therefore opportune and useful.They should be of interest to policy makers, research managers and administrators and to researchers themselves.

Post-apartheid South Africa is painfully aware of its limited financial resources with which to address the gargantuan social, infrastructural, basic-needs and socio-environmental mistakes which must be overcome if sufficiently rapid socio-economic progress is to be made. Above all, an effective translation of the new academic research agenda within South Africa to ameliorate the enormous contemporary social, economic and human problems, is reqiured. This has been the subject of much recent study[1]. The effective implementation of research has therefore never been of greater importance; to plan for implementation is as important as the careful selection of the research agenda itself.

NOTES AND REFERENCES

1 T G Whiston, *Research Policy in the Higher Education Sector of South Africa*, Science and Technology Policy Series No. 3, FRD, Pretoria, 1994.

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Capitalism, Culture and Decline in Britain 1750-1990 *by W. D. Rubinstein* (Routledge, London, 1994), pp. viii + 184, A$27.95, ISBN 0-415-03719-0.

Rubinstein aims to explode what he calls the 'cultural critique' of the British economy. According to this view, British decline relative to other European economies and Japan since the glories of the Industrial Revolution, should be attributed to the anti-industrial spirit that permeated every sphere of British life. He attacks particularly Martin Wiener, Corelli Barnett and the early Antony Sampson. His contention is that, in fact, industrial decline was a transfer of resources and entrepreneurial energies into other forms of business life, commerce and finance, where Britain's comparative advantage always lay, even at the height of the Industrial Revolution. Britain's elite system and the public schools have always been postivistic, rational, moderate and pro-capitalistic in values. The 'cultural critique', Rubinstein maintains, purports to explain a historical non-event.

The reader should recall that comparative advantage is not the same as absolute advantage. Britain may have been better at finance than industry and therefore specialised in finance, while being less productive in both sectors than her trading partners. So Rubinstein's ingenious income tax evidence that the bulk of middle class incomes even in the 1860s was always earned in the metropolis and the home countries, not in the leading industrial counties, Yorkshire and Lancashire, does not *necessarily* tell us about the absolute productivity of British services. Rubinstein addresses this point by a direct, if impressionistic, sectoral comparison with the United States. British economic performances in banking, in the stock market and generally in the financial services provided by the City have always been superior to those of the United States and elsewhere, he claims. The most criticised period, since 1950, shows spectacular increases of material well-being measured by consumer durable ownership, and house ownership. They compare favourably with levels achieved in other countries, Rubinstein demonstrates, though the supporting comparative evidence here is

thin. Rubinstein notes the lack of clarity in identifying characteristics of a national culture and relating them to economic performance - as required by any balance assessment of the 'cultural critique'. He then shows the inconsistency of the various criticisms of alleged British culture with German, United States and Japanese attributes.

The statistical core of the book is Rubinstein's even more valuable contribution to the debate. He examines four empirically testable propositions about the English public school's contribution to economic performance:

1) public school education was common enough in the late nineteenth century to instill anti-industrial spirit into the entire middle class;
2) it was common enough to affect the sons of industrialists;
3) there was a haemorrhage of talent whereby public school-educated sons of successful businessmen left business for other fields; and
4) the public schools influenced the entrepreneurial abilities of those that remained.

Rubinstein observes that the numbers educated in public schools were too small for proposition 1) to be true. He then selects eight schools and examines samples of boys entering in 1840, 1870 and 1895 / 1900, a total of 1800. Bankers were more likely to attend public schools and banking flourished relative to industry. On proposition 2), industrialists were unlikely to attend public schools. On proposition 3), following in father's footsteps was the normal career choice. There was a small intergenerational shift in both directions, between industry and other occupations. Probate valuations show fathers were wealthier than sons. But Rubinstein remarks that this is not a convincing finding for proposition 4) because the pattern may be attributed to taxation and estate duty avoidance in the twentieth century.

