BOOK REVIEWS

Why Economists Disagree—The Political Economy of Economics. By KEN COLE, JOHN CAMERON and CHRIS EDWARDS. (Longman, London, 1983.) Pp. 318, ISBN 00 582 29546 7.

This book aims to provide 'a rigorous non-mathematical analysis of the theory and politics' of three major schools of economic thought which are identified as subjective preference theory, cost of production theory and abstract labour theory. The authors argue that these several competing theoretical perspectives are each logically consistent, offer a plausible explanation of economic phenomena, and provide a distinct and coherent political program. There are clear historical and logical connections between Adam Smith and libertarian conservative thought in Britain and the United States, and between the Marxist theory of value and neo-Marxist critiques of capitalist societies. The third strand, the connection between 'cost of production theories' and 'social democracy'—associated with Roy Jenkins, David Owen and Shirley Williams—is much more questionable.

On balance, this is a disappointingly superficial book which does not really come to grips with the question asked in the title. If one wants to know why economists disagree read either Thurow (1983)[1] or, at a more advanced level, Blaug (1980); both authors do a much better job at providing answers. Although Thurow and Blaug would probably have many major points of disagreement, both would accept that economists disagree primarily because it is normally not possible to find a definitive experiment in economics which will conclusively refute one of two contending theories. In fact, as Blaug shows with nine very perceptive examples, economic theories tend to become surrounded by 'protective belts' which make the task of falsification very difficult, if not impossible. Both Thurow and Blaug would also agree that a theory in economics defines not only a program of scientific research (as in other disciplines) but may also suggest a program of political action. While many scientific hypotheses have philosophical, social or even political undertones, which often lead to bias in interpretation of evidence, economic theories tend to have more policy relevance—thus making agreement among professionals with different values that much more difficult, if not altogether impossible. What makes the Cole-Cameron-Edwards book disappointing is their lack of recognition of such methodological issues, of economics as a positive science and that policy advice must ultimately rest on falsifiable hypotheses of positive economics, that is, on the demonstration that the empirical relationship between two variables is A and not B.

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[1] Reviewed in this issue.

References

Thurow, L. C. (1983), *Dangerous Currents: The State of Economics*, Oxford University Press, Oxford.
Blaug, M. (1980), *The Methodology of Economics or How Economists Explain*, Cambridge University Press, Cambridge.

Dangerous Currents: The State of Economics. By LESTER C. THUROW. (Oxford University Press, Oxford, 1983.) Pp. 247, ISBN 0 19 877183 5.

In this wide-ranging, richly informed and splendidly entertaining critique Professor Lester Thurow of M.I.T., a world-renowned economist, addresses the question—'Why has the discipline of economics become so discordant, and where are the theoretical currents taking the profession?' In Thurow's view, the Keynesian approach which replaced the classical price-auction economics of the 1920s was toppled because it lacked an adequate microeconomic base, as do the current contenders—monetarism, supply-side economics and rational expectations. His main aim is to attack the re-emergence of the equilibrium price-auction paradigm, which, he says, has made microeconomics fundamentally irrelevant and unsound. He could well have dedicated the book to the Belfast Irishman who announced—'Anyone who is not confused on this issue does not understand the situation'.

The book could disturb the complacency of agricultural economists who work in the 'easy' part of the economy. As Thurow points out, it is in the financial and commodity markets that the equilibrium price-auction model works best (with the labour market at the other extreme).

Chapters are devoted to fixed versus flexible prices, inflation, economic failures (a review of the post-war recessions and the failures of economists' prescriptions), econometrics, supply-side economics, rational expectations and the labour market.

Thurow asserts that there is no convincing empirical evidence that inflation slows growth rates, or that it redistributes income unfairly. He distinguishes two types of monetarist solutions for inflation, 'trench warfare', under which unemployment is increased gradually, and 'atom bomb' approaches, involving dramatic increases, and suggests that the limited success from either policy is not worth the price paid in stagnation and unemployment.

