

The 3 Rs: Regulation, risk and responsibility in British utilities since 1945.

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Both as nationalised and then as privatised industries, utilities such as electricity, gas, water and telecommunications were subject to test and regulated rates of return on capital investment. While in their early years as nationalised industries, the capital performance requirements were vaguely embedded in an instruction to cover costs taking one year with another, from the early 1960s initially required rates of return and later test rates of discount were specified. Increasingly reflecting, in principle at least, the wish to cover long-run marginal costs, this approach towards capital investment affected both the level and structure of pricing tariffs. Whereas the early average-cost pricing of the nationalised industries had effectively cross-subsidised between the differing connection and supply costs of the utility, long-run marginal cost pricing structures attributed costs according to where and by whom they were incurred. This gave rise, especially after privatisation, to concerns that low-income groups were being disadvantaged by pricing structures in which standing charges bulked disproportionately large. Particular concerns were expressed about the consequences for low-income groups of the privatisation and regulation of the electricity and water utilities, and this article will concentrate on these two utilities. Not only did each produce output for which there were no complete substitutes, but as capital-hungry industries both provide loci for a further issue concerning capital investment, namely the provision of adequate capacity for future supply requirements. In electricity in particular, the introduction of competition into the industry and the privatisation of other fuel and power industries, increased the risks of making sunk capital investment in the industry precisely because the returns were less certain than they had been. The problem had shifted in part from securing adequate returns on utility capital investment to offering sufficient returns to solicit further investment. The increased risk arose from the liberalisation of the industry, and as such revived memories of the early-Austrian school of economists and their concern that theoretically static analyses of what were actually dynamic markets understated the importance of risk and, at times, uncertainty in shaping the fixed capital investment decisions. As well as analysing the changing approach to the capital investment of utilities, and its consequences for the pricing and availability of output, this article will also use post-liberalisation anxieties over the future adequacy of capacity as an occasion for revisiting some of the concerns of the Austrian- and neo-liberal economists concerning both capital investment decisions and approaches towards the treatment of low-income groups. In so doing, it will also reflect if, and if so how, there has been a shift in the scope and instruments of government responsibility in ensuring the provision and accessibility of utility output.

Regulation

The initial guidelines on undertaking capital investment given to the newly nationalised industries were vague and implicit in 'covering costs taking one year with another' whose main purpose was to inform pricing rather than capital investment. It seemed to be taken for granted that the costs to be covered would be

average rather than marginal, and that this was so was made explicit when the economist James Meade urged the merits of marginal cost pricing on the Lord President, Herbert Morrison. The social ambitions of connecting and supplying households cheaply on a cross-subsidised postalisation basis was made clear by Morrison in May 1946:

“The fundamental purpose of nationalisation was ....to secure greater efficiency in the industry....to reduce costs and provide surplus funds which could be used to extend the benefits of cheap electricity to rural areas where ....electricity was either not available or unreasonably expensive ....Ultimately, he would like to see a standard charge for electricity throughout the whole country, the tariff varying according to the purposes for which the electricity was being used, and the industry being at liberty to make special arrangements with individual interests.....He realised that this system of postalisation had its opponents among some of the economists, but he did not find the arguments which they advanced convincing. The argument that each consumer should pay the precise cost incurred in bringing electricity to his premises would, if followed to its logical conclusion, prevent even a small municipality from adopting a system of standard charges within its own boundaries.”<sup>1</sup>

In fact, the rolling out of the network to distant locations could have been funded separately and without being bundled up in the tariff structure. The concern of economists like Meade was not particularly with the one-off cost of extending the supply system, but with the relationship between current prices and the (short-and) long-run marginal costs in an industry with non-stockable output. From the mid-1950s, against a background of economically spurious but politically charged concern with public expenditure, the Treasury was able to press its case for reformed tariff structures echoing Meade’s earlier concern with marginal cost pricing. As explained elsewhere<sup>2</sup> the Treasury’s route to the desired reform of pricing structure, was not through pricing itself but instead by requiring higher returns on capital investment. The initial break-even requirement gave way to the requirement from 1961 that nationalised industries earn required rates of return, and then, moving from an *ex post* to *ex ante* approach, to requiring proposed capital investment projects to meet a test discount rate set by the Treasury.<sup>3</sup> This in turn impacted on pricing structures, the bulk supply tariff for electricity moving closer to reflecting the long-run marginal cost of supply.<sup>4</sup> The tightening of *ex ante* tests and *ex post* returns on capital investment predated privatisation by more than a decade and continued through privatisation into regulation. While US-style capital regulation was not chosen for fear of regulatory capture and ‘gold-plating’ over-investment, the RPI-X regulatory mechanism developed by the economists Stephen Littlechild and Michael Beesley, initially for telecommunications, necessarily contained implicit judgements on the permitted returns on capital investment.<sup>5</sup> While technically RPI-X made cross-subsidisation for entry-deterrent purposes possible and of concern, the trend towards pricing at long-run marginal cost continued.<sup>6</sup> This was associated with an interest in segmenting markets so as to reflect specific attributable costs of supply. A similar process had occurred in the United States where regulation moved away from fully distributed cost as the basis for rate-making. Under the fully distributed cost approach, common costs were allocated on the basis of the relative shares of quantities such as output, peak demand, and revenue of attributable cost. From the early 1970s, and using

