Organization and Development of the Embryo. By Ross Granville Harrison, edited by Sally Wilens. New Haven, Yale University Press, 1969. 290 pp. $15.00.

Organization and Development of the Embryo is based on a series of Silliman Lectures at Yale University given by Ross G. Harrison in 1949 under the same title. Professor Harrison was unable to prepare these lectures for publication because of illness, but his assistant, Miss Sally Wilens, has assembled in this volume the notes and papers of Professor Harrison on which the content of the lectures was based. The five papers reprinted here concern cellular differentiation, tissue culture, development of the nervous system, symmetry in development, and heteroplastic grafting. A synopsis of the lectures and a summary by Professor Harrison aids in relating the papers to the lectures. In addition, new material is included in the form of excerpts from the Silliman Lecture notes interpolated in the papers by Miss Wilens, figures taken from slides used to illustrate the lectures, and a previously unpublished account of the embryonic development of the spotted salamander, Ambystoma punctatum.

The papers themselves are primarily of historical interest and its does not seem significant how closely the volume conforms to the original organization of the lectures. Of greater importance is that this collection of writings records the general thoughts and concepts of Professor Harrison on embryonic organization and development. With the inclusion of a preface on Professor Harrison's life and a complete bibliography of his published papers, the volume emerges as a fitting tribute to the entire life and work of Ross Harrison. Since the field of developmental biology owes much to the contributions of Professor Harrison, this volume will be of interest and value to all those working in this area.

Thomas L. Lentz

The Pulmonary Circulation and Interstitial Space. Edited by Alfred P. Fishman and Hans H. Hecht. Chicago and London, The University of Chicago Press, 1969. 432 pp. $15.00.

This book contains 27 papers on research related to the pulmonary circulation. Drs. Fishman and Hecht have done an excellent job in publishing it less than a year after the conference on which it is based. It is a book for investigators, rather than for students and clinicians. Several papers are difficult to understand unless one is familiar with the author's prior publications. Most papers lack a summary or concluding remarks; this makes quick orientation difficult.

Blood pressures in the pulmonary circuit are low, and hydrostatic pressures play a dominant role in determining the distribution of blood flow through vessels in different parts of the lungs. My impression from the evidence put forward by the conference participants is that any biological regulation of lung flow plays a minor role compared with the effects of gravity, at least in healthy adults. This is a bit disappointing to the biologist who finds regulation systems more interesting than passive consequences of gravitational forces. Nevertheless, we need to know more about what affects lung blood flow. For instance, pulmonary hypertension often leads
to right heart failure, and is therefore a sign of impending disaster for many patients with common heart and lung diseases. We have known for a long time that hypoxia constricts lung vessels and causes pulmonary hypertension in acute experiments; this response may be important in disease as well. There are many theories about the mechanism of this hypoxic response, none of them generally accepted. Perhaps one of the most stimulating ideas in this book is Torrance's suggestion that further study of the hypoxic response of smooth muscle cells in lung vessels may give clues about the nature of chemoreceptor cells in general. Some other views on hypoxic vasoconstriction are discussed only briefly; this includes the recent work of Hauge and Lloyd, which suggests that chemical transmitters such as histamine may be important.

The organizers of the conference invited papers on the interstitial space in the lungs, on vascular smooth muscle and its innervation, and on pulmonary hemodynamics, because this information might be relevant to pulmonary circulation problems. Much of this material is first rate in its own right, for instance D. F. Bohr's paper on smooth muscle, Catherine O. Hebb's on motor innervation of lung blood vessels, and R. W. Torrance's on "The idea of a chemoreceptor." Evaluation of the impact of this work on pulmonary circulation research must clearly remain for the future, although the editors might have led the way in a summarizing statement. A postscript, outlining points of agreement and of controversy among the participants, would have helped the reader to arrive at some synthesis of all this diverse material. Although the absence of a general summary detracts somewhat from the book's value, as a source of specialized information on the pulmonary circulation it will remain unsurpassed until the next conference on that subject!

Arend Bouhuys

Ward Rounds. By K. D. Beernink. Lamanda Park Press, 1969. 40 pp.

K. D. Beernink was a student at Stanford Medical School, was a medical intern at Yale from 1965-66, and thereafter was engaged in research at Stanford when he died in May of 1969, shortly after the publication of this book of poems.

In the introduction to this brief but sensitive collection of poems, the poet informs us that in fact the hospital, with its triadic relationship of physician, patient, and illness, is the real world for interns and residents and that each "doctor-patient ward encounter is a unit of experience to the physician." What is then offered is "a mosaic of factual details collected from my patients . . . and a synthesis of my subjective reactions to them."

Perhaps the predominant theme of the poems is the continual awareness of limitation and, therefore, potential for growth both as a physician and as a man. This theme is achieved principally through the ironic tone that pervades most of the poems. The irony of artificial life in "traumatic decortication" contrasts keenly with the irony of artificial death in "post necrotic cirrhosis." In each case, an illusion is created by impersonal knowledge only to be dispelled by human understanding. There is irony, also, in life in the face of death in "acute lymphocytic leukemia," especially when contrasted with death in life in "infectious mononucleosis." The ultimate