remains today to remember him: a medical library named in his honour at a hospital in Colorado Springs and a research institute in Denver, proving that Webb's story did not end with his death. In fact his own research laboratory, which was transformed in 1924 into the Colorado Foundation for Research into tuberculosis, received in 1949 a grant from the National Association for Tuberculosis; it was later integrated into the medical school of the University of Denver. In 1962 there was a new building under the name Webb-Waring Lung Institute. In 1969 it announced the discovery of a new tuberculosis vaccine described as a "non-living antigen extracted by the action of trypsin from killed *Bacterium tuberculosis*," and was intended to be tested on humans.

From this book emerges a story of the life of an undoubtedly gifted, ambitious, hard working clinician, who was dedicated to his professional life as much as to social and financial success, yet obstinately involved in medical research, beyond his capacity or scientific training. His determination commands respect; his foresight of the future of immunology and his prediction of the role of lymphocytes in defence against infection seem prophetic. The oddly self deceptive and less than happy personal life evokes

sympathy, and one can understand why his personality had won him so many friends. Yet some aspects of his life are less than likeable.

The book would have been more readable and more interesting if it had been half its length. It contains much about the American medical scene between the two centuries and about the people that Webb met, such as Theodore Roosevelt and Franklin Roosevelt, Arnold Klebs, Jules Bordet, Albert Calmette, Harvey Cushing, Almroth Wright, Aldous Huxley, Paul Ehrlich, Simon Flexner, Robert Koch, Elie Metchnikov, Hideyo Noguchi, William Thayer, Hans Zinsser, and many others. Unfortunately, it was too well researched, and these nuggets are buried in a welter of superfluous or irrelevant detail about nearly every member of Webb's family and those of his two wives and about his many wealthy patients. The 36 good photographs, depicting many aspects of Webb's life and work, add human interest to the book and give it a period flavour.

Dr Webb of Colorado Springs. H Clapesattle. (Pp 520; figs; \$19.50.) Colorado Associated University Press. 1984.

Facts on sudden infant death

DAVID SOUTHALL

In countries where infant deaths due to malnutrition and its accompanying infections have been largely prevented sudden unexpected deaths without adequate explanation remain a resistant and major problem. Since the mechanisms for these deaths are still unknown they have been collectively labelled sudden infant death syndrome, and this is now the most frequent cause of death in infants after 1 week of age. Each day the parents of about six infants in the United Kingdom and 30 in the United States will find their apparently well and thriving baby dead and will not be comforted by knowing why this disaster has happened.

Sudden Infant Death, the latest of three recent books on this problem, is an achievement.^{1,2} Instead of wasting time on theories, for which there are few data, it concentrates on the facts. In the first part of the book an excellent survey of known epidemiological data is presented, and great care is taken to define accurately the term "sudden infant death syndrome" and to explain the basis of good epidemiology and the accurate interpretation of published reports. For the first time in a book on this subject there is appropriate criticism of studies that have included in their analysis sudden unexpected infant deaths for which there is an adequate explanation. The authors point out the inadequacies of certain follow up studies where only a small proportion of cases were actually traced and the failure of epidemiological factors to have more than marginal value in predicting those infants who will actually die. Their dismissal of all but a tiny minority of sudden infant deaths as infanticide is based on data rather than theory.

They then discuss the possible causes of sudden infant death, a section that is preceded by an excellent discussion of methods for generating and testing hypotheses. It is rightly pointed out that the term sudden infant death syndrome is arrived at by a process of elimination. My only criticism here concerns the defeatist attitude towards obtaining adequate postmortem controls for such cases. The discussion concerning the potential drawbacks of studies on near miss cases and subsequent siblings of sudden infant death infants is well thought out and particularly relevant to much of the published data on possible cardiorespiratory mechanisms for death. The chapter on excesses and deficiencies is comprehensive and well balanced, but that on sleeping, breathing, and heart rate is unfortunately the weakest in the book. There are many misleading

statements, and the way in which references are quoted makes it difficult to check the original publications. The published data on a possible relation between cardiorespiratory dysfunction and sudden infant death is complicated and full of confusing and opposing findings, and it is impossible to summarise this accurately or appropriately in eight pages. A well argued chapter on infections and the immune system follows.