concepts drawn from the theory of co-operative games, an increasingly influential approach was developed by economists, many of them employed by AT&T's subsidiary Bell Laboratories, for allocating responsibility for common costs among services so as to avoid cross-subsidy. The Federal Communications Commission undertook a series of investigations lasting from 1964 until the late 1970s concerning the impacts of different fully distributed cost methods applied to various message, private line and telegraphic services offered by AT&T. One of the many criticisms made of the fully distributed cost approach by economists in giving evidence to the Federal Communications Commission was, to quote William Baumol, that 'fully distributed cost test deals with only one circumstance, that is, it deals with the service as it is operated or has been operated. It involves no incremental comparison. It does not compare the circumstance of the user with the service and in the absence of the service'.<sup>7</sup> Pricing at long-run marginal cost did look forwards to what might come rather than backwards to what was, and as such did offer greater encouragement for the marginal systems analysis of future investment. In addition to segmenting markets, one consequence of pricing at long-run marginal cost was to make clearer distinctions between the fixed and operating costs of supply. This was a long way from Morrison's approach to cross-subsidisation and it reflected a changed concern to maximise and reallocate the consumers' surplus. These and similar developments in regulatory tariff-making in electricity in the United States during the 1970s were watched closely by the UK Treasury, in particular transcripts of Alfred Kahn's evidence and analyses at regulatory commissions being sent to Great George Street, London.<sup>8</sup>

Standing charges not only formed a higher proportion of the total bill for low users of output, but, reflecting the emphasis on pricing for capital investment provision, their level was likely to rise faster than marginal unit charges. The combined effect of increased standing and unit charges for electricity fell particularly on older (low usage) and poorer (low income and restricted usage) households.<sup>9</sup> In spite of stable production and demand, electricity prices for residential consumers in the UK increased between 1990 and 1995, an increase that was not justified by any change in the cost of oil, gas or coal. Yet while prices to residential consumers rose, those to industrial users in the UK fell by around 25% between 1985 and 1995.<sup>10</sup> Discounts were offered in the more competitive markets for large customers.<sup>11</sup>

While standing charges to domestic electricity consumers rose by 47% and unit charges by 40% between 1987 and 1995, compared with a retail price increase of 38%, the average increase was larger in water. In aggregate, the ten privatised water and sewerage firms in the UK increased the average charge for domestic users between 1989-1990 and 1993-1994 by 55%, compared to an increase of 39% between 1985-1986 and 1989-1990. Between particular regions, there was a considerable variation in price changes, by as much as 76% between the two extreme cases. The average bill in the region served by South West rose by 187% between 1989 and 1994, whereas the increase was only 30% for that served by Thames and 24% for that served by North West over the same period. As the regulated price of water rose, so too did the number of families who were unable to pay for a water service. In 1990-1991, there were 7,673 disconnections of water service in the UK; in 1991-2 there were 21,286; the following year there were 18,636. Whereas in 1989, 1% of families were in arrears on their water bills, by 1994 this figure had risen to 9%. This problem of unpaid bills came about partly because of the gap created between the amount charged by the

water companies and a new system of income support instituted in 1988. Previously families dependent on state assistance benefited from a mechanism that automatically paid water bills. Beginning in 1988, families had to pay their water bills using the subsidy provided, which calculated a theoretical charge for water of £1.65 per week, compared with the water companies' effective charge of £2 per week.<sup>12</sup>

Problems of poverty also coincided with an increase in income inequality. While inequality increased in all OECD countries, it occurred to a much greater extent than average in the UK regardless of whether one considers family income, spending or wages.<sup>13</sup> At the beginning of the 1970s inequality was higher than it had been for at least 30 years. While the rise in inequality which began in the 1970s obviously cannot be attributed to a 'Thatcher' effect, her governments did little to end this reversal of the post-war trend towards greater income equality.<sup>14</sup> While in 1979 the proportion of the British population below 50% of median income was slightly more than 5%, by 1997 it was around 15%. The percentage of the population under 60% of median income doubled over the same period. In 1979, the share of total income held by the tenth decile was 4.5 times that held by the first decile; in 1995 it was 8 times. The gap between those with the highest and lowest incomes widened because the richest decile saw its income grow by 50% in real terms over the period, while the poorest decile suffered a drop in real income of 14%.<sup>15</sup>

