

Reviews

Peter Bogetoft and Peter Pruzan, *Planning with Multiple Criteria* (North-Holland, Amsterdam, 1991, ix, 368 p.)

An explanatory subtitle for “Planning” in the title of this book is: *Investigation, Communication, Choice*. This is good and enticing. Further, the authors say that they deal with planning *which integrates the concepts of values, objectives, criteria, preferences, decisions and conflicts – and therefore improves our ability to establish harmony between our thoughts, words and deeds*. This is even better.

Some forty or seventy years of planning in the USSR and Central Europe has not established any harmony between words and deeds, whether it was carried out with or without multiple criteria. So, the reader is anxiously awaiting the crucial answers: Why has planning failed so miserably? What is multiple criteria planning and how does it differ from planning? What is planning anyway? Why is “planning” now forbidden word and concept in Central Europe? Isn’t there a danger that this multiple criteria planning will turn out simply to be the old multiple criteria decision making (MCDM) after all?

This are the kind of questions a typical reader will set for himself, before even browsing through the book. Then he will jump to section 1.5. Planning and section 2.3. Optimizing Planning, 4.4. The Purpose of Multiple Criteria Planning and some others. One is obviously anxious to avoid still another standard text on MCDM with all that standard-economics notation and preferential pseudoalgebra.

One is also very anxious to avoid reading again about how multiple criteria and especially multiple decision makers are very significant characteristics of all realistic decision situations and contexts. Because *they are* and that’s why MCDM has

emerged. Some time ago the time had come to do something about it. Multiple decision makers clash and share their multiple criteria and form knowledge-producing networks and thus create a dynamic social consensus about the world “out-there” – a basis of all planning. Nothing less than a new theory of knowledge and its production would do. All the rest is algorithms.

Starting with the section 1.5 Planning proved to be intellectually heart-breaking: “Unfortunately, there is no generally accepted way to delineate planning.” The authors help themselves by characterizing decision making as localized in time and space, i.e., point in time when a particular alternative is chosen, while calling planning “an ongoing process.” So, viewing decision-making as a process, as Japanese do so skillfully, is either not allowed or it is being labeled “planning”. The authors confirm that: “We might also think of *planning as the process of decision making*.”

Thus, planning would include value identification and adjustment, establishment of criteria, generation of alternatives, gathering of information, etc., i.e. all the things which are normally associated with decision making.

Still, one would appreciate a book which would take it easy on formal models and algorithms and concentrate on knowledge production, criteria evolution and invention of alternatives – where the means and ends are not “givens.”

One would therefore rightly expect more of the theories and practice of cognitive equilibrium (CE), concepts of harmony and balance, graphical interfaces of the “gestalt” type, de novo programming, and MCDM knowledge production systems. Certainly more so than, for example, ELECTRE, Frank-Wolfe or Geoffrion-Dyer-Feinberg algorithms. Somehow, one cannot escape the feeling, such is not what multiple criteria planning is or should be about.

By far the largest part of the book is devoted to “Prior Articulation of Alternatives” (34 pages),

“Prior Articulation of Preferences” (46 pages), “Progressive Articulation of Alternatives” (21 pages), “Progressive Articulation of Preferences” (40 pages), and assorted Appendices on formal orderings and pseudoorderings (39 pages) – that is some 180 pages of rather traditional MCDM stuff.

The question remains, whether this taxonomy of *techniques* (i.e., prior versus progressive approaches) has any relationship to the possible variety of decision-making and problem-solving situations of reality. Do real problems and situations fall in such nice “heaps” or do they come rather unclassified and even unclassifiable, on a continuum of human efforts to order the unknown of their own external environment?

How does one choose between the enormous variety of MCDM techniques and approaches, either “prior” or “progressive”? The chapter on “Choosing Between Planning Models” is ambitious in evolving such a complex system of multiple meta-criteria that it could use some of this “Frank-Wolfe” or “GDF” itself. It would be pretentious to think that any manager or even MCDM specialist could use this methodology in practice. The authors themselves delegate it safely into the realm of a “major challenge.”

Only in the last Chapter 11 (page 269), Bogetoft and Pruzan deal with multiple decision makers (and decision “receivers”), after they have stated (on page 4), as a postulate: “*almost all significant planning situations are characterized by a multiple or decision makers . . .*” “Is then most of this book dealing mostly with the *insignificant* planning situations? It should not.

The authors conclude that each group member should first determine the values, criteria and objectives for himself. Then he should discuss them “openly” with others, where a means of evaluation matrix can be helpful. Then, based on such discussions, the alternatives are generated and analyzed. Finally, the authors propose, based on such discussions and analyses, a “*collective*” choice should be arrived at.

This last prescription is not very original, but it is operational. For thousands of years human “collectives” have done just that. The authors invent a rather awesome acronym MCGDSS (for “multiple criteria, group decision support sys-

tems”), but there is little more to it so far. This chapter, with the exception of the relatively independent topic on *Ethical Accounting Statement* and the review of *Social Choice Theory* is, at least to this reader, a disappointment. The book should have started with such a chapter and evolve from it: that is what was promised and that is what is needed in MCDM.