He points to dramatic contrasts in positions. The monetarists believe that the price elasticity of demand for money is zero. (Price fluctuations clear every market except the money market.) Keynesians believe that the price elasticity of demand (and supply) for labour is zero.

The failure of econometrics to fulfil its earlier promise again is traced back to a deficient microeconomic basis for the macroeconomic models. He concedes that '. . . nothing right now can do better and no one can do without them' (p.110) but believes that 'In many areas the stable equations that economic theory depends on don't seem to exist' (p.105). Econometricians, he feels, must give top priority to robustness, even though it will rarely be achieved. His pessimism, however, is based not solely on the wrong-headed microeconomics which underlies macroeconomic models. 'Economics, along with much of modern science, is being drawn in a direction wherein events are perceived to be much more stochastic and much less deterministic than had previously been thought' (pp.122-3).

Those who believe the labour market is just another market and that labour is just another factor of production should read Chapter 7. Thurow presents a perceptive analyses of the peculiarities to be found in the labour market, including the importance of worker motivation, on-the-job training, the individual's relative income position, interdependent preferences and team productivity. He concludes that in the long run, fixed wages are more efficient than flexible wages. In a dynamic setting wage rigidity is not a market imperfection. He then asks how high unemployment would have to climb to bring about a reduction in real wages, noting that 25 per cent was inadequate in the 1930s.

Thurow questions the dominance, in economics, of the behavioural assumption of rational utility maximisation, which has long been rejected by sociologists and psychologists.

> When it comes to empirical analysis of consumer choice, economists retreat to the doctrine of 'revealed preferences' and do not attempt to specify the procedure by which marginal utility is determined or measured. Revealed preferences, however, is just a fancy way of saying that individuals do whatever individuals do, and whatever they do economists will call it 'utility maximization'. . . By definition, there is no such thing as an individual who does not maximixe his utility. But if a theory can never be wrong, it has no content. It is merely a tautology.
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> The same problem exists on the earnings side of individual behaviour. Income maximization is postulated, but then vanishes via a presumed nonobservable variable, psychic income. This notion tautologically makes everyone an income maximizer whatever his observed behaviour (pp.217-8).

Thurow points out that disagreement is common in all non-experimental sciences, whether economics, natural selection or geology.

> But the fact that a lot of dry holes are drilled in the search for oil does not prove the intellectual bankruptcy of geology; more dry holes would be sunk without it . . . If economists are to be charged with any crime, it is not that of knowing too little relative to what they can know, but with the crime of being too certain about what they think they know (p.20).

Dangerous Currents is a work of demolition and not always fair, or so it seems to a reviewer who still feels that the price-auction model is a vital perspective for most markets. Clearly though it can become a set of blinkers. A more comprehensive but workable model is vital, especially as regards the complex reward system that governs the community. Not surprisingly, Thurow can give only scattered hints as to how this might be achieved.

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Reason in Human Affairs. By HERBERT A. SIMON. (Basil Blackwell, Oxford, 1983.) Pp. 115, ISBN 0 631 13409 3.

This short book evolved from the Harry Camp Lectures which Simon delivered in 1982 at Stanford University. As a result, the book is very accessible, strongly thematic and cohesive, and pitched for a diverse audience. It is also interesting and provocative.

Simon approaches his topic by considering in turn 'the relation of reason to intuition and emotion, the analogy between rational adaptation and evolution, and the implications of bounded rationality for the operation of social and political institutions' (p.vii). There are three chapters.

In the first two chapters Simon focuses on rationality at the level of the individual. He looses a broadside at subjective expected utility (SEU) theory: 'Conceptually, the SEU model is a beautiful object deserving a prominent place in Plato's heaven of ideas' (p.13) but it 'has never been applied, and never can be applied—with or without the largest computers—in the real world' (p.14). The purported applications one encounters deal with 'highly abstracted problem[s] in a world simplified to a few equations and variables' or 'microproblem[s] referring to some tiny, carefully defined and bounded situation carved out of a larger real-world reality' (p.14).