The composition of the poorest also changed. In place of the traditional predominance of pensioners in the ranks of the poorest, at the turn of the twenty-first century 70% of the low-income families were unemployed people, single parents, invalids, the infirm, and the 'working poor'. A third of children in the UK lived in families in conditions of poverty, the largest proportion in the European Union.<sup>16</sup> Whether one chooses 40%, 50% or 60% of the contemporary average income as a poverty line, there was a major increase in poverty between 1979 and 1992/3. In 1994, 9.9 million individuals in 5.7 million families were dependent on the minimum means-tested benefit Income Support; that is about one person in six in the UK. These figures compare with 4.4 million people in 2.9 million families receiving Supplementary Benefit (Income Support's predecessor) in 1979. By this measure, poverty more than doubled in the decade and a half after 1979.<sup>17</sup>

Without wishing to interfere with pricing structures, the utilities' means to palliate the electricity and water bills of the lowest income groups were limited. To address the problem of disconnection, utilities offered prepayment meters. In 1991 there were 48,000 disconnections for non-payment of the electric bill; this fell to 18,000 in 1992.<sup>18</sup> In both electricity and water, the fall in the number of disconnections was linked to the introduction of prepayment systems: 2.3 million in 1992 for electricity, 780,000 for gas. However, as Florio notes, such a widespread use of prepayment meters disguised the problem of disconnection. Service to households with prepayment meters was not actually interrupted, per se, but if users were not in a position to pay, they were forced into periodic disconnection. According to a study in Bristol and Birmingham conducted by the Rowntree Foundation, the introduction of prepayment meters had a dramatic effect in reducing fuel consumption in the households interviewed. This was achieved for instance by cutting the number of cooked meals and minimising the use of hot water. There is evidence of 'fuel poverty' in the UK after privatisation. Conventionally, the threshold amount of income that can affordably be devoted to energy expenditures is 10%.. According to this definition, in 1996 in England

alone 5 million households (8.5% of families in the UK) were in a state of fuel poverty.<sup>19</sup> The government was driven to increase cash transfers to particular social groups (e.g. winter fuel payments). Apparently government had not lost the wish to tackle fuel and water poverty, but through privatisation it had effectively given up the means of doing so by acting directly on prices.

### Risk

Many of the economic benefits of the privatisation programme were expected to follow on from the introduction of competition in the former public monopolies. To economists, the potential benefits of liberalisation considerably exceeded benefits arising from a transfer of the industry from public to private ownership. The liberalisation of an industry's contestable markets could precede, coincide with or follow the industry's privatisation. In 1982, in the Oil and Gas (Enterprise) Act and in 1983 in the Energy Act, liberalisation was attempted before privatisation. Following the privatisation of British Gas as a monopoly, the task of promoting entry into the industry was left to the regulator. Learning from experience, in the run-up to the privatising Electricity Act of 1989, the government actively sought to restructure the industry and then sell it in its competitive form. Investors fought shy of the nuclear power component of the generating section of the industry with its unknown but probably high decommissioning costs for which inadequate provision had hitherto been made by governments. Privatisation transferred risks on which private investors wanted more information. Part of the appeal of competition for its advocates was that information was dispersed throughout the market, that if prices reflected (social) marginal costs then these reflections of resource costs were also transmitted to and fro between consumers and producers, and that the heightened risks of competition provided incentives for efficiency. While by the 1980s economics textbooks could set out clearly the virtues of marginal-cost pricing arising out of perfectly competitive markets, the likelihood of competitive markets leading to efficient resource allocation had been fiercely contested for much of the twentieth century. Meade's early contributions on the use of marginal cost pricing in socialised industries arose in response to his reading and reviewing of Abba Lerner's Economics of Control. Around the same time as Lerner's book, Oskar Lange offered his analysis of a possible use of centrally planned announcements of prices for resources and the incorporation of these prices by socialist managers in their production plans. As resource shortages or surpluses became apparent, so announced prices would be adjusted.<sup>20</sup>

