# THE YEAR BOOK OF WORLD AFFAIRS 1980

Published under the auspices of THE LONDON INSTITUTE OF WORLD AFFAIRS

**WESTVIEW PRESS** 

Boulder, Colorado

All editorial communications should be addressed to the Director, London Institute of World Affairs, Thorne House, 4–8 Endsleigh Gardens, London, WC1H 0EH

Published in Great Britain in 1980 by
Stevens & Sons Limited of
11 New Fetter Lane, London
Computerset by
MFK Graphic Systems (Typesetting) Ltd., Saffron Walden, Essex
Printed in Great Britain by
Page Bros. (Norwich) Ltd.

Published in the United States of America in 1980 by Westview Press, Inc., 5500 Central Avenue, Boulder, Colorado 80303

Frederick A. Praeger, President and Editorial Director

Library of Congress Catalog Card Number 47-29156

ISBN 0 89158-876-0

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#### TRENDS AND EVENTS

This annual survey is intended to serve three purposes:

- (1) With every additional volume of the Year Book, it becomes increasingly difficult for new readers to derive the fullest benefit from the material available in earlier volumes. This survey brings together references to themes examined in the past which have particular current relevance.
- (2) The specific object of an annual publication is to make possible analyses in a wider perspective and on the basis of more mature reflection than may be possible in a quarterly or monthly journal. Thus, it is not the object of this Year Book to provide instant information on current issues of world affairs. Yet, international affairs have a stereotyped and, largely, repetitive character, so that, frequently, a "new" happening, or "modern" development has been anticipated in one or more of the earlier volumes of the Year Book. Trends and Events provides evidence of some such continuity as may be traced over a span of years.
- (3) References to earlier contributions also offer readers an opportunity to judge for themselves the adequacy of the conceptual and systematic frameworks chosen or taken for granted in the papers selected:

#### (A) East-West Détente

Boardman, R.: China's Rise as a Nuclear Power (25 Y.B.W.A. 1971)

Burmeister, W.: Brandt's Opening to the East (27 ibid. 1973)

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Ranger, R.: Arms Control in Theory and in Practice (31 ibid. 1977)

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- Curzon, G. and V.: Neo-Colonialism and the European Economic Community (25 ibid. 1971)
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- : The Anglo-French Continental Shelf Case (33 ibid. 1979)
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It may also be helpful to remind readers of the Cumulative Index to Volumes 1 to 25 in the 1971 Volume of the Year Book of World Affairs—Managing Ed., Y.B.W.A.

#### THE RISKS OF A NO-RISK SOCIETY

## By LORD ZUCKERMAN

ONE man's skin may differ from another's; so may the slant of his eyes or the shape of his nose, but otherwise all human beings, all members of the species homo sapiens, are built to the same pattern. If the anatomical drawings of Galen or Leonardo differ from those of today's textbooks, the conclusion we draw is not that our structure has been changing over the past few hundred years, but that these two men, great as they were, were not as skilled at dissecting and observing as we are today. Nor do we believe that when William Harvey upturned earlier views on the subject, the blood started to flow in a different way in our bodies from what it had been doing before. The conclusion we draw is that physiologists before Harvey did not understand the mechanism of the heart. We also implicitly accept that what was poison to our forebears would be poison to us, and that the new poisons we have devised since their time would also have been poison to them, just as our bullets would have killed them, and their arrows us. In short, man does not change. Poisons do not change. What undoubtedly do change—and change dramatically—are our attitudes to the scale of the hazards we face and our ability to deal with them.

This can be mainly attributed to the growth and dissemination of the kind of knowledge which now makes it so easy to imagine hazards which, even if never experienced, have become conceivable. New and highly sensitive instruments measure infinitesimal quantities of noxious compounds in our body fluids and in the air we breathe; so we worry lest we are being poisoned. We have known of accidents to vast oil tankers, and are therefore wary of their possible recurrence. Abstruse probability calculations of what might go wrong provoke nightmares about some unthinkable disaster affecting a nuclear reactor—and so we organise to delay their construction. Environmentalists are fearful lest our physical surroundings are further changed by the spread and development of extractive and manufacturing industry.

At the same time, there is a belief that modern science and technology have become so powerful that society could be provided with all our material needs and wants with no danger to man or beast. We seem to be plagued by new hazards, yet the implicit concept of a "no-risk society" has become so widespread that the

notion of personal responsibility has all but been submerged. Even what were once spoken of as Acts of God—for example, the damage caused by storm and flood—are events which it is assumed can be averted by governmental action.

The trouble is that a price always has to be paid when risks are eliminated. Every protective step, whether it be something positive, such as building a vast barrage across the River Thames to prevent the flooding of London, or mass inoculation with a new vaccine against a threatened epidemic, or something negative, like yielding to public pressure and refraining from building a reservoir where it would affront local environmentalists, and siting it instead at much greater cost in some remote area, deprives the community of resources which could be used for other purposes.

