unwanted" is one of Scull's more graphic phrases) in unwarranted. Such points have, however, already been well made by John K. Walton, for instance in his 'Casting out and bringing back in Victorian England: pauper lunatics, 1840–1870', in W. F. Bynum, Roy Porter and Michael Shepherd (eds.), *The anatomy of madness*, vol. 2, (1985), an essay to which she does not refer.

The reader of this book is sometimes stopped in his tracks by puzzling statements. We are told, for instance, that "typhus . . . became a major health problem in 1838 when it was carried to England by countless Irishmen". On occasion, the prose leads one to doubt one's own sanity. What is one to make of the following?—"By the end of the eighteenth century it became apparent that the private sector could not adequately fill the need for supervision and care of the insane. The supply of space in private houses far outdistanced the demand for care." And typos are epidemic. Scull's *Museum of madness* appeared in 1979, not 1970; there were no such people as Nassua Senior or the "physician", Thomas Wakely, or J. Brownowski for that matter; nor any such London suburbs as Fulman and Huxton; nor an asylum named Ricehurst. Not least, one pities the mythical W. F. Bynum, *Jr*, who haunts this sorry volume.

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DANIEL PICK, *Faces of degeneration: a European disorder, c. 1848–c. 1918*, Cambridge University Press, 1989, 8vo, pp. viii, 275, illus., £27.50, $39.50.

The appearance of Daniel Pick's scholarly and imaginative book on the modern European history of degeneration theory testifies to a continuing interest in a species of medical history that does not restrict itself to studies of the institutional, clinical, or laboratory circumstances in which medical ideas and practices are produced. Without ignoring these traditional sources of medical ideas, the authors of this kind of history prefer to emphasize the social and cultural influences on the construction of a medical discourse and to trace its permutations in the language and imagery used in the environing society. In *Faces of degeneration*, Daniel Pick employs this strategy to show how the bio-medical concept of degeneration first arose in France, and how doctors, social scientists, and the inhabitants of other cultural domains received and applied it in France, Italy, and Great Britain.

To explain the popularity of degeneration theory, Pick does not adopt a model which assumes "hard" scientific knowledge spreads by replicating itself in other, "softer" discursive domains; nor does he consider degeneration to be a professional ideology that serves the "interests" of medical specialists. Rather, in the manner of recent post-structuralist criticism, he considers how the concept of a retrograde evolution was, to use his term, "inflected" by writers and thinkers in ways that reveal their unique situations as "narrators" of stories about degeneration. To his credit, he does not push this strategy to the point where authors are subsumed into and thus subordinated to their texts. But by identifying the "voices" in which they speak, their uses of irony or metaphor, he can prise out information about their psychological location with respect to their subject, the anxieties it provoked in them, and the degree of confidence they possessed about its cure. He uses this technique to great effect in his treatment of B. A. Morel and Emile Zola and on Bram Stoker, Arthur Conan Doyle, Thomas Huxley, and H. G. Wells in their literary ruminations on the biological condition of their fellow man.

Pick also demonstrates that this method can be useful in understanding the ways particular cultures used the concept of degeneration to ponder their respective historical traditions and the trajectories of their nations. Because of their unstable, revolutionary past and the nineteenth-century diminution of their geo-political status, French thinkers regarded degeneration as an invisible, multi-faceted phenomenon that was infecting their whole populace, threatening the vitality and reasonability of élite and mass alike. In Italy, Lombroso and his followers viewed degeneration from the perspective of the problems of a recently-unified state. Instead of a process of degeneration, they saw biologically-tainted individual degenerates, as befits the outlook of an educated élite seeking to subdue the "savages" newly incorporated into their midst. The British, for their part, worried about the "deteriorating" urban residuum in the heart

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, Basilisken-Presse, 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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