Some of the fiercest criticisms of socialist planning predated the work of Lange and Lerner and centred on the issue of information. Interwar criticism from the Austrian school of economists was probably best encapsulated in Ludwig von Mises's 1922 book Socialism: An Economic and Sociological Analysis, von Mises's thinking drawing in turn on that of Carl Menger and his Grundsätze der Volkswirtschaftslehre (Principles of Economics) as well as on that of Böhm-Bawerk.<sup>21</sup> In his turn, von Mises was to influence Friedrich von Hayek, whose work enjoyed belated popularity with sections of the Conservative party and governments from the mid-1970s. It was in part in response to the interwar debate on the possibility of the socialist economic calculation that von Mises and then von Hayek came to develop an 'Austrian' approach to pricing which differed from that emerging from a combination of the work of Marshall and Walras. One of the central questions asked by the Austrian economists was how were prices and

markets formed. That while equilibrium economics might be able to explain how an existing market worked, it could not provide a convincing explanation of how the market came to exist in the first place. As such, it was unlikely to be able to explain how future markets might develop over time, the concept of time being central to the distinction between static and dynamic economic analysis. Much of this thinking was drawn together by von Mises in his publication in 1940 of Nationalökonomie, later translated and published as Human Action. Hayek's papers written in response to the socialist calculation debate were gathered together and republished in his 1948 Individualism and Economic Order.<sup>22</sup> While there were significant differences in the ways in which Mises and Hayek respectively identified the essence of their understanding of the theory of price, as distinct from that of mainstream theory, nevertheless their shared scepticism as to what a static view of markets had to offer formed a strong common bond. In an observation predating by over half-a-century later criticisms of the efficient market hypothesis, Hayek observed that: 'it is generally made to appear as if these questions of how the equilibrium comes about were solved. But, if we look closer, it soon becomes evident that these apparent demonstrations amount to no more than the apparent proof of what is already assumed. The device generally adopted for this purpose is the assumption of a perfect market where every event becomes known instantaneously to every member'.<sup>23</sup> For the Austrians a key role for an entrepreneur was to create new information; a manager might exploit existing information that was imperfectly known.

One aspect of Austrian economics developed by Mises and Hayek, and then later by Israel Kirzner, concerned uncertainty about the future, particularly as it affected capital investment decisions. In emphasising concern with uncertainty, the Austrians shared some of Keynes's concerns and the Austrian concern with time and the continual process of forming markets was of interest to John Hicks.<sup>24</sup> In addition to developing the IS-LM model of Keynes's General Theory, Hicks wrote three books on capital theory, referring back to the Austrian economists in particular in the last of the three books, that on Capital and Time.<sup>25</sup> In the context of the liberalisation of former nationalised monopolies, the uncertainty affecting capital investment decisions was particularly pertinent given the actual and greater potential exposure of industries like electricity to competition, both inside and from outside the industry. Both in the Victorian and Edwardian system of concessions, then as municipal enterprises and subsequently as nationalised monopolies assurances on probable returns were given and were frequently accompanied and secured by a period free from competition. The 1870 Tramways Act inaugurated the system of providing limited period franchises which was initially usually for 21 years but was subsequently extended to 42 years in 1888.<sup>26</sup> Nationalisation represented an extension of this process in which (often national) monopolistic conditions were established as the norm, public ownership being preferred to regulation as a means of extracting for consumers the benefits of improvements in productivity. Thus, where privatisation was eventually successful in not only transferring ownership but also in introducing competition into sections of each industry, then it reintroduced risk and uncertainty into markets from which it had been absent from decades. In theory, privatisation also increased each industry's responsibility for the consequences of its own decisions, reduced the role and responsibility of the state, and increased the exposure of industries to economic change. Now, if poor decisions were made, as with the early civil nuclear power programme of the 1950s, then ultimately the state should no longer absorb the loss. If relative competitive prices

threatened to alter markets significantly from what had been expected, as had happened with the commercial exploitation of North Sea gas, then the State ought no longer to use a mix of taxation and price interference to mitigate the pace and size of the shift in relative prices. If a nationalised industry like coal mining struggled to find markets in the face of falling oil prices, then the state should not again force other nationalised industries like electricity to increase their coal-burn while at the same time increasing taxes and duties so as to restrict oil and coal imports.<sup>27</sup>