The effects of sudden infant death syndrome on parents and other family members and a detailed examination of the role of nurses, doctors, hospitals, the police, coroners, funeral directors, and

The Caernarfon and Anglesey Infirmary in 1853. The hospital's original foundation in 1809, as the Caernarfon and Anglesey Loyal Dispensary, was due to the vigour and enterprise of the then Dean of Bangor, John Warren. He first proposed it at a celebration dinner for local dignitaries, at the Penrhyn Arms in Bangor, to mark the golden jubilee of George III. The dispensary, he suggested, would "give some permanent proof that the auspicious day has not passed unnoticed." Exactly a year later the dispensary was first opened and its later development is recorded in *The Progress of Medicine: a history of the Caernarfon and Anglesey Infirmary 1809-1948* by O V Jones (Gomer Press, £10.50).

ministers of religion in handling the period immediately after death are covered. Much of this discussion centres on an unpublished study from the Foundation for the Study of Infant Deaths of 713 unexpected infant deaths, 470 of which were cases of sudden infant death. I hope that this study will also be published because it is a major source of information relevant to all who are concerned in any infant death. I was amazed at certain facts from this study and they make essential reading for all those concerned above and those in the Department of Health, who find it acceptable to provide a death grant of £9, representing 6% of the average cost of an infant burial. Though we are unable to prevent such deaths, it is just after the death that parents may be given some help, and the report from the foundation gives the good and the bad features of present practices.

The final part of this book looks towards the future. In the excellent sections on predicting which infants are at risk and attempts at preventing sudden infant death the defects are pointed out in the scoring systems that are *not* confined to the unexplained group of sudden infant deaths. The defects highlighted in the health visitor intervention programme—namely, ending a controlled trial before a significant result had been obtained and including sudden infant deaths that were explained—are important since this programme carries a suggestion that sudden infant death syndrome is due to parental mismanagement, in truth a rarity. The authors'

views on the use of apnoea monitors are well thought out and concisely presented.

The authors' conclusion that it may be more important to determine the mechanisms that are responsible for sudden infant death rather than attempt at this stage to prevent it will be appreciated by both parents and researchers. This is a most important publication at this stage in our knowledge. It is essential reading for paediatricians, family doctors, health visitors, researchers, policemen, and coroners and will provide the consolation for parents who have lost infants that in all but a few cases nothing could have been done to prevent their child's death and the hope that the disease processes that are responsible will be identified.

Sudden Infant Death. Patterns, Puzzles, and Problems. J Golding, S Limerick, A Macfarlane. (Pp 272; figs; £14 hardback, £6.95 paperback.) Open Books Publishing. Distributed by J M Dent and Sons. 1985.

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Devastation in SE Asia

W C NOBLE

"What follows must (thus) be viewed against a background of few known facts and much speculation." This caveat in the introduction to one paper might well serve as a key text for the whole of *Herbicides in War*, which presents summaries of papers given at a symposium in Ho Chi Minh City on the botanical, zoological, and human problems resulting from the extensive use of herbicides during the second Indochina war (Vietnam war) of 1961-75. The existence of problems is not in doubt; it is the magnitude of the problems and the solutions that are unknown.

Although not the first war in which herbicides were used, the Vietnam war was the scene of their most extensive use. About 55

million kilograms of active herbicide in 72 million litres of spray seem to have been used over about 1.7 million hectares, or about 10% of South Viet Nam. Some areas were sprayed more than once, and about 200 000 hectares received three or more doses. Multiple applications were needed to achieve complete defoliation of the upper and lower tree canopies.

In botanical terms the result inland was widespread destruction of crops and forest and their replacement by poor grassland; regeneration has been held back by fires, usually of human provenance, which favours grassland at the expense of tree seedlings. The sudden dumping of nutrient as a result of defoliation resulted in

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