In the end, it does not matter who pays, whether the ordinary citizen through higher prices, or the Exchequer out of revenues either raised through taxation or invented by printing money. The basic fact is that each step taken to offset a hazard or to protect an amenity consumes resources. The standard of living might as a result seem to be raised for some people; what is certain is that the cost of living is raised for all. And since one category of hazard—for example, the risk that a drug's adverse side-effects might outweigh its direct benefits—cannot be compared on a like-with-like basis with, say, a new weedkiller which inadvertently proves toxic to some species of bird or butterfly, or some conceivable, even if improbable, disbenefit arising from the retention of lead pipes in old houses, the only measuring rod which governments could use in order to place real or assumed hazards in some sensible order of priority would be a measure of the resources that would be called for if they were to be abated. For a variety of reasons, this is not yet done, at least not on a continuing basis.

#### I—THE DOMESTICATION OF MAN

When our forebears began the cultural transition to life in settled agricultural communities, they must have believed that one way or another they were bettering their lot, and that they were also ridding themselves of some of the perils which beset a food-gathering and hunting existence. But to pay for the benefits of their new communal existence, they had to surrender part of what before had been their liberty. It was no longer a case of an individual doing what he wanted, when he wanted, and where he wanted. Our village ancestors had to accept a stricter discipline and had to develop a far wider loyalty than sufficed to hold together a family group. They had, for example, to learn a primitive hygiene; to learn not to foul wells and

other sources of water and, eventually, even if this lesson took ages and ages, not to pollute the communal village with the midden heaps which had characterised life in the caves.

During the thousands of years which this first phase of man's social evolution lasted, the authority on which communal life depended became vested in rulers who made laws and regulations in order to maintain the stability and improve the conditions of the societies which they led. Whatever form it took, whether power was shared by a council of elders, or vested in the person of a monarch, the central authority was ipso facto responsible for the security of the people it governed. At one extreme it had to assure defence against possible enemies; at the other it had to do its best to see that water supplies were always available. And it had to sustain what today we call "the quality of life," both in the environmental field and in the government of the relations between individuals. Obviously what was done varied in accordance with the standard of living and the cultural level which different communities had reached. And since culture has never grown uniformly or spread evenly through the societies which make up mankind, these varied enormously. Indeed, in many parts of the world the sanitary conditions of villages, and even of towns, are not yet the equal of those of ancient Pompeii. More than that, environmental laws were sometimes far more severe than they are anywhere now. For example, it is recorded that in medieval times the lighting of a coal fire in the City of London was an offence punishable by death. Counterfeiting was also a capital offence, and at least in one country so was the adulteration of wine. It had been the custom from the days of ancient Rome to add a sweet syrup called sapa to inferior wines so as to make them more palatable and saleable. But sapa has a very high lead content, and by the seventeenth century it was well understood that lead in sufficient dose is poison. In Wurtemburg adulterating wines was therefore declared an offence punishable by death. This law of 1696 appears to have been introduced in spite of the fact that it would have been difficult to enforce, not only because the chemistry of the day was too sketchy for reliable analyses of the wine, but also because of the difficulty of diagnosing lead poisoning before it was too late.

Of course, the object of the law was not to provide some form of compensation or redress for the man who drank the adulterated wine, in the sense that either he or his relatives had a claim for damages because he might have been harmed. The principle of caveat emptor then applied as much in the food industry as it did in

<sup>&</sup>lt;sup>1</sup> J. Eisinger, "Lead and Man," 2 Trends in Biochemical Science (1977).

commerce generally. The value of the Wurtemburg law lay in its deterrent effect. Rulers, who were every bit as sensitive to the toxic effects of lead as were those whom they governed, neither wanted to be poisoned themselves nor to encourage the inadvertent poisoning of their subjects.

#### II—The Protection of the British Citizen

During the eighteenth and nineteenth centuries, when wealth, population and squalor were growing apace in the United Kingdom. the concern of government in the welfare of the ordinary citizen continued to develop along the same lines as it had been doing in all countries which had not become fixed in a tribal mould. In varying degrees, and with varying enthusiasm, local authorities became responsible for improving public services—water supplies, sewerage, roads, street-lighting and even fire services—while the main concerns of central government continued to be the defence of the realm, the maintenance of law and order, and preventing the Exchequer from being cheated. Presumably because the Crown was also concerned to protect the well-being of its subjects, whose contentment was clearly a condition of social stability, there was also a law as far back as the thirteenth century which was ostensibly designed to protect the consumer against short weight and the adulteration of foodstuffs, for example, the watering of milk, or, when tea started to be imported, the addition of exhausted leaves to fresh tea, which was then glazed with black lead.