Simon argues that the bounded character of human rationality is inevitable and that this affords the behavioural model of rationality a degree of credibility exceeding that of alternative models. He draws direct analogies between this model and the Darwinian theory of evolution. 'In both theories, searching a large space of possibilities and evaluating the products of that search are the central mechanisms of adaptation. Both theories are myopic. Such optimization as they achieve is only local' (p.73).

In his second chapter Simon outlines, *inter alia*, the evolutionary rationale for 'weak altruism' (enlightened self-interest) and extends it to social evolution. Selfishness is central to evolution, but unenlightened selfishness (and pure altruism) creates problems for survival, he argues.

One basis for altruism is docility: 'the propensity to behave in socially approved ways' (p.65). The implication of this for social decision making is that 'an invisible hand' will lead to the achievement of socially desirable outcomes only if 'our social institutions are framed to bring out our better selves' (p.105) and 'do not require major sacrifices of self-interest by many people much of the time' (p.106).

In the final chapter, Simon considers major institutions and the sources of the limits to their rationality. The latter include those which flow, directly or indirectly, from the boundedness of individual rationality.

Simon argues the need to recognise the inevitable limitations to rationality in private and social decision making. Relatedly, he advocates consideration of less 'Olympian' and more realistic models of rationality than the SEU model. This requires more attention to institutions and appropriate interventions to improve their rationality and to cause self-interest to lead to desired outcomes. Consistent with this, Simon rejects libertarianism.

This book is vintage Simon. It is a delight to read. It is awash with implications for the conduct of applied economic research. Its major strength is the clarity with which the modest potential of reason to solve substantive problems is explained, and the perspicacious identification of the principal determinants of the extent to which that potential can be achieved.

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Stubborn Survivors: Dissenting Essays on Peasants and Third World Development. By REX MORTIMER. Edited by HERBERT FEITH and RODNEY TIFFEN. (Centre of Southeast Asian Studies, Monash University, Melbourne, 1984.) Pp. 180, ISBN 0 86746 299 X.

Rex Mortimer (1926-1979) was a lawyer and for 18 years an active member of the Communist Party of Australia. He was editor of the party's Melbourne weekly *The Guardian* and helped to establish the Marxist theoretical journal *Arena*. His time as a party functionary included seven months of cadre training in China in 1957 and a six-week visit to Indonesia in 1964. In 1966, partly as a result of these experiences in the Third World, he left the party and threw himself into graduate study of Indonesian affairs at Monash. By 1970 he had completed his doctoral thesis which was later published (Mortimer 1974). Subsequently, he lectured in politics at the University of Sydney and held the Chair of Political Studies at the University of Papua New Guinea.

Stubborn Survivors is a posthumous collection of Rex Mortimer's essays on the theme of peasants and political dynamics in the Third World. In lively, compelling prose Mortimer throws down his challenge to what he sees as the liberal intellectual consensus, characterised by its faith in cumulative technological and social progress and its naive assumption that the Third World can and must take the same path of development as the industrialised West. His strongest broadside is reserved for the 'developmentalism' of Heinz Arndt, which he regards as the most extreme and narrow form of Australian liberal scholarship, but it is liberalism in general—the philosophical or ideological standpoint of the majority of Western intellectuals—which he is concerned to overthrow.

In stark contrast to the technological optimism of liberal development theorists, Mortimer contends that in fact the technological power of the large industrial nations, whether capitalist or communist, is overpowering and destroying the social and value systems of the poor nations and that 'there is no guarantee whatsoever that most third world countries will be able to achieve even their minimum goals of economic development and cultural self-preservation' (p.6). Programs of technical assistance, far from aiding the poor, are merely part of the problem. Even revolution is no panacea because a revolutionary government in a poor country 'is still beset with the enormous task of repulsing the unrelenting pressure of the industrialised nations to enmesh it in their network of power, trade and exploitation' (p.7). In Mortimer's view, 'the third world countries can only gain relief from their problems in a world where the overweening power of the industrial giants has been broken' (p.7).

