offering of inducements, or the compulsion associated with standardisation, took policy-making into a separate area of commercial discrimination and enforcement.

Westminster, of course, had a stronger tradition of imposition over local authorities than private industry (although negotiation more readily exemplified central-local relations).⁸³ Nevertheless, this provided an already noted optional conduit for government led private sector change. Initially, for example, local authorities were to retain autonomy in selecting the type and numbers of permanent non-traditional housing each required. Central co-ordination was there only to take ‘full advantage ... of the possibilities of mass

⁸¹ Tomlinson, *op.cit.* (footnote 3), p. 140.

⁸² PRO CAB 124/554, re LP(49)11, 13 May 1949.

⁸³ R.A.W Rhodes, “Power Dependence”. Theories of central-local relations: a critical reassessment’, in M. Goldsmith (ed), *New Researches in Central-Local Relations*, (Aldershot, 1986), pp. 1-33.

production and large scale planning’, and to avoid ‘delays, due to the hesitancy of the building industry to adopt new methods’.⁸⁴ Indeed, in England and Wales, although not in Scotland, the formal imposition of percentage quotas on local authorities was consistently rejected. However, in ways which capture the ambiguities of power and imposition within construction’s modernisation programme, persuasion and education were to stretch into areas more consistent with formal direction when results were not forthcoming. Local authorities were offered extra quotas, or steel supplies were guaranteed, if they took greater numbers of non-traditional houses; while central approval for traditional housing could be, and was, deferred. Moreover, additional direct or hidden subsidies consistently underwrote non-traditional production: justified in macro terms because they saved labour and scarce materials, but also because they were considered ‘vital’ to provide an external ‘stimulus’ to construction by promoting competition from the manufacturing sector and its techniques. Thus, Bevan, argued, ‘a new element will be introduced into building which accords more to the general climate of industry.’⁸⁵

Ministers’ frustration with this ‘very backward and important’ industry was heightened because government was ‘immeasurably’ its largest customer

enabling it to be fully employed by huge subsidies without which its products would be out of reach of the people who need them most. The Government has also, at great expense, completed research

⁸⁴ PRO CAB 124/474, H (45)14, 12 March 1945, memo by Willink; H(45)13, 9 March 1945, note by Sandys.

⁸⁵ Hayes, *op.cit.* (footnote 19); Finnimore, *op.cit.* (footnote 20), pp. 64-6; PRO CAB 134/642, Bevan, ‘House Building Costs’, 16 June 1949.

which shows those buildings could be greatly improved and the cost of erecting them cut in terms of time, labour and money if a number of quite straightforward changes were made in the organisation and methods of the industry.... production seems to lag behind even the low pre-war level and we seem unable to persuade the industry to adopt even devices which have been invented, produced, tested and proved at the tax-payers' expense.⁸⁶

Morrison's chagrin is self-evident. It found political expression in a number of ways: for example, he favoured extending still further the number of British Standards added to the compulsory list on publicly-funded work (despite problems with materials supply). Bevan, too, wanted to impose wage incentive schemes on all public housing projects.⁸⁷ Most controversial was the proposal to pressurise private 'contractors employed on Government or grant aided work to use more up to date methods.' In this enterprise Morrison had the full support, initially at least, of his ministerial colleagues on the still influential Lord President's Committee responsible for co-ordinating domestic policy. It was considered, for example, that coercion might be applied through the form of contract and government site inspection.⁸⁸

Yet applying duress necessitated formally giving statutory meaning to the sphere of modernisation to be enforced. And here ministers were to be disappointed. Officials unanimously concluded that, to cite the Chief Scientific Advisor, it simply was 'not

⁸⁶ PRO CAB 125/553, Morrison to Key, 28 Jan. 1949.

⁸⁷ PRO CAB 124/554, Morrison to Key, 25 April 1949; Lockspeiser, Comments on MOW report on Building R & D, 7 May 1949; CAB 130/59, 'Future Policy Towards the Building Industry', mins 9 Nov. 1950.