Much of the early discussion of the liberalisation of former nationalised monopoly markets focussed on how to encourage new entrants into the industry. As such, a keen concern was to prevent the incumbents from exploiting the combination of existing sunk investments and proportionately low marginal costs to deter entry. What was discussed less was how the increase in risk and uncertainty arising from increased competition in markets would impact on the ability to attract new sunk investment. Indeed, rather than under-investment, it was concern with Averch-Johnson style over-investment which was of most concern to those devising new regulatory incentive structures.<sup>28</sup> The mainly RPI-X regulatory periods were kept short to around 5 years, not least because their extension to 10 or 15 years was feared likely to allow sufficient time for a gap to emerge between operating costs and prices during which costs savings would not be passed on to consumers. While nominally it was prices which were being regulated, implicitly price regulation was a form of return on capital regulation. Similarly, the prices which emerged from US-style capital regulation had to be politically acceptable. In the United States, for much of the 1950s and 1960s investor-owned utilities had enjoyed an implicit understanding with regulators that allowed returns on reasonable capital investment would be fair, adequate and pretty predictable. Yet, even with the partial liberalisation of the electricity industry, the risks arising from competition both within the industry itself and from outside, from the oil and gas industries, were sufficiently high to deter large, long-term sunk investments such as in nuclear power stations. The concerns with the ability of competitive markets to draw forth such capital investment which had found expression in the Austrian economists' preference for dynamic over static analysis acquired fresh pertinence. So too did the work of an industrial economist like G.B Richardson who, as Stigler urged the strengths of the theory of perfect competition in the later 1950s, reflected in 1960 in his book Information and Investment on the failure of economists, with the notable exception of Hayek, to pay sufficient attention to the type of information required for capital-investment decision-making in and by an industry.<sup>29</sup> Richardson reminded his fellow economists of Menger's pioneering work on the marketability of assets.<sup>30</sup> Ideas which resurfaced in Keynes's exposition of his concept of liquidity preference could also be applied to investment decisions. Just as individual liquidity preference might reflect individual anxieties about the future, then so too might industrialists prefer various forms of liquidity reflecting the differing marketability of assets to a decision to engage in sunk capital investment. Again, this pointed to a market that was always on the move, and that it ever found equilibrium was debatable. Certainly the founders of modern equilibrium analysis were aware of its transitory delicacy and Walras preferred to approach it, as though playing 'What's the time Mr Wolf?' through a process of *tâtonnements*.<sup>31</sup>

In the initial Pool trading arrangements designed by the Austrian-economics-influenced Stephen Littlechild for the newly privatised electricity supply industry, specific payments were made to companies for making existing capacity available and the high system marginal price resulting from the day-ahead auctions did make

future investment in nuclear power potentially attractive. However, this high system marginal price arose in part from the ability of two dominant players, National Power and Powergen, to 'game' the day-ahead bidding system. In 1998 System Marginal Price in the Pool was still set more than two-thirds of the time by the two largest generators, and almost all the time by only four generators. Pool prices were still some 10-20 % above the new entry level based on the latest gas-fired plant.<sup>32</sup> In time, in response to complaints from large customers and competitors of the electricity supply industry, the financial bids in the Pool gave way to the physical bilateral contracting of the NETA. Competition was increased in the industry, not least as National Power and PowerGen agreed to divest a total of 6GW of existing coal-fired plant, which was purchased by Eastern Electricity and subsequently run at higher output than it had previously been. Nine years on from privatisation, the duopoly was only half its size at vesting. In 1998/99 National Power and PowerGen accounted for under 40% of the generation market, and this share was to fall further. Increased competition in and outside the industry, regulatory periods significantly shorter than the lifetime of large sunk investment and the ending of Pool prices offering a considerable margin above the lowest marginal costs of nuclear generators, made it more attractive to earn returns reasonably quickly on new CCGT technology than to place undue trust in the future and sink money into nuclear.<sup>33</sup> The inability and/or unwillingness of government to provide assurances to would-be investors in nuclear power of the level and security of their future returns on their capital investment was consistent with a wish to develop a more competitive electricity market; it did however leave unanswered the questions as to how, if government decided that new large long-term sunk investment was required, it was to be made.

In contrast to the privatisation of the electricity supply industry, that of the water industry retained a series of local monopolies within the industry and provided a system of price regulation which specifically recognised the increasing costs and future capital investment requirements of the industry. Rather than the usual RPI-X form which restricted prices to X per cent below the RPI for a specified number of years, the water companies were offered RPI+K where K was an allowable price increase above inflation to be used to finance the investment plans necessary to upgrade capacity and meet quality standards.<sup>34</sup> At privatisation, the parlous condition of the water industry and the need for new investment to stop leaks and to meet new environmental standards had been apparent. Under the pre-privatisation structure of the water industry established by the 1973 Water Act, ten RWAs (Regional Water Authorities) had been established and charged with planning and controlling the use of water in each river catchment area. Each RWA was responsible for more than one river basin, and collectively it was hoped to achieve an integrated river-basin management. RWAs were responsible for a range of water uses within their broad remit of supplying of water, disposing of sewage and managing sewerage, and overlaid on these were responsibilities for water resource planning, pollution, fisheries, flood protection and land drainage, water recreation and environmental conservation. By the time of privatisation it was clear that investment by the RWAs had been inadequate, and there was particular concern with the decline in river water quality. At privatisation the activities of production and regulation were separated. The newly-created water supply PLCs lost their environmental activities which were transferred to an external body, the National Rivers Authority. The Drinking Water Inspectorate took over responsibility for household water quality and for the implementation of EC directives, and the economic regulation of the industry