How is this likely to come about? Mortimer's answer is profoundly pessimistic. He argues that in our era the most powerful catalyst for change—technological, social, or political—has been war. Rejecting the liberal vision of the future as a steady progression from the past, he judges that global catastrophe is the most probable outcome of the contemporary situation, and that this will destroy or drastically weaken the technological power of the industrial nations, so bringing about the desired 'dis-Europeanization' of the world.

In all this, as in the past, it will be the peasants of the world who stubbornly survive. Mortimer takes to task the majority of social scientists, including economists, for whom 'development connotes the disappearance of the peasantry or at least its consignment to the margins of social existence' (p.27). Only 'mavericks like Gunnar Myrdal . . . and the humble agricultural economist persistently remind us of the peasant's existence and problems' (p.28). He cites Bruce Johnston to show that any realistic projection has peasant numbers increasing absolutely for a century or more. If global catastrophe intervenes, the inhabitants of cities in the industrial nations will be the prime victims. The peasants cannot be dismissed as a major (perhaps the major) social and political force of the future.

> While he may appear to be overwhelmed by the wonders of modern technology and organization, he has demonstrated over millenia a stubborn disposition to survive and adapt and revive which may yet prove to be stronger than the powers he confronts (p.26).

Mortimer's detailed analysis of the peasants of Java—their response to the Indonesian Communist Party in the years before the 1965 coup and their fate under Suharto's New Order—strengthens his argument that it is illegitimate and futile to view development as aggregate economic growth, ignoring social, political and cultural factors, and in particular the vast disparities which have emerged between the privileged urban elite and the peasantry. He is especially critical of the new rice technology, both biological and mechanical, arguing that 'improved rice production within the present social structure of Indonesia . . . spells disaster for the mass of the peasantry' (p.11), a conclusion which is supported by some agricultural economists (Collier 1981) and contradicted by others (Hayami and Kikuchi 1981). Instead of 'technological stimulation' and commercialisation, Mortimer advocates a strategy of broadly-based peasant mobilisation along Maoist lines to achieve self-reliant, self sustaining and equitable development, but he sees little hope of this occurring.

Despite the fundamental pessimism of Mortimer's outlook, his sense of his own unimportance (perhaps deriving, as Benedict Anderson suggests in his excellent introduction to the book, from his experience of 'marginality', first as a communist, later as an unorthodox academic, and always as an Australian) gives him a detachment which enables him finally to transcend despair. In the opening essay on 'Futurology and the Third World' he writes:

> Few care to contemplate chaos on a gargantuan scale, still less the death of all that one has come to accept as the foundations of

> civilised life and progress. But it is at the same time vainglorious to say the least, to rank our obliteration higher in the scale than that of the countless millions of Asians and Africans whose bones have fertilised the gardens of our affluence, or to equate one stage in the history of mankind with its imminent consummation . . . An age of madness, which the Javanese see as alternating with ages of harmony, may be upon us. With all its horrific import, it may still represent the only road skirting the final solutions of nuclear holocaust or ecological suicide. Though this will offer small consolation to those who would prefer total destruction to living in a world which had become the black or the yellow man's burden, others may take comfort in the hope that out of the maelstrom a phoenix will arise from the ashes, offering a new opportunity to fashion a world closer to the spirit of human community than that which is enshrined in our tombs of concrete and glass (p.9).

Reading these essays is at once an exhilarating and a devastating experience—exhilarating because of the originality, vigour and passion of Mortimer's writing, devastating because of the force of his critique and the sombre realism of his prognosis. Despite his apparent regard for 'the humble agricultural economist' (including among Indonesianists the late David Penny), it is clear that Australian agricultural economists are firmly tied to the liberal consensus which Mortimer sought so strenuously to undermine. Schultzian technological optimism permeates the profession. To countenance Mortimer's alternative view of the world is discomfiting at best and probably a psychological impossibility for most (though Dillon (1979) comes close to abandoning the Schultzian viewpoint in favour of a 'dependency' framework). Nevertheless, if swallowed manfully (preferably in one sitting), the strong medicine contained in these essays can provide a partial antidote to the optimistic liberalism which flows in our veins.

