

modernist revulsion with the modern age to the re-enchantment of the past as the desired future. A particularly strong strand was the interpretation of Minoan culture (which Evans named) as pacifist and feminine, devoted to the arts of trade, dance and the mother goddess, not to war. Evans's own turning away from knowledge of military fortifications in Eastern Crete, and his willing embrace of forgeries of goddess figures, are particularly striking elements in the shaping of Knossos as a prelapsarian world. Cathy Gere well steps aside from judging Evans as a character in order to portray the comic and tragic riches of the sensibility which he fed.

The book is eminently readable and draws on a sharply focused knowledge of both the Greek Bronze Age and the lives and personalities – frequently so bizarre the telling threatens to run away with the plot – of Evans and the other creators of 'Knossos'. I am not sure that the largely unexamined notion of 'modernism' (a 'crisis' taking 'the form of an acute anxiety about the relation of the external world with the individual's internal perception', p. 6) can bear the weight placed on it, and I think that Nietzsche is a good deal more demanding, and tragic, than the biological essentialist portrayed here. That is, there might have been scope for a more persistent questioning of key concepts in the rethinking of moral and aesthetic 'crisis' through an imagined past, through self-description as 'Nietzschean' and through the metaphors of 'the mythic method' (T.S. Eliot's phrase, p. 146), and of what this all means, reflexively, for the author's own relationship with 'the past'. The conclusion briefly notes the possible parallel between the 'retrospective prophecy' reported here and the contemporary fascination with evolutionary stories. For unexplained reasons – though I imagine the thought is of the death camps – it is claimed that 'in the history of the human sciences, the Second World War represents an epistemic rupture of unprecedented violence' (p. 189); that surely is wrong, as it is precisely the American psychological and sociological sciences of the interwar years which flourished in Europe as a reaction to ideologically laden barbarism. The material is set, though, in a carefully rendered account of the historical context of Crete, from the time of the brutal wars with Turkish overlords, to the German invasion and to the tourist hordes of modern times. The book will have many delighted and interested readers who will 'see how the human sciences can convince us not just to believe in, but also to enact across our own lives, a prophetic version of our origins' (p. 231).

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L.S. JACZYNA, *Medicine and Modernism: A Biography of Sir Henry Head*. London, Pickering and Chatto, 2008. Pp. viii + 353. ISBN 978-1-85196-907-4. £60.00 (hardback).
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Stephen Jacyna's seminal portrait of physiologist-turned-clinical-neurologist Henry Head (1861–1940) reinvents medical biography and positions it at the cutting edge of several rejuvenated historiographies, on the relations of mind and body, science and art, and, crucially, science and the clinic in late nineteenth- and early twentieth-century British medicine. In this holistic account of a holistic thinker, Jacyna locates Head's work on sensation both within the context of his life history and as central to the wider modernist turn in early twentieth-century European thought and culture, which sought a return to subjectivity on the basis of a reconceptualization of man's relationship with the natural world. Head held that, since each person creates external reality via the interaction of common human biological processes with sensibilities mediated by individual inheritance, environment and lifestyle, medicine needs the art of clinical experience as well as the science of laboratory knowledge. Just as no fixed boundary can exist between the mind and the body, so, for Head, there can be no fixed boundaries between science and art in medicine, or in the more general culture in which medicine shares. Jacyna

reflexively applies Head's logic to medical biography: there can be no full understanding of Head unless he is located in the whole of his life.

Head's neurology was characteristically modernist. Intended as a revolutionary break with classical neurology, it underlined the importance of the subjective illness experience as integral to understanding disease, yet was simultaneously progressive, teleological, inscribing highly elitist views of sensibility and morality. Head was much influenced by Michael Foster and especially Walter Gaskell at Cambridge in presuming an evolutionary understanding of nervous-system development, dividing sensation into evolutionarily earlier, lower, animalistic 'protopathic' impulses governing basic instinctual drives and later, higher, 'epicritic' impulses. The epicritic represented the civilizing process (and progress) and had come to exercise general control over the protopathic – a control which could, however, be broken by disease, resulting in partially individualized illness experience.