was delegated to the newly created Office of Water Services (OFWAT).<sup>35</sup> While the functions of supply, regulating and environmentally protecting water supply and sources were separated out, the fundamental economic characteristics of the industry restricted the competitive threats faced by each water company. While the regulator and the regulatory formula encouraged the industry to undertake investment and to price at long-run marginal cost, market structure made this more likely to happen in the water than in the electricity supply industry.

### Responsibility

Inasmuch as problems concerning fuel and water poverty and the securing of heavy sunk investment were at worst caused and at least exacerbated by the privatisation of utilities and the liberalisation of their markets, the question arose as to whether addressing such problems ultimately remained, despite privatisation, a responsibility of the state. For Hayek and other neo-liberals, poverty was an outcome of a market process and not necessarily reflective of individual fault. In a market what made an individual unique was “not his generic but his concrete knowledge, his knowledge of particular circumstances and conditions” since ‘it is of the essence of a free society that a man’s value and remuneration depends not on his capacity in the abstract but on success in turning it into concrete service which is useful to others who can reciprocate.’<sup>36</sup> While a market was a system for providing and co-ordinating information, there was no presumption that a market produced a ‘just price’. As markets produced poverty as an outcome of its process of working, then so too should poverty be addressed, for while poverty and ‘deprivation are evils....they are not injustices’.<sup>37</sup>

Dealing with poverty as an outcome was fundamentally different from making the alleviation and eradication of poverty an aim of policy. Indeed, for neo-liberals the state should not pursue such aims; the state should be nomocratic rather than teleological. Although not himself a neo-liberal, Michael Oakeshott’s distinction between a teleocracy (an order devoted to the pursuit of some overall end, goal, or purpose) and a nomocracy (a rule governed order not devoted to the attainment of particular ends) had been developed by Hayek in the second volume of ‘Law, Legislation and Liberty: The Mirage of Social Justice’.<sup>38</sup> In a nomocracy political institutions provide a framework of general rules which facilitate the pursuit of private ends, however divergent such ends may be. It was not the function of political institutions to realize some common goal, good or purpose and to galvanize society around the achievement of such a purpose. This distinction between nomocracy and teleocracy had some overlap between the distinction later urged by Friedman between positive and normative economics as well as with the praxeological, rather than jurisdictional or political science, approach of von Mises.<sup>39</sup> Like Buchanan, von Mises saw the ends of human action as being subjective and he rejected the idea of all human action being directed at some kind of overall goal, happiness or welfare or whatever. Rather human action was undertaken to remedy some subjectively perceived unease in life.<sup>40</sup>

So, while the nomocratic state could address poverty which was an outcome of market operations, it should certainly not seek to adjust the relative outcomes by pursuing egalitarian policies. The ‘mirage of social justice’ in which a normative preferred distribution was pursued was unappealing to neo-liberals, both in itself and in being teleocratic. To neo-liberals, justice was not about the patterns of distributive

outcomes but about the process of the market.<sup>41</sup> The neo-liberal was concerned with the absolute position of the worst off, not with their relative position. However, to return to earth, it was not entirely clear how given the neo-liberal acceptance of the need to address poverty, how the practical problems of fuel and water poverty were to be alleviated.

That the lowest income groups spent a higher proportion of their household budget on energy than did higher income households was clear from Engel curve data and from FES snapshot evidence.<sup>42</sup> In 1984 the poorest households spent over 13% of household expenditure on energy while for households with incomes in excess of £17,500 the proportion of total expenditure on energy was around 7%. Yet, in contrast to expenditure on food which fell as a share of household expenditure as income rose, energy expenditure remained fairly constant as a share of household budgets as income increased. Energy could then be viewed both as an absolute and as a participation merit good. Low-income groups were also likely to convert fuel less efficiently into power and heat than were higher-income households. In the mid-1980s, while those with household incomes of less than £3500 per annum were less than three times as likely to have gas central heating as electric, those with incomes in excess of £17,500 p.a. were fourteen times as likely to have gas as electric heating. Income issues aside, in the mid-1980s the 30% of households living in council accommodation and the further 8% living in privately-rented accommodation also had little, if any, choice over the type of heating in their households.<sup>43</sup> Being less likely to have gas central heating, the poorest also missed out on the slower increase in gas than in electricity charges.<sup>44</sup>