⁸⁸ PRO CAB 124/553, re LP (48), 9 July 1948; Key to Bevan, 20 July 1948.

practicable to define up-to-date methods or to apply pressure on contractors to use particular methods.’ Instead they recommended that progress could best be made through the already established educative programme, which was yielding positive, if disparate, results (a strategy also given a high priority in other industries).⁸⁹ A majority of ministers, excluding Morrison, concurred. Nevertheless, two points emerge. Firstly, that *throughout* the Attlee period, ministers were prepared pragmatically to employ compulsion (in its various guises) to enforce modernisation. Secondly, that conceptionally modernisation had an overarching and immediate simplicity which gave it vibrant definition, and political character and force. In this context, that different understandings were commonplace was not especially important. Yet despite being categorised (standardisation, mechanisation, direct ministry input on site, etc.), it lacked a measurable or ordinal clarity. As such, even in specific and limited areas, an understanding of ‘up-to-date methods’ acquired the attributes of a moveable feast, which not only impaired its evaluation but also its implementation.

IV

This ambivalence was reflected in the variable relationships that existed between Labour and all external organisations in a modernising, consensual context. Clarity was also blurred for overtly political reasons. Tiratsoo and Tomlinson, in arguing for a

⁸⁹ PRO CAB 124/553, ‘Report on Improving Building Methods’, 12 Oct. 1948; Tomlinson, *op.cit.*

(footnote 3), pp.70-1.

modernising Labour government and a conservative industrial leadership, conclude that: ‘there can be no doubting the Government’s resolve to ensure that Working Party recommendations were implemented’, while manufacturers’ responses were inconsistent but less than enthusiastic.⁹⁰ In construction this singularly not the case. Here ambivalence and selectivity again dominated. Ministers thought the Building Report provided a ‘tendentious and inaccurate account’, particularly in suggesting that the ‘inefficiencies of the building industry were due largely to Government policy’. Bevan went so far as to call for greater political control over future ‘independent’ enquiries. Indeed, he and his colleagues briefly considered blocking its publication, but finally sought ways to limit its attendant publicity.⁹¹ Certainly its release was delayed until after the 1950 general election.

Yet there was no definitive reading of the Report as being resolutely hostile to government policy. Civil servants thought it made no ‘single spectacular suggestion’. One radical Labour MP noted that its recommendations focused overwhelming on the need to improve managerial techniques. Bowley later used its findings to indict the industry for its lack of inter-professional co-operation.⁹² On the other hand, the NFBTE, which had long campaigned against controls, concurred with ministerial assessments that ‘Government policy ... incurs much pertinent criticism’. It read the Report as favouring ‘restoring to the employer the pre-war conditions under which he had space and freedom

⁹⁰ Tiratsoo and Tomlinson, *op.cit.* (footnote 5), pp. 156-7.

⁹¹ PRO CAB 134/644, PC (50) 5, 31 March 1950; ‘Working Party’, *loc. cit.* (footnote 50).

⁹² ‘Working Party’ *loc.cit.* (footnote 50); I. Mikardo, *House of Commons Debates*, 22 May 1950, Vol. 475, col. 1736; Bowley, *op.cit.* (footnote 11).

to conduct his business'.⁹³ Indeed, an interpretation which highlights the productive problems associated with economic management, and especially the maintenance of controls, undoubtedly captures one seminal component of contemporary understanding, just as it highlights the political imperatives and tensions present.⁹⁴

On reflection ministers decided it was expedient 'not to express public disagreement' with the Report's findings, but instead 'announce that they were examining its positive recommendations': effectively to rebuff certain criticisms and reset the agenda.⁹⁵ Thus, ministers and officials set to drafting a future policy for the building industry, concentrating on 'points of detail' (controls, architects fees, optimum contracts size and training) and direct methods to increase productivity (central materials supply and the greater use of incentive schemes). Why these criteria were included, while others were not, has—in part—a mysterious quality. Notable by its absence was any discussion of the need for greater mechanisation. This ran starkly counter to a public and private government discourse, although it coincided with the Working Party conclusions and civil service briefings. Optimum contracts size had likewise already been widely discussed elsewhere, but was included to no great gain. Architectural fees, by contrast, formed no part of earlier briefs and was incorporated, one might suppose, largely on a political whim. An overtly political agenda was even clearer in the re-examination of central bulk purchasing, strongly favoured by the building trades unions and the left, but

⁹³ MRC MSS 187/4/2/15, NFBTE Ann. Report 1950, p. 17; *NB*, May 1950, pp. 323-4.

