Reviews

Risk, Organizations, and Society. Studies in Risk and Uncertainty, edited by M. Shubik (Kluwer Academic, Dordrecht, 1991), pp. 239. DFl.130, $US59.95 and stg. 36.75.

Chernobyl, 'Smoking is hazardous to your health', today's airport security, 'safe sex'—all of these suggest risk: risk of radioactive contamination, risk of developing cancer and other smoking-related diseases, risk of in-flight terrorism, risk of contracting HIV during sexual intercourse. Indeed, as trade and travel lead to a smaller world, yesterday's certainties become today's maybes. Analytical study of risk and uncertainty has become a growth industry, perhaps in response to a perceived growth in risk and uncertainty, perhaps because living has become riskier, in ways that are not always under one's own control. Some might say that there is the appearance of a Faustian bargain: the wonders provided by modern technology, but increased risks of contagion and sickness as the cost. Others would say that some of this might be a consequence of global population growth and lack of knowledge of some side effects of the new technologies.

One recent example is the suggestion that magnetic fields from power lines might increase the risk of cancer in those who live or work nearby. Florig (1992) reports there is yet no scientific consensus about this threat: the evidence about the biological effects of magnetism is both complicated and contradictory, and epidemiological evidence is sparse. But despite absence of government regulation on the maximum safe levels of exposure to magnetic fields, there are growing responses to the perceived risk—political, legal, and market responses—which suggest that sociopolitical and ethical factors play a large role in driving society's response to this issue. In the USA, the total economic cost of these responses now exceeds $1.5 billion annually, around half of 1 per cent of the total cost of electricity to consumers. But there is no guarantee that further research will lead to consensus about either the magnitude of the health risks posed by magnetic fields or what to do at a policy level: scientific tools for risk assessment are often too blunt to resolve small but socially significant risks.

The magnetic field issue has sociopolitical and ethical aspects as much as it has public-health aspects: it pits land owners, workers, and consumers against electricity companies, manufacturers, and government departments. It involves balancing our desires to eliminate risks over which we have no individual control with our demands for reliable and affordable electric power. Florig makes the point that even if scientists were able to reach agreement on the health risks from exposure to magnetic fields, the public's evident growing distrust with 'experts' might keep such issues as the siting of power lines alive indefinitely. The volume at hand includes evidence that the American public has a relatively low level of trust of the media and politicians, although a higher level of trust in science and medicine.

The volume under review—the second in a new series on *Studies in Risk and Uncertainty*—is the proceedings of a seminar held to 'improve our understanding of societal behaviour with respect to risk'. It is largely a positive, rather than a normative, study, using the four topics of nuclear proliferation, terrorism, smoking, and nuclear power as cases to examine the contrasts between individual risk (where the person acts to his own account), fiduciary risk (where the person acts on behalf of others), and organizational risk (where a formal or informal group interprets others' perceptions of risk and examines actions flowing from this interpretation). As with the issues of magnetic fields, the gap between professional and public opinion may be large. Life would be much easier if we were only exposed to individual risk (such as active smoking), but the growing complexity of our technological society means that the second and third risks are ever more important (especially for such issues as nuclear power and potential environmental carcinogens, such as magnetic fields).

In the introduction, Martin Shubik, showing another side of his diverse interests, remarks that policy making requires an account of how at least five groups view the problems: the establishment, scientists and professionals, non-political leaders of public opinion, the media, and the general public. His questions of each group are: Who perceives

the risks, if any? What priorities attach to the various problem areas? How strong is the consensus (or its lack) within the scientific and professional communities? Are the views of professionals and the public in concert? What of political feasibility and economic costs of an effective program?

The volume begins with a discussion of the various approaches to risk suggested by work in risk assessment, decision theory, economics, social psychology, and sociology, including observations from theory, experimentation, and sample surveys. Each of the four issues is covered in two chapters—by experts from academia, industry, the government, and private foundations—which include discussions of when each issue was first seen as a social problem by the public, what the state of professional opinion was at that time, and how public and professional opinions have evolved since.

In contrast with the other issues, there has been a convergence of public and professional opinion about the link between smoking and cancer, and the intensity of opinion has grown to the point where considerable action, both private and public, has occurred. Indeed, as Thomas Schelling points out in a fascinating chapter, the actions were almost entirely individual decisions to quit smoking, with (in the USA, at any rate) only belated and half-hearted government action against smoking. He details the changing pattern of smokers in the USA, where amongst middle-class men the incidence has fallen most, and where smoking has in the past 25 years, become associated with lower-class behaviour and has lost its Hollywood glamour. This has also happened in other English-speaking countries and Scandinavia, while US government officials have been vigorous in promoting the removal of barriers to American tobacco exports to East Asian countries. Smoking shows that behaviour can change in the aggregate, when individuals see themselves at risk, without government restrictions, such as those that continue to govern the consumption of illegal drugs.

Schelling's chapter is the high point of the volume for this reviewer. Other chapters range from a brief interview with an airline security vice-president to detailed papers on the history and organization of nuclear power. There is no grand synthesis, and—Schelling apart—the other chapters will be read almost entirely by those whose interests are nuclear power, nuclear proliferation, and terrorism. This reviewer would have welcomed a focus on environmental carcinogens, such as asbestos, but each reader will have his or her favourite omission: in the increasingly crowded and complex modern world, there is no shortage of potential risk.

ROBERT MARKS
Australian Graduate School of Management
and *Stanford University*

REFERENCE: Florig, H.K. (1992), 'Containing the costs of the EMF problem', *Science*, vol. 257 (5069), 468-72, July 24.

Human Development Reports 1990-92, United Nations Development Program, published for the UNDP by Oxford University Press. 1990 (no details available), 1991 pp. x + 202 $A28.95, 1992 pp. ix + 216 $A34.00 (all paperback).

These volumes are the first three in a new series from the United Nations Development Program. They report a wide range of indicators on the current status on human development in developing, and to a lesser extent, developed countries. They also canvass a variety of issues, with supporting data, from environmental degradation and the growth of global political freedom, to the liberalization of global markets. Their format is reminiscent of the World Bank's Annual Reports. The first half of each of the Reports is devoted to discussions and prescriptions related to current issues in world development, particularly those related to human development. The latter half provides comprehensive tables, for all UN member countries, on a wide range of indicators related to income, human resource development, access to social services, health, life expectancy, gender equity and resource distribution. Although some of these data are available in other sources, including the World Bank's Annual Reports and World Tables, there is considerably greater detail here on human development, equity and living standard indicators. These will be invaluable to economists, demographers and other social scientists undertaking comparative studies in poverty alleviation and human resource development in developing countries.

On the other hand, the philosophical thrust of the discursive first sections of the Reports is rather predictable UN fare. While they acknowledge that the domestic policies of developing countries are at least partially responsible for the lack of progress in human resource development in many continents (particularly Africa, South Asia and Latin