data, and it is perhaps worth while recalling from his table some of the suggestive general facts already agreed upon or worth pursuing further.

It is clear in general terms that a price must be paid for the advantages of high industrialization, high incomes and education, transport facilities, high efficiency of public health, and low general mortality. That price appears to be a high cardiac mortality and a high cancer rate.

Almost half this large volume is devoted to cancer of the respiratory tract, and the author has gone to great lengths to present data from most countries on the great increase in lung cancer, absolutely and relative to total cancer incidence, the much greater incidence in men than in women, the enormous increase in known and possible lung irritants resulting from transport and industrialization, and the relation to tobacco. He also gives the terrifying estimates of Coruzzi that (in round numbers) some 50 million people use cocaine, 100 million betel, 300 million hashish, 400 million opium, and about 800 million tobacco—all as addictions. The tobacco story is told with a certain ferocity but the author has not lost sight of the possibilities of additional exogenous factors in the environment, and, in the matter of urban conditions, conforms to the studies of Stocks in Britain and the very recent reports from Cincinnati by Miller et al. (syncarcinogenesis and co-carcinogenesis). The author believes (p. 610) that there are in the body, otherwise in physical, hormonal, etc. equilibrium, a very small number of latent cancer cells which can erupt into activity from a factor X which may be endogenous or exogenous in origin.

In a 50-page discussion of occupational bladder tumours, the author presents a rather mixed-up story and insists still in attributing the condition to amino-nitro derivatives, in spite of absolutely no evidence that the nitro group has any place in the aetiology. The statement is also made that B-naphthylamine and benzidine and their homologues are the most powerful bladder carcinogens. This is not so.

It would, we think, have been unjust to deal summarily with this book, as indeed, has been done by at least one American reviewer, Chiurco's volume strikes one rather as the work of a teacher who has included too much and repeated too much, but has certainly given the reader much to think about. As is so often the case in Italian textbooks it is frequently an exasperating task to find text references in the bibliography.

M. W. Goldblatt


This is the proceedings of the second of a series of conferences arranged twice a year by the Faculty of Medicine at Nancy with support from the High Authority of the European Coal and Steel Community.

The conference was devoted to three aspects of respiratory physiology relevant to the study of chronic lung disease: first, alveolar ventilation and gas exchange at rest; second, ventilation during test exercise; and third, the effects of oxygen breathing at rest and on exercise.

Each session was nicely balanced with papers describing the normal responses preceding others on the corresponding change in disease. They were followed by discussion.

In all there were 20 contributions of fairly even quality, eight from Nancy and the rest equally divided between Paris, the Low Countries, and Professor Fleisch's department at Lausanne, Switzerland. These and other countries on the Continent were represented in the discussions which were critical and well-informed and must have been a most valuable part of the proceedings.

The first session began with methods for estimating arterial carbon dioxide tension needed in the calculation of the resting alveolar ventilation. This is of value in assessing the degree of respiratory compensation in patients with an elevated arterial PCO₂ due to respiratory insufficiency. Such subjects often have a one second forced expiratory volume of less than 1.2 litres.

The session ended on the subject of arterial hypoxaemia in iron workers with pneumoconiosis. The suggestion is made that much of this is due to "venous admixture" or dilution of fully oxygenated blood with what is effectively venous blood from alveoli which are perfused with blood but poorly ventilated with air. More recent work points in the same direction (e.g., H. L. Motley, 1958, Fed. Proc., 17, 114). However, there are a number of complicating factors, some of them raised in the discussion, which must be considered in relation to this interpretation and it is to be hoped that the subject will be considered again later this year at the next conference in the series.

The second session was concerned with ventilation during exercise. For a given level of exercise the ventilation is higher with advancing age, lack of exercise, and simple and complicated pneumoconiosis (P.M.F.) than it is in young normal subjects. In subjects with P.M.F. all these factors tend to operate together.

The third session was on reactions secondary to inhalation of oxygen in concentration greater than 21%. A number of useful points are made but none more pertinent than this one with which Professor Sadoul opened the discussion which followed:

"Ni la saturation d'oxygène, ni le taux de CO₂, ni l'insuffisance ventilatoire évaluée par la spirométrie, ni l'augmentation du volume résiduel ne semblent en corrélation étroite avec l'abaissement de la ventilation observée lors de l'hypoxie."

The conference was clearly a success. To one physiologist reared in the Anglo-Saxon tradition it is especially interesting as indicating a trend away from spirometry and oximetry which have dominated respiratory physiology on the Continent over the past decade. However, we have not yet reached unanimity—witness the different versions of the alveolar air equation on pages 76 and 81, and it is a pity that the editors did not secure a consistent terminology amongst their contributors. The papers themselves are eminently readable and are provided with French, English, and German summaries. One mistranslation—75% instead of 64% in the English summary on p. 85—is a trap for the unwary. The proceedings make a useful contribution to the applied physiology of chronic lung disease.

J. E. Cotes