⁹⁴ See PRO CAB 134/645, PC (50) 25, memo by MOW, 28 March 1950.

⁹⁵ PRO CAB 134/644, PC (50) 7, 10 May 1950.

equally opposed by other parties, and in the pointed rebuttal of Working Party accusations that government policy and bureaucracy had impeded productivity gains.⁹⁶

Labour's review, therefore, was neither comprehensive nor politically impartial. This is hardly surprising. However, in the two key priority areas identified—better educational provision and the introduction of incentives—ministers' dealings with external bodies proved to be noticeably varied and 'flexible', and certainly not tenacious as a matter of policy. In the case of neither was this because of already pristine compliance. Indeed, the Minister of Education thought that construction needed to be 'awakened to the need for technically trained personnel'.⁹⁷ Yet, while some ministers commended the industry for its eagerness to employ those with higher qualifications, other colleagues and civil servants, argued against coercing a university sector wholly opposed to offering studies in building exactly because construction failed to offer 'good prospects for trained men'. Paradoxically, underpinning this statement on industrial backwardness was an entrenched belief that technical training 'was not a suitable subject for a first-degree course'. Consequentially, opinion remained heavily divided over the limits of pressure that should be applied to secure the co-operation of the universities and little was done. There was noticeably less division or hesitancy when seeking to rectify trades union inflexibility towards dual-craft or adult training (although the employers also

⁹⁶ PRO CAB 134/648, PC (50) 115, Bevan, 'Future Policy Towards the Building Industry', 27 Nov. 1950; UMIST, NFBTO, 'Enquiry into the Building Industry. Written Evidence', May 1948, p. 74.

⁹⁷ PRO CAB 130/59, Tomlinson, Memo on Training, 27 July 1950.

opposed this); indeed it is clear that ministers thought in terms of setting no limit to the degree of coercion they were willing to apply to the unions to reverse their opposition.⁹⁸

A temporary incentives scheme had been introduced by the MOW during wartime to combat falling productivity. Here it was appreciated that success depended on the ‘co-operation and enthusiasm of both employers and operatives.’⁹⁹ This was seldom evident. The unions ‘strenuously opposed’ the imposition of bonus payments, and did so again immediately after 1945, despite the wage reductions resulting. They held that bonus systems were divisive and discouraged ‘true craftsmanship’ (although the ‘a heavy majority’ of the membership favoured payment by results).¹⁰⁰ Employers as a body were also split. By 1947 the NFBTE was urging that ‘the future of the industry depended to a large extent on the success’ of this experiment, but smaller contractors were ‘afraid of unfair competition’ from the larger firms because they lacked the costing systems needed to operate bonusing.¹⁰¹

Ministers and officials saw incentives as one further cure-all for poor productivity. Most, however, opposed intervening strategically with free collective bargaining.¹⁰² Yet

⁹⁸ PRO CAB 130/59, memo by Issacs and Stokes, 1 Dec. 1950; meeting mins, 18 Oct. 1950; T/229/471, EH to Turnbull, July/Aug. 1950; Smith to Turnbull, 17 Aug. 1950 & 6 Dec. 1950; Bevan, *loc.cit.* (footnote 96); CAB 134/649, PC(51)12, 29 May 1951.

⁹⁹ MOW, *Payments by Results in Building and Civil Engineering During the War*, (London, 1947), p. 17

¹⁰⁰ UMIST, NJCBI mins, 22 Jan. 47; MRC MSS 78/36/4/5/33, memo by Coppock (NFBTO), Dec. 1954. For opposition, see *BO*, Jan. 1949.

¹⁰¹ MRC MSS 187/4/2/12, NFBTE Ann. Report 1947, p.8; Zweig, *op.cit.* (footnote 28), p.79.

