cause is the same. The growing perception of the danger of AIDS has caused a reduction in the rate of change of sexual partners and hence a reduction in the coital rate. There is also the possibility that coital rates are subject to medium term oscillations synchronised with the economy. Fashionable, decreed hemline levels and accompanying measures of sexual permissiveness do not move at random but seem to be subject to forms of homeostatic control which, plausibly, also influence coital rates.

Pollution
Dickinson and Parker1 also raise the possibility that pollution may be a cause of the decline in sex ratios. However, pollution might have opposing reproductive effects on men and women. There is good evidence that exposure to industrial hazards like heat and to some chemicals like lead,4 borates,5 and pesticides causes men to sire a disproportionate number of daughters. And there is evidence that some forms of disease (for example, non-Hodgkin's lymphoma and multiple sclerosis) in men are associated with low offspring sex ratios. It seems plausible to suggest that all this variation is hormonally mediated. Low values of testosterone and/or high values of gonadotrophins are associated with many diseases in men6 and with the above mentioned deleterious industrial exposures.

Only limited data exist on the effects of hazardous occupational exposures and diseases to women on offspring sex ratios. The most suggestive line of evidence comes from the sex ratio of offspring of women with MS. This is high. Moreover the adrenal glands of MS patients are large.10 Stress produces adrenally enlarged men who lower testosterone in men and apparently raises it in women. It is therefore reasonable to propose that in this disease (and perhaps others) raised adrenal androgens occasion a rise in the sex ratio of offspring born to affected women.

The present line of reasoning suggests that the reproductive effects of disease and of hazardous occupational exposure are similar if this is accepted, one might expect these exposures and diseases to have opposite effects on the offspring sex ratios of men and women. The upshot is that air pollution (if it affects the reproductive system) cannot be expected to reveal itself in a changed offspring sex ratio. Dickinson and Parker6 cite Williams et al (who reported a lowered sex ratio in association with pollution).12 But one might mention that Lloyd et al13 found raised sex ratios in association with pollution. Thus, though pollution might have caused the decline in sex ratios, the hypothesis that it actually did so would only gain plausibility if it were backed by evidence of a particular pollutant which increased between 1973 and 1990, and decreased thereafter.

Hormones
The present notwithstanding arises whether the decline in sex ratios in England and Wales from 1973-90 reflected some sort of increasing hazardous environmental exposure to men. In particular, is it to be associated with the recent suggestion relating diminished sperm counts to environmental oestrogen exposure?14 If the USA is anything to go by, this seems not to be the case. There (where the data on secular movements in sperm counts are more abundant than in the UK) sperm counts were apparently declining during the 1970s and possibly stable during the 1980s,15 in contrast to the movements in sex ratios described above.

NOTICES

The 1997 World Congress of the World Federation for Mental Health, 6–11 July 1997, Lahti and Helsinki, Finland. For further information contact: The Secretariat, KaKo Congress Services, PO Box 762, FIN-00101 Helsinki, Finland. Tel: +358 9 492 810. Email: kako-ar@cc.helsinki.fi.


Conference on Ovaries and Addiction: balancing theory and social public review, 21–23 April 1997, Conference centre De Doelen, Rotterdam, The Netherlands. Scientific Secretariat: GGD, Professor HFL Garretsen, PO Box 70032, Schiedamseweg 95, 3000 LP Rotterdam, The Netherlands; tel: +31 (0) 10 433 96 20; fax: +31 (0) 10 433 94 93. Conference Secretariat: Van Namen & Westerlaan, Congress Organizers, The Hague; PO Box 1558, 6501 BN Nijmegen, The Netherlands; Tel: +31 (0) 24 323 44 71; fax: +31 (0) 24 360 11 59.


Epidemiological and Social Aspects of Cancer

Evaluation of cancer screening opens with a discussion of the broad principles of screening. It then looks in turn (possibly intentionally in descending order of effectiveness?) at screening for cancers of the cervix, breast, colon and rectum, melanoma, ovary, prostate, and “other” – lung, stomach, oral, and neuroblastoma. For each site, there are sections on the epidemiology, aetiology, screening test(s), effectiveness (with reviews of published trials where appropriate), acceptability, and conclusions. Particularly relevant are those on the economic, and the relatively neglected, psychological aspects.
The general aim of the Focus on cancer series is to bring together the knowledge of the wide range of people involved—biologists, pathologists, epidemiologists, hospital specialists, and community support teams. The editors and the authors of the various chapters, all respected experts in their fields, have definitely achieved this. Whether or not such concise reviews will be of value to both the "busy oncologist" (aren't we all?) and all the other professionals involved is more difficult to assess. I certainly learnt a lot from the book. But, partly because there is so much information condensed into less than 200 pages, I did find the going rather tiring at times. And there are only a dozen or so tables (three chapters have none) and no charts, diagrams, or photographs at all. In addition, the referencing system seems mildly bizarre—the references for each chapter have been sorted alphabetically and then numbered, and are referred to in the text by the number—which means that in chapter 1, for example, the reference numbers appear in the order 14, 22, 15, 3, etc.