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References

Collier, W. L. (1981), 'Agricultural evolution in Java', in G. E. Hansen (ed.), *Agricultural and Rural Development in Indonesia*, Westview, Boulder, Colorado.

Dillon, J. L. (1979), 'Broad structural review of the small-farmer technology problem', in A. Valdés, G. M. Scobie and J. L. Dillon (eds), *Economics and the Design of Small-Farmer Technology*, Iowa State University Press, Ames, Iowa.

Hayami, Y. and Kikuchi M. (1981), *Asian Village Economy at the Crossroads*, University of Tokyo Press, Tokyo.

Mortimer, R. (1974), *Indonesian Communism Under Sukarno: Ideology and Politics, 1959-1965*, Cornell University Press, Ithaca.

The World Rice Market: Structure, Conduct and Performance. By AMMAR SIAMWALLA and STEPHEN HAYKIN. Research Report No. 39 (International Food Policy Research Institute, Washington D.C., 1983.) Pp. 79, ISBN 0 89629 040 9.

Those involved in teaching agricultural price analysis and policy to the increasing number of students from developing countries studying in Australia should consider obtaining a copy of this (free) publication from IFPRI. The authors have assembled a considerable volume of basic production and trade data and used them, along with standard methods of price analysis, to make important observations about international trade in rice and the functioning of various domestic rice markets. The publication will serve as a useful supplement to the fairly limited number of rigourous papers on the subject available in leading journals. Some of the quantitative analysis might seem a little crude but, even with the addition of the present publication, the available data on world rice production, prices and trade do not support sophisticated econometric model building. The availability of this publication will allow teachers to draw more easily on examples from rice markets to demonstrate various concepts. Those involved in research on international grain markets will also find the publication useful. There is a lengthy bibliography of related studies many of which are in rather obscure publications. The authors have included some analysis of the relationships between rice and wheat prices and this should be of interest to Australian agricultural economists given the increased importance of the developing countries as a market for Australian wheat.

The most useful section of the publication is that dealing with market structure. There are several important observations here. The world market is a 'thin residual market' in which the principal participants are governments as opposed to firms. Market thinness has been accentuated by the introduction of new rice growing technology more suited to conditions in traditional importing countries than in traditional exporting countries. Market shares are highly variable over time leading to an absence of established trade channels. In turn this leads to high search and transaction costs. Despite technological advances in rice production, the real rice-wheat price ratio has increased because of the higher growth rate of 'rice-preferring' populations than 'wheat-preferring' populations, a supposedly higher world-wide income elasticity of demand for rice compared to wheat and more rapid growth in wheat supplies compared to rice supplies.

In relation to conduct, it is suggested that government policies contribute to market thinness in that importing countries tend to pursue productivity-enhancing policies more aggressively than exporters. The principal argument here is that importers and exporters alike view the international rice market as unreliable. In my view, emphasis on self-sufficiency policies among traditional rice importers after World War II is as much due to the foreign exchange burden of imports and a sheer nationalistic pride in being seen to be rice self-sufficient as it is to the fickleness of the international rice market.

An important aspect of market conduct is that governments with a few exceptions (mainly China and the United States) tend to be unresponsive to world prices and there is no 'supplier of the last resort' and no 'central market'. Domestic stockpiles are crucial in cushioning the effects of domestic supply and demand fluctuations.

It is claimed that the international rice market has failed on efficiency and stability grounds. The production pattern is not in accord with the pattern of domestic resource cost of rice production and the perceived instability of the rice market has led governments to adopt policies which, in effect, make the situation worse. Making imports and exports more sensitive to prices is seen as one way of improving market efficiency but sovereign governments are reluctant to head in this direction. It is argued that the problems of the international rice market are akin to the 'prisoner's dilemma'.

One of the reasons I view this publication favourably is that the authors use basic supply and demand concepts to explain the market trends. Indeed there are a couple of intriguing pieces of analysis with respect to the causes of movements in the rice-wheat price ratio and the causes of demand shifts for these products. Too little of this type of analysis is brought to bear in debates about rice markets in particular and 'food security' in general.