¹⁰² Prior to 1948 when an incomes policy was introduced.

behind the scenes ministers actively sought change by any means. Continuing opposition from the industry prompted Bevan to threaten to cancel future housing work:

The cost of building is already so high that it ought not to be allowed to go any higher.... strong pressure should be brought to bear on both employers and operatives to secure the acceptance of an 'incentives' scheme. If my colleagues agree I would like the industry to be told that the Government insist that such a scheme must be adopted...¹⁰³

That agreement was eventually reached rested significantly on ministerial contrivances with the TUC and employers' organisations to impress on all parties that a wage increase not linked to productivity would be 'highly undesirable'.¹⁰⁴

So sensitive was the incentives' issue that ministers tempered further controversy by delaying consideration of an already mooted Working Party enquiry.¹⁰⁵ Union opposition also turned on a broader loyalty: where incentives were proposed as 'vital for the fulfilment of various [social] programmes by the Government'. Yet increased productivity raised the spectre of a return to large-scale unemployment. The unions requested, therefore, that 'sufficient material supply' would be provided to assure 'continuity of work on the assumption of a 20 per cent increase in productivity.' These were guarantees that the government, as the financial crisis of 1947 unfolded, was singularly unwilling and unable to offer.¹⁰⁶

¹⁰³ PRO CAB 124/636, Note by Bevan, Nov. 1946.

¹⁰⁴ PRO CAB 124/636, Issacs to Morrison, 13 Jan. 1947; Nicholson to Morrison, 8 Nov. 1946.

¹⁰⁵ PRO CAB 124/636, Min. of Lab. to Nicholson, 16 Aug. 1947; CAB 132/6 LP(47)23, 25 July 1947.

¹⁰⁶ PRO CAB 124/636, Coppock to Attlee, 8 Aug. 1947; Attlee to Coppock, 15 Sept. 1947.

Yet these were not transitory anxieties. As ministers later acknowledged, ‘the most serious obstacle’ to the diffusion of incentive payments was ‘the fear of employers and employees that by increasing their rate of production they may work themselves out of a job.’¹⁰⁷ To counter this, the Minister of Works, supported by other ministers reviewing building policy, proposed expanding the building programme to account for productivity increases—in effect, offering a psychological incentive. This initiative met a firm rebuff from the Chancellor’s CEPS advisors. Unless the size of the building workforce was reduced, it was argued, incentive-induced programmes only added to total investment costs if labour remained constantly employed. Incentive schemes, moreover, were by their very nature inflationary because a high proportion of the costs ‘saved’ were passed directly to the workforce.¹⁰⁸ Approval was, therefore, deferred pending a Treasury review. This reported unfavourably on the building material supply position.¹⁰⁹ Ultimately, therefore, measures to promote incentives, which ministers and the Working Party alike thought ‘imperative ... if output in the industry is to be adequately increased’, were supplanted by macro considerations.¹¹⁰ Yet it was a decision determined more by the concurrent abnormal circumstances imposed by the outbreak of the Korean war than

¹⁰⁷ Bevan, *loc.cit.* (footnote 96). See also V.L. Allen, ‘Incentives in the Building Industry’, *Economic Journal* 62 (1952), p. 601; and MRC MSS 187/4/2/15, NFBTE Ann. Report 1950, p. 12. This was deep rooted fear across all industries, see W. Crofts, *Coercion or Persuasion? Propaganda in Britain after 1945* (London, 1989), pp. 74-5, 84.

¹⁰⁸ PRO T 229/471, Turnbull to Plowden, 26 Sept. 1950; Turnbull briefing Gaitskell, c.Dec. 1950

¹⁰⁹ PRO CAB 134/644, PC(50)21, 8 Dec. 1950; CAB 134/650, PC(51)20, Edwards, memo, 2 Feb. 1951.

¹¹⁰ *WPRB*, p. 33.

by doctrinal intransigence. In fact, public investment in housing and construction fell in 1951, as did building productivity.

IV

Officials researching into future policy for the building industry in 1950 concluded that:

The fact of the matter is that there is no single obvious short cut to higher productivity and lower costs. There are, however, a number of measures that can be taken, each of them looking perhaps relatively small by themselves, but in the aggregate able to produce substantial improvements.¹¹¹

The contrast with the rhetoric of modernisation—which headlined mechanisation, scientific diffusion and incentives—and its programmatic function—driving forward change through pejorative or alluring comparisons—is obvious. Clearly a generalised call for small, incremental improvements would have been no campaign at all. Yet the hyperbole which exemplified modernisation as a political process also gave added contemporary meaning to the industry’s limitations. Fundamentally, however, ‘backwardness’ and ‘modernisation’ derived their understandings contextually from the growing productivity conflict between needs and capacity in the industrially dislocated post-war period, where the ‘politics of progress’ acquired a resonant piquancy. Under such pressures, politicians, and their technical and scientific advisors, specified