The nationalised industries' early practice of pricing at average cost offered cross-subsidised prices to all income groups. As an approach to making essential output available to the poor this was effective, but as a means of welfare provision it was inefficient. As James Meade had argued in 1946, poverty was an income problem and should be dealt with as such. By the 1980s with the trend towards pricing at long-run marginal cost continuing, there was little appetite among policy makers for approaches towards tackling fuel poverty which involved a return to the past practices of interfering with the level or structure of prices. As an income problem, fuel poverty was properly dealt with through social security. However, as the system of social security developed from the 1980s it seemed reluctant to deal with fuel poverty head-on as an income problem. Rather it seemed to target particular groups, such as pensioners, for help or to identify particular circumstances, such as cold weather, in which additional payments would be made. That pensioners spent proportionately more on fuel than non-pensioner households was clear.<sup>45</sup> While energy expenditure formed on average between 5-7% of the budget of non-retired households, it formed 17% of the budget of single retired households mainly dependent on the state pension, and 12% for retired couples mainly dependent on the state pension.<sup>46</sup> Cold weather in the winter of 1985-6 led to the introduction of the 'trigger temperature' system for single payments in exceptionally severe weather.<sup>47</sup> Neither of these payments was income-related. While in particular circumstances weekly additions to supplementary benefit could be made to cover energy costs, with the replacement of supplementary benefit by income support as part of the social security reforms of 1988, no provision was made for the continuance of such payments.<sup>48</sup> The contrast was with the payment of means-tested housing benefit, which was received by slightly more than 7 million households in the UK more than one-third of the population. Regional variation in rent had long occasioned additional payments to social security recipients, but nonetheless in the mid-1980s

13% of the expenditure of the poorest group was spent on energy, more than the 10% spent on housing.<sup>49</sup>

### Conclusion

Moves towards pricing utility output at long-run marginal cost began before and continued after privatisation. The concern with pricing was an expression of deeper if episodic political concerns with public expenditure and of an underlying rising drone of interest among economists that the resource costs of capital investment be better reflected in the level and structure of output prices. When prices were adjusted, both their level and their structure impacted on the poorest groups in society whose composition was changing. Rather than groups like pensioners sitting at the bottom of the income ladder, this place was increasingly occupied by unskilled people where no-one in the household worked. The social security reforms effected from the late 1980s sought to increase the incentives to work, and as such seemed reluctant to make equivalent provision for the unemployed as for the old on matters such as assistance with fuel costs. While government did not abandon its responsibility to address the problem of poverty, other policies such as privatisation and social security reform reduced its ability to do so. While Mrs. Thatcher alluded to the work of Hayek, her governments' policies were often at times less compassionate and forward-looking than the work of the Austrian and neo-liberal economists. For Menger, von Mises and Hayek, risk and uncertainty were dominant concerns. The inability of markets to fully include the factor of time and to overcome uncertainty was clearly recognised by the Austrian school of economists. Hence the urging of a dynamic rather than a static view of markets. The liberalisation of markets in which large sunk investments were required simply increased uncertainty and risk, and made those investments less likely to occur. Increased competition could make the existing assets work harder, but the increased uncertainty about future returns and relative prices pushed time-related discount rates higher thereby reducing investment in new large sunk assets. This might not matter, except that in industries like energy, governments express concern about the security implications, be they environmental, economic or military, of a failure to solicit sufficient long-term sunk investment. While issues of national security are a legitimate area for government activity, most of those concerns, be they with global warming or electricity capacity shortages, currently work backwards to the present from a future projection of danger. Government appears to have shifted its area of responsibilities forward in time, while working with present markets which accommodate time inadequately. It might be better for government to accept responsibility for the present precisely by acting to reduce current uncertainty about the future.

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<sup>1</sup> The National Archives, Kew, London. CAB 21/2208, Lord President's Office, Extract from minutes of (S.I.M.)(46)<sup>9</sup>th meeting, 22 May 1946.

<sup>2</sup> Chick, *Electricity and Energy Policy*.

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<sup>4</sup> Meek, 'The new bulk supply tariff', *Economic Journal*.

<sup>5</sup> Beesley and Littlechild, 'Regulation of privatized monopolies', *RAND Journal of Economics*.

<sup>6</sup> Helm and Yarrow, 'The assessment', *Oxford Review of Economic Policy*, p. xxvii.