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Farmers of Five Continents. By DON PAARLBERG. (University of Nebraska Press, Lincoln and London, 1984.) Pp. 114, ISBN 0 8032 36700.

Professor Don Paarlberg is much more than a distinguished academic and a senior adviser to governments and international agencies. He is that seemingly disappearing and old-fashioned phenomenon: an agricultural economist who has at once an abundance of good humour, commonsense, humility and compassion. More than that, he writes good, simple English, with short sentences commendably free of jargon, footnotes and mathematical symbols, and it is obvious that he is more interested in people and their welfare than in economic theory or philosophical dogma.

This small book includes a dozen essays which tell of visits Don Paarlberg and his wife have made over the years to farms and farmers in many different parts of the world. In some senses it is a twentieth century equivalent of Cobbett's *Rural Rides* but with much more objectivity and much less propaganda. The Paarlbergs visited and interviewed some who were prosperous, large landowners, some who were illiterate, subsistence peasants, some who were old, some young; the differences in terms of wealth, education, religion and politics were enormous. Yet—

> All are famine-fighters, whether or not knowingly enrolled for battle. Each is dependent on the bounty or parsimony of nature. Each contends with the weeds and the weather. Seedtime means hope for each, and harvest brings satisfaction or disappointment, as the case may be. Farmers are brought into continual awareness of the wonder of birth, growth and death. These similar experiences mean a kinship of countrymen, however diverse their backgrounds.

Thus Don Paarlberg offers a montage of world farming and its practitioners. The reader who is widely travelled (and is there any other sort nowadays?) will probably experience a sense of *déjà vu*—of having already been there and met them. However, I found that this only added to my own enjoyment of the book and it enabled me to identify more closely with the experiences and discussions that it provides.

The author is far too sensible and experienced to offer solutions to the problems of agricultural development as he encounters them in Java, Brazil, Upper Volta, India, USSR or the United States. However, throughout these essays he highlights the recurring importance of certain themes: ecological balance and environmental protection, farm size, farming diversity, importance of efficiency and limits to this importance, the need for incentives, farming systems which an individual farmer can find credible, and so on.

It is a modest and mildly optimistic book that reflects the importance of traditional values such as moderation, balance, human dignity and hard work; it reflects an attitude towards the farming community of which Thomas Jefferson would have been proud.

Read it on a plane or take it to bed—you will enjoy it.

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Enterprise and the Scope of the Firm. By MORRIS SILVER. (Martin Robertson, Oxford, 1984.) Pp. 191, ISBN 0 25520 737 X.

In this book Morris Silver presents an explanation of vertical integration and disintegration which is based on 'information impactedness'. The concept of 'information impactedness' is attributable to Oliver E. Williamson. In this context, it is defined as a situation of asymmetrical availability of knowledge between two or more potentially vertically integrated producers. The book is structured in three parts: Part 1 presents the basic model; Part 2 provides supporting evidence drawn from a large body of case studies; and in Part 3, several alternative and complementary explanations of vertical integration are reviewed.

Using the basic model, Silver argues that vertical integration is an outcome of the decision of the innovator-entrepreneur to minimise costs rather than being the result of market failure or just economies in the transmission of information. Costs are also incurred in transmitting information in the employer-employee relation. Thus, there are trade-offs which ultimately limit the extent of vertical integration.

The problem of information impactedness is expected to be most prominent in the youthful stage of a new product or process, when knowledge about techniques or market potential is limited to a few people. Potential downstream or upstream operators will be unwilling or undependable in the marketplace. Possible solutions for the innovator are to offer an information premium or contracts specifying numerous contingencies, but the least costly alternative may be for the innovator to purchase or rent existing facilities. The optimal (cost minimising) extent of vertical integration is determined by the intersection of a rising curve (the marginal increase in production cost) with a horizontal curve (the marginal reduction in information transmission costs). The argument of both cost functions is the number of operations arrayed in order of decreasing technical similarity. The marginal increase in production costs curve rises because more unrelated operations involve greater costs (diseconomies of scope), while the marginal reduction in transmission costs is expected to be invariant to the unrelatedness of operations.

