

Book Reviews

of their peaceful island, which both threatened their ageing industrial supremacy and recalled to them the restive barbarians at the peripheries of their far-flung empire. Pick shows convincingly how British doctors and writers alike used a language which enabled them to deny simultaneously the existence of degeneration in their land (and therefore its cure by political means) yet identify and stigmatize the social elements they most thoroughly feared.

The book is based on a thorough knowledge of the most recent literature in this domain of historical writing. It is clearly written and straightforward about its methodological devices. Pick has made a remarkable contribution here to a comparative understanding of degeneration theory and suggested new ways to study the spread and the meaning of medical culture.

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RENATO G. MAZZOLINI, *Politisch-biologische Analogien im Frühwerk Rudolf Virchows*, transl. Klaus-Peter Tieck, Marburg, Basiliken-Press, 1988, 8vo, pp. 176, illus., DM 45.00 (paperback).

Political analogies feature prominently in the early writings of the cellular pathologist, Rudolf Virchow. This carefully documented study is a slightly revised translation from the Italian of an article published in 1983. It has been attractively produced with the addition of an extensive bibliography (but it lacks an index). The author's aim is to consider the role of non-scientific factors in the generation of scientific theories. He traces the origins of Virchow's characterization of the organism as a cell state, which according to Mazzolini is a heuristic analogy explaining the interaction of cells. There are lengthy quotations of social analogies assembled from Virchow's publications between 1845 and 1860. These are placed in the context of a tradition stretching back to Leibniz, to whom, paradoxically, rather mechanistic ideas are ascribed. Virchow denounced the concept of a "vital force" as autocratic and misconceived, given the cell's individual properties with varying forms and diverse functional characteristics. Mazzolini emphasizes that Virchow was profoundly influenced by the ferment of political ideas surrounding the 1848 Revolution and debates in the Frankfurt assembly. Only published editions of Virchow's writings have been used, whereas archival sources in university, state, learned society, and academy archives might have yielded additional perspectives on the use of such analogies. Nor has Mazzolini examined Virchow's subsequent political activities in Berlin and Prussian politics.

The philological approach can lack sensitivity to the changing scientific definitions of the cell during the 1850s and 60s. These are addressed in the concluding section, but this is too abbreviated to do full justice to the complexity of debates on the "constitution" of the cell and of cellular processes of growth. Thus, Max Schultze's fundamental redefinition of the cell in terms of protoplasmic theory is overlooked, as well as the implications of the increasing concern with the cell nucleus. When Haeckel and Virchow were in dispute at the *Gesellschaft deutscher Naturforscher und Ärzte*, they had not only contrasting views on the teaching of biology, but also on the constitution of the cell and the cellular organism. The use of concepts such as "democratic" also lacks precision, particularly when professional and institutional factors are considered. Debates in the periodical *Die medicinische Reform* indicate that, whereas Remak was prepared to see the doctor as publicly accountable, for Virchow medical science gave the scientifically-trained doctor superiority. For individualism rather than egalitarianism characterized Virchow's writings on the cell and on disease as a cellular malfunction. The study does not adequately explain how Virchow's highly original concept of cellular individualism came to reinforce the corporative state, to which he was so opposed. The author does give a selection of certain relevant texts such as the bacteriologist Ferdinand (not Julius as on p. 103) Cohn's *Der Zellenstaat*. It is hoped that this study will stimulate further clarification of the complex interaction of medical science and social theory.

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