Whatever the contribution of the public schools, there is something to explain in both the pattern and the pace of British economic performance (as there is for every other economy); for instance, the stagnation of the Edwardian period, and not merely the catching up but the overtaking of British living standards since 1950 by Continental Europe and Japan. The quite extraordinary history of the British motor industry in those years cannot merely be dismissed by the term 'comparative advantage'. The British do not seem to have found a formula for managing large scale manufacturing facilities in the way the Germans apparently have, so they have been driven to services. In science they did eventually find a way of catching up, but Rubinstein does not elucidate the nature of the lag by asserting that 'German university science and technology 1870-1933 has been significantly overrated'. Germans won 29% of all Nobel prizes in Chemistry, Physics and Physiology / Medicine between 1901 and 1930, a proportion far above *those* any of any other country, including Britain.

Culture may have something to contribute to an explanation for all this, but for it to do so, some systematic thinking is required first, perhaps along the lines presented by Mark Casson in the *Economics of Business Culture*.[1] The British approach to education for example may explain the pattern of her comparative advantage. The supply of managerial or entrepreneurial effort may depend upon leisure pursuits open to social groups; social isolation may encourage devoting more time to business, because of the absence of anything better to do, with a tendency to reduce costs and innovate. Small social groups may be more cohesive and provide better credit and information networks than a large socially integrated class.

Rubinstein does not explicitly make the most telling point against the 'cultural critique' - that all capitalist economies require for their survival some form of 'non-market spirit'. If everything can be bought and sold, including the traditional functions of government, and socialisation, then civil order is likely to disintegrate. Nonetheless, he has performed a great service by showing how scientific methods can refute a portion of the seductive and widely

believed 'cultural critique'.

NOTES AND REFERENCES

1 M. C. Casson, *The Economics of Business Culture: Game Theory, Transactions Cost and Economic Performance,* Clarendon Press, Oxford, 1991.

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Australian government purchasing policies: buying our future, House of Representatives Standing Committee on Industry, Science and Technology (AGPS, Canberra, 1994), pp. xxxix + 181, $14.95, ISBN 0-644-33307-3.

Governments have used their purchasing of goods and services as a tool for industry development in countries as diverse as Sweden, the United States, France, Singapore, Taiwan and Japan. In the pragmatic real world of policy, it has seemed self-evident that such an important source of domestic demand should be harnessed to national economic and strategic objectives. As innovation has grown more important, government's heavy use of high technology goods (largely for defence and information processing) has added further weight to the argument.

By comparison, Australian politicians and policy-makers have shown little interest in industry policy and even less in the effects of their agencies' purchasing practices. Until the mid-1980s, government procurement struggled for a place on the policy agenda and, as the House Committee's Report shows, was receiving only half-hearted attention a decade later.

The reasons are numerous: the reliance, up until the mid-1970s, on tariff protection as the sole instrument of industry policy; the pervasive technological cringe of Australians; and (perhaps most significant of all) the bureaucracy's continuing indifference. It is easier and more convenient for government purchasing officers not to have to worry about the effects of their decisions on Australian industry. And in the absence of any firm political will to the contrary, it is difficult to blame them.

Australian firms have protested loud and long at the difficulties they have experienced in getting a fair go, let alone preferential treatment, when attempting to sell to government. But despite a number of reports, all urging that something be done the issue has failed to arouse much interest in the inner circles of government or, for that matter, in academia[1]. Bob Hawke's memoirs, for example, contain no reference at all to industry development, let alone to so mundane a subject as procurement policy.

To its credit, however, the Labor government of the 1980s did implement some worthwhile changes, largely through the efforts of Kim Beazley and John Button. Bowing to the overwhelming presence of transnational firms in government markets, it was decided to use the Commonwealth's purchasing power as a lever to force these firms to do more manufacturing and research in, and exporting from Australia. The Partnerships for Development program in the IT sector and the Factor F program in pharmaceuticals have been the principal manifestations of this philosophy.

These schemes, together with Kim Beazley's crucial decision as defence minister to build