<sup>7</sup> Brown and Sibley, *Theory of Public Utility Pricing*, (1986), pp. 48-49. Docket 18128/18684. Tr. At 10386.

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<sup>8</sup> For reasons of space I have omitted discussion of Ramsey pricing. To an extent, Ramsey pricing is a response to financial break-even requirements in which price inelasticities are exploited, rather than a direct response to future capacity resource requirements in current output prices.

<sup>9</sup> Baker and Blundell, 'The micro-econometric approach', *Oxford Review of Economic Policy*.

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<sup>10</sup> Florio, *Great Divestiture*, p. 226

<sup>11</sup> Ernst, *Whose Utility?*.

<sup>12</sup> Florio, *Great Divestiture*, pp. 237-8.

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<sup>14</sup> Jenkins, S 'Recent trends', *Oxford Review of Economic Policy*, p. 39

<sup>15</sup> Florio, *Great Divestiture*, pp. 37, 98.

Office of National Statistics, *Social Trends*.

<sup>16</sup> Florio, *Great Divestiture*, p. 98.

<sup>17</sup> Johnson, P. 'The assessment: inequality', *Oxford Review of Economic Policy*, pp. 11-12.

<sup>18</sup> In 1991 there were 19,000 disconnections for non-payment of the gas bill and 16,000 in 1992.

<sup>19</sup> Burns, Crawford and Dilnot, 'Regulation and redistribution', *Fiscal Studies*.

Florio, *Great Divestiture* pp. 238- 240

<sup>20</sup> Lange, 'Marxian Economics', *The Review of Economic Studies*.

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<sup>21</sup> Böhm-Bawerk, *The Positive Theory of Capital*.

<sup>22</sup> Hayek, *Individualism*.

<sup>23</sup> Kirzner, *How Markets Work*, pp. 16-18.

<sup>24</sup> O'Driscoll and Rizzo, *Economics of Time and Ignorance*, chap 5.

<sup>25</sup> Hicks, *Capital and Time*, p. 12.

Hicks distinguished between Menger's theory as one of economics in time and Böhm-Bawerk's as an economics of time. Hicks, 'Some Questions of Time',

<sup>26</sup> Byatt, *British Electrical Industry*, p. 8.

<sup>27</sup> Chick, 'The marginalist approach', *Economic History Review*.

<sup>28</sup> Helm and Yarrow, 'The assessment', *Oxford Review of Economic Policy*, p. xxi.

<sup>29</sup> Richardson, *Information and Investment*.

F. A. Hayek, 'Economics and knowledge', *Economica*, 1937.

<sup>30</sup> Richardson sees Menger's chapter on The Theory of Money in his *Principles of Economics* as anticipating some of the much later analysis provided by J.M. Keynes in *The General Theory of Employment, Interest and Money*. See Richardson, *Information and Investment*, p. 157, fn. 1.

Menger, *Principles of Economics*.

<sup>31</sup> Walras, *Elements of Pure Economics*, pp. 169-72, 243-54, and 284-95.

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- <sup>32</sup> Littlechild, *Privatisation*, p. 27.
- <sup>33</sup> Littlechild, *Privatisation*, p. 26.
- <sup>34</sup> Hunt and Lynk, (1995), 'Privatisation and Efficiency', *Oxford Bulletin*, p. 374.
- <sup>35</sup> Lynk, 'Privatisation, Joint Production and the Comparative Efficiencies', *Fiscal Studies*.
- <sup>36</sup> Plant, *Neo-liberal State*, pp. 72/3
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- <sup>38</sup> Plant, *Neo-liberal State*, p. 16
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- <sup>39</sup> Plant, *Neo-liberal State*, pp. 58- 59. Praxeology is the science of the means used in action to achieve some subjectively determined end. It is not the science of ends and cannot be a normative science as ends are determined by individual subjective choice.
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- <sup>40</sup> Plant, *Neo-liberal State*, p. 58
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- <sup>42</sup> Burns, Crawford and Dilnot, 'Regulation and Redistribution', *Fiscal Studies*, p. 10.
- <sup>43</sup> Dilnot and Helm, 'Energy policy', *Fiscal Studies*, pp. 34, 36, 38, 45.
- <sup>44</sup> Burns, Crawford and Dilnot, 'Regulation and Redistribution', *Fiscal Studies*, p. 13.
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- <sup>46</sup> Dilnot and Helm, 'Energy policy', *Fiscal Studies*, p. 36.
- <sup>47</sup> Dilnot and Helm, 'Energy policy', *Fiscal Studies*, p. 41.
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- <sup>49</sup> Dilnot and Helm, 'Energy policy', *Fiscal Studies*, p. 34.