In conclusion, I would characterize this book as being mostly correct and stimulating in terms of its critique of MCDM, but rather short on new ideas or new approaches to MCDM, including those already evolving. For example, modern Cognitive equilibrium (CE) theories and approaches have not been introduced. The authors then have to fall back on the most traditional MCDM. If they would not, given the page count, there would be no book. The traditional part of MCDM is treated with traditional competence and with traditional formalism, including Lagrangian multipliers.

The book will be useful to students and also to practicing management scientists who might wish to become more familiar with MCDM and its strengths, shortcomings and outlooks. Bogetoft and Pruzan have identified some of the MCDM needs and outlooks for the 90s, but have mostly left to others in MCDM field the doing of the necessary work.

Milan ZELENY
 Graduate School of Business
 Fordham University at Lincoln Center
 New York, NY 10023
 USA

Michael Poole, *The Origins of Economic Democracy: Profit-sharing and employee-shareholding schemes* (Routledge, London, 1989, 158 p., GBP 35, hardback

Industrial and economic democracy have always been at the forefront in the industrial relations debated. The extent of profit sharing and employee-shareholding schemes in contemporary industry demonstrates the changes of organisation from the tradition divided between capital and labour and illustrates the state to which the share

and property owning democracy of the twentieth century has expanded. It would, of course, be a mistake to consider the spread of economic democracy as a simple evolutionary progress. The extent to which profit sharing and employee-shareholding schemes have grown in organisations and reasons behind their adoption are the concerns of this work.

The book forms part of a two volume work which addresses the origins and development of profit sharing and employee-shareholding, with the second volume assessing the consequences of such schemes on company performance, industrial relations, and working practices. The data presented, which is sponsored by the Department of Employment, draws on a survey of some 1125 firms and case studies with 303 firms in Britain.

Chapter 1 offers a clarification of the main concepts of economic democracy and traces the history of profit sharing in Britain. In addition, it provides a comparison of British schemes and experiences internationally. In Chapter 2, two models are developed to assess the conditions under which profit sharing and employees share ownership may emerge, and the circumstances which lead certain management types to adopt such schemes. The first, a 'structuralist' framework, takes outcomes to be the simple product of governmental and economic factors. The second framework, based on an 'action' premise, accepts that the rise of profit sharing schemes depends on a range of conditions, set against the background of legislative and economic factors. These conditions are examined in the following 5 chapters and tested in the empirical research. The 5 explanatory conditions taken are: the role of government, economic conditions, managerial strategies, industrial relations within the firm and power and strategies of other organised groups within the firm.

A theory of organisation democracy, as the book illustrates, necessitates a bringing together of theories of economic and industrial democracy. Moreover, the role of economic democracy, as the author notes, demands a theory of 'favourable conjunctures', which can overcome the reliance upon evolutionary or cyclical explanations of developments. In addition to this, the author suggests that explanations must also accord government and legislative support a pivotal role.

The book's findings indicate that the developments in recent years have occurred against the background of changes in industrial relations institutions and policies, with management frequently advocating consultative approaches to employees, accompanied by more participation and dialogue. Much of this has taken place within the context of expanding publicly quoted companies, which present greater possibilities for profit sharing and employee-shareholding. A further factor here concerns the technologies invested in contemporary firms and their corresponding human resourcing implications. Thus, the requirements may demand a more employee centred approach to attract and retain scarce labour.

The author argues that the 'action' frame of reference taken by the study provides the most satisfactory way of understanding the diverse patterns of development of schemes. Hence, this approach explains outcomes as the strategic choices of actors constrained or facilitated by economic or legislative considerations but not determined by them.

The book provides some interesting insights which run contrary to the stances taken by classical theories as to the effects of profit sharing on labour movements. Whereas such schemes may have been presumed to run counter to union interests, the book demonstrates that financial participation has actually developed alongside trade union growth. Indeed, the presence of staff associates provided good indicators of the likely adoption of schemes, with such bodies frequently representing a consultative and paternal style of management. However, concerns such as encroachment on collective bargaining were areas unions sought to address.

The author concludes by supporting the 'favourable conjunctures' thesis for interpreting the advance of economic democracy and placing primacy in the role of strategies and styles of management in adoption of such schemes.

Taken alone this work sets out an authoritative account of the development of economic democracy and clarifies the conceptual problems of the subject. The effect of schemes of financial participation on company performance, industrial relations and worker satisfaction – as we are told – are dealt with in the forthcoming volume on the

subject. It is perhaps these areas which will provide companies and analysts with the substance to decide on the appropriateness of strategies of economic democracy and their likely effect on financial performance. The book provides a major clarification of the economic democracy debate, illustrating the need for clear conceptual formulation and analytical frameworks to provide insights into the adoption of profit sharing and employee-shareholding. However, the present work provides a major contribution to the role of

economic democracy and should provide a useful starting point for comparative international research, especially within a European context, in which common policies on financial participation may prove to be contentious issues.

Paul J. JACKSON
*Judge Institute of Management,
University of Cambridge*