But this law, like various similar statutes that were passed until well into the nineteenth century, and which it was the duty of the craft guilds to monitor was, as Giles has pointed out,<sup>2</sup> all but useless. Effective protection of the British consumer did not come about until the passage of the 1875 Sale of Food and Drugs Act. This laid down for the first time that "no person shall sell to the prejudice of the purchaser any article or any thing which is not of the nature, substance or quality demanded by such purchaser." The burden of implementing the new regulations fell on local authorities who at the start had to turn for help to the Government Chemist, a central office which had been established in 1842, and whose first task had been to help the Department of Customs and Excise in its efforts to prevent the adulteration of tobacco. Starting with the 1875 Act, and its successors of 1928, 1938, and finally with the Food and Drugs Act of 1955, British citizens are now legally protected, not only against being cheated by those from whom they buy, but also from

<sup>&</sup>lt;sup>2</sup> R. F. Giles, in Food Quality and Safety. A Century of Progress, H.M.S.O. (1976).

being poisoned by dangerous food additives and unsafe drugs. The Medicines Act of 1968, the Trade Descriptions Act of 1972, and the Fair Trading Act of 1973 have since been added as further measures of consumer protection.

These recent Acts, as well as the 1955 Food and Drugs Act, reflect a sharp change in public attitudes to the risks associated with modern industrialised societies. Almost everywhere in the West, people have been encouraged since the end of the Second World War to demand far more in the diminution of the hazards of life than just legal protection against contaminated or adulterated food. Spurred on first by dreams of social justice or equality, and then by the competitive bids of rival political parties, our expectations of higher standards of living, of greater personal security, of the elimination of a host of presumed perils which our fathers or grandfathers accepted without question, have continued to rise. Correspondingly, those by whom we are governed have to steer a middle course between diverse and often conflicting social pressures. Security of employment has now become a right. So have unemployment benefits and pensions. The best education and medical service must be accessible to all, and at the same time military services must be adequate and up-to-date. A vociferous lobby of self-styled ecologists wants artificial fertilisers banned; another insists that the energy problem be solved without resort to nuclear power; and a third requires an assurance that no drug, old or new, will have adverse side-effects. And, of course, if anything goes wrong, if any individual is harmed, there must be compensation.

The unrestrained pressures which develop within our democratic electoral system inevitably have the effect that both the government in power, as well as the alternative government or governments waiting in the wings, promise the electorate more and more. A not unforeseeable consequence has been that over recent years, in a period which began with golden hopes of increasing prosperity and social harmony, and which today can hardly be said to be characterised by the latter, the public sense of priorities about hazards has become more and more unreal, and the government's tasks in meeting ever-rising expectations increasingly difficult.

#### III—THE COST OF PROTECTION

Not one of the risks which beset modern industrial society—whether it be lead or sulphur in the atmosphere, or the possibility of adverse side-effects from some new drug—can be eliminated or reduced without paying a price. As I have stated, it matters not at all whether it is the Chancellor of the Exchequer, or the private manu-

facturer, or the consumer who has to bear the cost. The diversion of resources to make life safer in any one respect inevitably means that less is available for other social purposes.

For example, it now takes millions of pounds to develop a new pesticide or drug, and about half of the money has to be spent on statutory safety and environmental tests. The cost of satisfying safety regulations is becoming so high that it seriously reduces the amount of money that should be available for further research. It is therefore not at all surprising that the number of new cropprotection compounds that are submitted for approval to the World Health Organisation has declined precipitously over recent years. Moreover, since no manufacturer can be certain that a novel product will satisfy the additional regulations that seem to be imposed every year by countries which might otherwise be importers, it is also not surprising that some companies are hesitant about accepting the risk of embarking on new developments.

On top of all this, there is also the matter of liability. At least one major pharmaceutical firm has ceased its research and development activities because of the vast sums that have had to be paid out in compensation to people who were adversely affected by a product it put on to the market. All in all, the whole process of development in the chemical industry is being slowed down, in spite of the fact that effective agrochemicals and drugs are vital if the production and distribution of food in the world is to increase at a rate commensurate with need, and if improvements in world health are to be sustained.

#### IV—Sources of Disquiet

Obviously it would be criminal not to do everything that is reasonable to ensure that new chemicals that come on to the market are safe. Paradoxically, however, hard experience shows that the question of what is reasonable has no rational answer. In imposing new and more stringent safety regulations, governments and international organisations alike are doing what seems to be necessary. Sometimes, however, they are also over-reacting to irrational public pressure. Small groups of activists in the modern environmental movement have been so successful in generating public fears, and then in stimulating governmental action, that not surprisingly they are encouraged to press on with their crusades. The media, too, are quick to seize on new stories about the hazards of industrialised societies, and journalists are well-skilled in dramatising issues out of all proportion to their relative importance. It is ironical that the words "mercury" and "lead" seem to have become better known as