sponsibilities. And finally some papers are as general as Loren Graham's useful catalogue of contemporary "concerns about science" and corresponding efforts at regulation.

Resigning oneself to the present-minded and practical limits of the symposium, one is still struck by the lack of papers on military issues. Sissela Bok notes that nearly half of all the money spent on research (throughout the world in 1972; probably more than half by now) was spent for military purposes. But she drops that alarming information only in passing, while concentrating on efforts to impose limits on biomedical research. The other participants show a similar reluctance to discuss the military frontier, where R & D is still virtually limitless. They share Bok's preoccupation with "the larger society's" efforts to draw limits around biomedical research.

Perhaps this symposium is further evidence that pride in serving the military, which marked the scientific profession from the time of Leonardo and Paré, has turned at last to shame and revulsion. Even a conference that explored the need for limits on scientific inquiry averted its gaze from the military. But I may be too optimistic. The subconscious motives for excluding the military problem may have been less shame and revulsion than confusion and despair.

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Materialistische Wissenschaftsgeschichte: Naturtheorie und Entwicklungsdenken. (*Das Argument*: Argument-Sonderband, AS 54.) 198 pp., illus., bibl. Berlin: Argument-Verlag, 1981. DM15,50, students DM12,80 (paper).

The reader who looks to find examples of a "materialistic" approach to the history of science here will be disappointed. Three of the nine essays deal in traditional history-of-ideas fashion with topics in eighteenth- and nineteenth-century biology. Two that purport to be criticisms of Darwinian evolutionary theory are based on a distorted view of that theory. Nor are the four that address the book's major theme entirely satisfactory. Johannes Rohbeck's argument that Adam Ferguson's concept of work and kindred ideas of others were essential preconditions for the progressionist theories of Lamarck, Erasmus Darwin, and Geoffroy Saint-Hilaire has serious problems, not least because he says nothing of substance about the scientific ideas involved. Michael Wolff's attempt to update Boris Hessen also contains several fundamental conceptual errors, but his contention that the notion of impetus had its roots in contemporary economic theory seems not entirely farfetched. In order to judge it, however, one would need to see his monograph *Geschichte der Impetustheorie* (1978), reviewed critically by Bruce Eastwood in *Isis*, 1981, *72*:503–504. Erika Hickel provides a well-documented sketch of the role of industry in the development of new drugs in Germany between 1870 and 1905. However, she cites virtually no evidence to support her claim that the work of organic chemists and pharmacologists within the context of a burgeoning pharmaceutical industry contributed to the dominance of a chemical-reductionist viewpoint in biology. Everett Mendelsohn—whose essay originally appeared in *Constancy and Change in Human Development*, edited by Orville G. Brim, Jr. and Jerome Kagan (Cambridge: Harvard University Press, 1980)—argues that continuity and discontinuity are constructions not of nature but of the human mind, and cites examples of the occurrence of these basic themes in the history of science. He would establish a connection between belief in discontinuities and philosophical or political radicalism, but some of his own evidence belies such a simple correlation. The problem, a serious one for all sociologies of knowledge, is that similar ideas can be adapted to different ends in different circumstances depending on the state of the discipline and the author's purposes, confounding what might otherwise seem to be strong "natural" affinities.

KENNETH L. CANEVA

Gianni Micheli (Editor). *Storia d'Italia.* Volume III: *Scienza e tecnica nella cultura e nella società dal Rinascimento ad oggi.* xxx + 1365 pp., illus., index. Turin: Giulio Einaudi, 1980. L60,000.

For the past fifteen years, the history of science has been undergoing a rapid development in Italy despite the persistant difficulties it has had in obtaining institutional recognition comparable to that enjoyed by the history of science in Anglo-Saxon countries. Proof of this growth can be found in the present multi-author volume, the ninth in the "History of Italy" series, published by Einaudi, which is entirely devoted to the history of science and technology in Italy from the Renaissance to the present day.

The book is divided into four parts. The