¹¹¹ ‘Working Party’, *loc cit.* (footnote 50).

construction's ills by drawing too readily on inappropriate comparisons between building and manufacturing. Indeed the very language and specifics of modernisation lacked clarity, so that perceptions and predilections frequently governed. This aided misdirection and impaired implementation. All, too, were prone to self-serving diagnoses and 'eye-catching' remedies, so that 'objective' measurement acquired an ambiguous, portable quality. This occurred at a time when 'new' non-traditional methods, representing but one expression of the contemporary preoccupations with technological solutions, offered an alluring bridge between the factory and building site.

Yet the alleged conservatism of builders had contradictory faces. The MOW, for example, which monitored the industry closely, noted builders' doubts as to the profitability of substituting plant for human labour. It, too, had reservations about the gains available. Yet it also reported that there was less a lack of interest by builders in new developments, than a shortage of machinery, and a pervading belief that a lack of working continuity would undercut its profitable deployment (just as the union's feared that materials shortages bespoke future unemployment). Mechanisation for its own sake, like much on the moderniser's agenda, remained a self-transferred and false expectation. In summarising the industry's progress by 1959, against continuing charges of backwardness, the BRS reflected that:

The degree of mechanisation of building constructional processes which has been achieved may not be great; it is certainly not enough for those of us who are impatient for a higher rate of application; ...

but the industry is developing an awareness of the potential value of utilizing the facilities offered by this mechanical age.¹¹²

Social and scientific values thus continued to set the agenda for yet another phase in industrialising construction.¹¹³

Indeed a strong belief – coexistent in government and Whitehall – that substantial improvement was possible had always been omnipresent (captured even in the two otherwise prosaic commentaries above). Given the high fall in productivity across the trans-war period, this was neither a surprising nor wholly unrealistic expectation. Continuing under-performance spurred the Attlee governments further beyond a consensually orientated agenda into the realms of pressured consent and compulsion. Yet, importantly, this proclivity was already present: for example, in the forced standardisation for public housing schemes and in the discriminatory practices by government and Whitehall when favouring ‘modern’ non-traditional producers. Distorting the market against traditional builders undermined the pretence of modernising by consent (although compulsion could be disguised under the cloak of necessity because of factor shortages). It is equally apparent that even in construction, where government and its agents had greater levers over the private sector than elsewhere, in ministers’ resolution to act a disparity existed between external agencies in terms of the frequency and degree of coercion applied. Moreover, if intention is the judge, then, although

¹¹² D.G.R. Bonnell, ‘The Mechanization of Building Constructional Processes’, *Royal Society of Arts Journal* 107 (1959), pp. 327, 338-9.

¹¹³ P. Dunleavy, *The Politics of Mass Housing in Britain 1945-1975*, (Oxford, 1981).

heavily restrained by circumstance and practicality, ultimately Labour set fewer limits still on the coercive methods it was prepared to employ. But then so important was building productivity that ministers were prepared finally to set aside even inflationary considerations in favour of promoting growth. Modernisation, as a corrective to backwardness, can thus be best be understood, and measured, as being a forceful political elixir applied to remedy a perceived socio-economic malaise (signified contextually by industrial conservativeness, technological deficiency, etc.) deemed to be impairing national or sector potential. This was the reality. Yet, as with all perceptions, and all measures of potential, the ambiguities of illusion and delusion are, and were, every present to deceive.

Abbreviations

BO: Building Operative (NFBTO publication)

CHAC: Central Housing Advisory Committee

MRC: Modern Records Centre, University of Warwick

MOW: Ministry of Works

NB: National Builder (NFBTE publication)

NBSSR: National Building Studies Special Report

NFBTE: National Federation of Building Trades Employers

NFBTO: National Federation of Building Trades Operatives

NJCBI: National Joint Council for the Building Industry

PRO: Public Records Office, London

UMIST: University Manchester Institute of Science and Technology

WPRB: Ministry of Works, *Working Party Report Building* (London, 1950)