Over time, cumulative learning effects push down that portion of the marginal increase in production costs function to the left of the initial optimum, but there is a limit to the learning effect. As information impactation is overcome due to information diffusion, the marginal reduction in transmission costs is expected to fall even further, implying a reducing optimal degree of vertical integration as an industry matures. Since new entrants face the old marginal increase in production costs function and a new, lower marginal reduction in transmission costs, they are expected to be less vertically integrated than the pioneering companies.

As one of his initial illustrations of information impactedness, Silver discusses the process of vertical integration and subsequent disintegration in the nineteenth century English sugar beet industry. Initially the sugar refiners knew nothing of farming and English farmers were unwilling to make the necessary investments in fertilisers and special stubble ploughs. This meant that the industrialists had to establish their own large sugar beet farms. However, towards the end of the nineteenth century, many farmers became acquainted with sugar beet production techniques, and this resulted in divestment by the refiners.

In Part 2, the reader is taken on a case study tour through business history in a variety of locations ranging from the employment of slaves in ancient Rome to the 'bonanza farms' of America's Wild West. Most of the examples are agricultural. However, the author never passes up the opportunity to expose the fallacy of Marxist explanations of the business history as 'class struggle'. Similarly, he attempts to explain to disciples of Rosa Luxemburg that vertical integration by multinational companies in less developed countries is a natural result of information impactedness, rather than imperialistic exploitation. A Malaysian example shows that vertical disintegration follows as soon as local people acquire knowledge. Further examples of the rise and fall of plantations illustrate the point that large farming units do not necessarily arise due to economies of scale.

In Part 3, various alternative and complementary explanations of vertical integration are analysed. Silver does not see information impactedness as the sole determinant of vertical integration, but rather as the richest model. He sees the need to monitor quality and government regulation as possible motivations but tends to reject the market power motive. A motivation which he considers in some detail is the idea that component suppliers who face high investment costs will use their position to extract higher prices from downstream producers. This approach predicts that components requiring a high investment cost will be integrated, but Silver suggests that such opportunism could be handled by contracting. Information impactedness, he holds, provides a more plausible explanation of this observation.

Like the Smith-Stigler hypothesis that 'the division of labour is limited by the extent of the market', Silver's approach predicts decreasing vertical integration over time. The Smith-Stigler view is that specialisation of functions occurs to take advantage of economies of scale in an expanding market. In terms of his own model, Silver sees this as an upward shifting marginal increase in production costs curve, while his prediction results primarily from a falling marginal reduction in transmission costs function. He criticises the Smith-Stigler hypothesis for not explaining the onset of integration and considers that the learning curve phenomenon, in implying a *falling* marginal increase in production costs curve, deals it a lethal blow.

Silver concedes that discriminating empirically between these alternative viewpoints is difficult, particularly with the cross-sectional methodologies which have predominated in this area. His scepticism about the potential of econometric research is evident from the beginning of the book, but while his model is plausible and the case study evidence is impressive in its scope and consistency, wider acceptance by the profession will only follow, I suspect, after the hypotheses generated by it have been consistently upheld in econometric studies.

In the eyes of this reviewer, it is unfortunate that Silver, in common with other researchers in the area, tends to view vertical integration as a one-dimensional concept. The degree of vertical integration should not be limited to mean the number of operations involved. Our understanding might be enriched by viewing vertical integration with a wider framework of vertical interrelationships. At one extreme, there are totally unrelated suppliers, and at the other extreme, fully internalised divisions or subsidiaries. In between, there exists a complex grey area of partly owned subsidiaries, affiliated companies, inter-company shareholdings, interlocking directorships, financial ties and contractual arrangements. Some of these shades of vertical integration are apparent in Silver's case studies, and might help to explain the difficulties of empirical research. Actually measuring shades of grey is a difficult exercise in itself.

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