Screening (and not just for cancer) is, unfortunately, superficially a highly attractive proposition, particularly for the general public. "What, you can do a simple test to see if people have got cancer? Wow - let's do it! Now! For everyone!" Professional proponents of screening are also often highly enthusiastic. To counterbalance this, I feel that the sometimes harrowing implications for the individuals concerned of some of the problems frequently encountered, including direct harm from tests and false positive tests, as well as the enormous costs and organisation problems of population-scale screening, deserve wider attention and understanding by those who will be the subjects. I think that it would be extremely valuable if some of the sound sense and science in this book could be put in a more attractive, accessible and simulated language and format for the general public and the media.

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This book takes routine national mortality data from four countries and demonstrates how it can be used to describe, monitor, project, and compare mortality. It systematically addresses a set of questions about time trends, age and sex differences, median age of death, cohort changes, likely causal factors, and the future situation concerning mortality. All of these questions relate to the four countries under study—Sweden, Denmark, Norway, and Finland.

Analysis is carried out on total and all cause mortality, as well as 16 specific categories of deaths. These include major causes such as cardiac diseases, malignancies, and different kinds of injury and poisoning. But the book also includes an interesting analysis of deaths due to senility, symptoms, signs, and ill defined conditions. Liver cirrhosis and tuberculosis are included as diseases for which mortality is not necessarily declining. The book ends with a review of some of the socioeconomic and behavioural factors which may explain some of the changes identified.

Surveillance of mortality in the Scandinavian countries contains a mass of data presented clearly in manageable tables in the text, as well as in more detailed appendix tables. These are augmented with many clear graphs. The review serves three main purposes. Firstly, it provides a detailed account of mortality patterns in Scandinavia. It sets out how the countries differ, why this might be, and whether there are signs of convergence in trends. Secondly, it is an important study of health variation in a corner of Europe. But thirdly, it provides a model of the epidemiological methods used in the surveillance of mortality. It provides the student or practi- tioner with a clear and illustrated de-monstration of the complications that have to be taken into account. It shows how to use techniques such as standardisation and birth cohort analysis. Most importantly, it draws attention to the need to understand how deaths are classified and how this may vary over time and place.

KAREN DUNNELL
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This is the story of the scientific investigations which followed upon the explosion of uranium and plutonium devices at Hiroshima and Nagasaki in the summer of 1945. Much has been written of the science and much about the events, but their bringing together in this book is a unique and engaging synthesis.

Since 1945 and up to the present, the survivors of the atomic bombs have been intensively studied. They comprise a cohort of some 100,000 individuals of whom over half are still alive 50 years after the events. Their radiation doses, at an average of 100–300 mSv, are comparable to the cumulated experience of occupational, medical, and general populations at risk. The main categories of study have been acute radiation related events and subsequently morbidity, mortality, and other delayed outcomes including genetic.

The initiative, originally called the Atomic Bomb Casualty Commission (ABCC), was born of times greatly different from our own. Idealism, guilt, humanity, and human curiosity were the drivers which impelled and sustained the scientific work. In particular, there was the military imperative to know and understand the effects of atomic war, an eventuality that was more seriously con-tagulated as a likely event then is it now. It is of interest to note the ramifications of the societal and human impacts of the Japanese A bombs as were exaggerated apo-calypstic as they have been for more recent evocations.

The ABCC was transformed into the Radiation Effects Research Foundation (RERF) in the mid-1970s to better reflect the fundamental nature of the work being done on the biological effects of radiation. By that time the true long term worth of the work being done had already been recognised internationally. The life span study (LSS) had provided the major contribution to the setting of radiation protective standards based on derived risk estimates. This work has continued through revisions, re-estimates of dose, etc, and continues to provide risk estimates which have proved comparable to others derived from occupational and medically-exposed populations.

Of particular public concern have been prenatal and transgenerational effects of radiation. In counter to this concern, the prenatal associations have been long period and no evidence of the effects. The survivors have shown a remarkable resistance to both short and long-term effects attributable to radiation. New challenges to risk estimates derived from A bomb survivors have come from the recent British controversy about nuclear installations and childhood leukaemia and also from Chernobyl and childhood thyroid cancer. The A bomb survivor experience should no longer be considered to be the norm for transgenerational childhood cancer, is statistically incompatible with risk estimates derived from the work of Gardner and others who have examined possible associations between leukaemia clusters and nuclear sites. The recent demise of these radiation related theories would tend to validate the relevance of the A bomb survivor experience. On Chernobyl, it is too early to say.

An unlauded but highly necessary part of the work of ABCC and subsequently RERF has been in the accurate derivation of historical radiation exposures. The last such exercise in the mid-1980s resulted in estimates which are now considered likely to have underestimated a neutron dose to bomb survivors. This may lead to a frame shift in risk estimates in due course. Meanwhile, the account given of the ingenuous pursuit of inanimate objects which may hold "imprints" of radiation doses due to isotopic change is a fascinating feature of the book.

The style of the author is lucid, measured, and learned in a pleasantly old-fashioned way. This is as befits a distinguished geneticist who has dedicated much of his career to the subject to hand. To encompass the range of science and the range of history which, of necessity, the author must be successful is a considerable achievement.

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