monella and enteric infection is so compressed as to be of little value, and repeats the myth that in enteric fever the faeces are negative until the third week of disease.

JOAN TAYLOR

Neoplastic Development Vol. 1. By L. Foulds. (Pp. xi + 439; illustrated. 110*s*.) London and New York: Academic Press. 1969.

This is a solid book, closely knit and writ. There are approximately 890 references, and this is only the first volume. To quote from the Preface, 'It is hoped that this discussion will be a helpful introduction to readers who are not conversant with comparatively recent impacts of cybernetics and molecular biology, in their widest senses, on biological method and thought. Volume 2 deals in more detail with special cases of neoplastic development in animals and in man.' Dr Foulds does not invoke much cybernetics although he clearly likes the concept of network-organization in growth control (Weiss), but molecular biology has emphatically stimulated him to much pondering and poring over acres of print.

Critical reviews of the literature can be more satisfactorily critical when the pen is pushed by an old hand in the field; this provides the relish in the first seven chapters on neoplasia. It is worth remembering that *he* says 'No satisfactory definition of neoplasia is available or will be until a great deal more is known about the nature and properties; . . .' (p. 91). The other eight chapters on biological organization and development biology present him with sloughs and quagmires of speculation and neologisms through which he progresses nobly, and it may be that his own particular efforts to identify and define the strange mechanisms of the cell will in return illuminate the thinking of the professional microchemical and cellular biologists. Perhaps in the next volume he is going to show that the facts already obtained about neoplasia in animals and man can be logically arranged to match the pattern he draws for us in this volume.

It is difficult to summarize intelligibly a long complex journey, and the features the author names might mean little to those who have not been there, but I think the main theme of the last eight chapters can be suggested by the following extractions. 'The most immediate impact of molecular biology upon developmental biology has been on the study of differentiation, . . . Differentiation entails the preselection and selection of effective genomes and the transcription and translation of these genomes by linkage with conforming dynamic biochemical systems. . . . The problem of *preselection* is inextricably related to that of the nature of *competence* which, as here proposed, depends on the differential availability of the utilizable genetic patterns constituting the facultative genome. . . . The facultative genome was invented (Foulds, 1963) to take account of the empirical evidence for the differential availability of alternative genetic patterns for use as effective genomes under a variety of circumstances; it provides a genetic basis for pathological *metaplasia* as well as for normal developmental *competence* and capacity and is closely relevant to many problems of neoplastic development as will be described later." (Pp. 375-6.)

'A basic, and it seems to me incontrovertible, presumption of this discussion is that "genes", and more specifically DNA, have no intrinsic "activity" at all. DNA supplies genetic *patterns;* dynamic biotonic systems provide all the *activity*. . . . Differentiation is not adequately described in terms of the activation of individual genes; it entails the activation of integrated genetic patterns. The activated genetic patterns constitute *effective genomes*. . . . Differential utilization of the genome presupposes a choice between multiple integrated genetic patterns *available* for use as effective genomes. The available choices constitute the *facultative genome*. . . . The facultative genome supplies the genetic basis for . . . the multiplicity of the differentiative types of neoplasms derived from a single tissue" (Pp. 360-1).

If, as could be the case, I have failed to grasp the significance, perhaps Volume 2 will bring things into focus. Nonetheless this volume has taught me much about neoplasia, about viruses, and about biological organization. This last is surprising and perhaps his success on this stony ground is because Dr Foulds understands and is really trying to help pathologists in fields we know we should but have scarcely time to study. On the terminology used by histopathologists he rather agrees with Smithers, although elsewhere he finds the latter's views 'massively unconvincing' (p. 135).

This volume, apart from its intrinsic interest, is essential reading as a pruning guide for pathologists who write or talk about neoplasia. Even those who merely think about neoplasia are doubtless also awaiting the next volume with excitement.

A. C. LENDRUM

Aetiology of Lung Cancer By Leiv Kreyberg. (Pp. 90; 12 graphs, 23 tables. NKr 48.00) Oslo: Universitetsforlaget. 1969.

In less than one hundred pages Professor Kreyberg, a pathologist of world fame, has made a useful, scholarly and comprehensive survey of the various forms of lung cancer which he has been studying for more than twenty years.

The book contains a great deal of information about various histological types of the disease and links the histopathological findings with the sex and environment of the patients concerned, as well as with their smoking habits. Professor Kreyberg concludes that the most common forms of lung cancer—epidermoid carcinoma and small cell anaplastic carcinoma (types I and II of the WHO 1967 histological type code)—are very closely linked to tobacco smoking habits. Indeed, in Professor Kreyberg's experience such tumours hardly ever occur in non-smokers. Furthermore, the risk is not confined to those who smoke cigarettes, pipe tobacco and cigars also exact their toll of lives although they may be a little less lethal.

Atmosperic pollution, at least as encountered in Norway, is not considered to be a major factor in the aetiology of lung cancer. Occupational influences are of much less importance than smoking habits.

Because this book is written primarily from the standpoint of human biology the synthesis of pathology and epidemiology is most effective. I recommend the volume not only to medical students, clinicians of all degrees of specialization, pathologists and epidemiologists, but also to all others who care about the public health.

R. A. M. CASE

Tumours of the Female Sex Organs Part 2 suppl. By A. T. Hertig and H. Gore. (Pp. 51; illustrated. $1.35.) Washington: Armed Forces Institute of Pathology. 1968.

This supplement deals further with tumours of the vulva, vagina, and uterus and is part of the now well known Atlas of Tumour Pathology. Most of the new material concerns the cervix. Readers will find interesting the comments on the epithelial changes in the cervix which may be attributable to taking of the 'contraceptive pill' and warning is given against overdiagnosis of adenocarcinoma in this respect. Unfortunately the ugly term 'adenoma malignum' is mentioned in this section and elsewhere in this supplement though its continued use was rightly condemned in the original fascicle. Dysplasiais now described and illustrated, though Fig. 284, published elsewhere, is not a well suited choice.

It is salutory to read that the authors have not changed their view that minimal degrees of stromal invasion in carcinoma *in situ* (p. 103) do not of themselves justify more radical treatment than that required if no such microscopical change had been discovered.