Head's holistic vision eschewed the perceived classificatory impulse of contemporary medicine; disease and illness were infinitely more complex and fluid than the current diagnostic labels. Health was not framed in terms of adherence to norms, but as the individual's ability to adapt successfully to changed conditions. The historiography of science–clinic relations has often overlooked such holistic perspectives, in which both 'scientific' and 'human' facts were essential to diagnosis and therapy. Jacyna shows how such a perspective was forged in the crucible of early twentieth-century British evolutionary modernism. Head was, in fact, proposing a type of 'Romantic Science' akin to the explorations of William James, Ludwig Binswanger and, later, Oliver Sacks: an attempt to bridge the oft-perceived incommensurability between science and experience on the basis that both are crucial to understanding the human individual in health and disease.

This integrationist perspective underpinned Head's position on science–clinic relations. He preserved what he called 'the old alliance between the Laboratory and the Wards' (p. 56), in which there was no oppositional disjunction based on socialized boundaries between them. Both were simply essential parts of a unified clinical medicine. For Head, the clinic was an extension of the laboratory – a place where experimentally derived knowledge could be understood experientially; both were equally necessary and mutually complementary. That similar positions were maintained by other British clinicians and physiologists may be a neglected perspective in the over-polarized historiography of science–clinic relations.

Head's patients, especially the more aristocratic, epicritic ones (above all, his patient and friend Robert Nichols), were treated in Head's case narratives as, Jacyna argues, 'rounded characters that play an active part in ... unveiling ... the truth of their condition. The doctor ... is ... more an involved *primus inter pares* ... than ... detached representative of a disinterested clinical gaze. The understanding of the disorder appears to occur through a process of mutual negotiation and cognition' (p. 2). The self is malleable; the doctor helps the patient to understand the impact of the illness and rebuild a new self. Pain, like beauty, is relative, not absolute. Both emerge out of the interactions of observer with environment. They are not fixed but contingent. As well as remaking his patients, Head and his wife Ruth self-consciously – and, one might add, rather painfully pretentiously, to modern sensibilities – remade themselves in letters and scrapbooks. As Head noted, 'Man perpetually builds up a model of himself, which constantly changes' (p. 135).

However, Jacyna's holistic 'Romantic History' shares Romantic Science's dilemma: how to retain the rationality and intellectual rigour of scientific ways of knowing while coopting experiential human perspectives? Jacyna confesses to losing 'the detached neutral voice of the academic historian', admitting that it was 'difficult not to develop an emotional engagement' (p. 8). However, this statement subtly reiterates Head/Jacyna's underlying point: like all knowledge, history can only be subjective. Both medical case narratives and biography should thus include all relevant 'facts' so that the individual in focus can be more fully understood.

Oliver Sacks seems wrong, then, to portray Head as one of classical neurology's reductionist 'diagram makers' (p. 140). In fact, so-called subjective factors were integral to his understandings. In Head's view, physicians should facilitate the retrieval of adaptability by developing the patient's (epicritic) ability to take control of self-image (including body image) to incorporate the disease/illness into a new functional normality. This is very similar to Sacks's own framing of the physician-as-facilitator of the new narrative of the self. In Jacyna's interpretation, Head also harmoniously combined clinical with scientific work and thus emerges as sophisticated pioneer and exemplar of the heterogeneous ways medical workers integrated science and the clinic, science and art, and mind and body in the twentieth century.

However, the sum is greater even than these parts. Jacyna's holistic portrait of Head reveals the sources of medical holism in twentieth-century British medicine to have been not only psychological discourses but also physiology, evolutionary thought, physics, economics, literature, art and other cultural manifestations of cognitive and aesthetic modernisms. Even in the local educational and personal development of individual workers, holism was holistically embedded.

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ROBERT BUD, *Penicillin: Triumph and Tragedy*. Oxford: Oxford University Press, 2008. Pp ix + 330. ISBN 978-0-19-954161-4. £16.99 (paperback).
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For three decades Robert Bud has maintained two careers in synergy. He is an important light in the world of science museums, and especially London's Science Museum, where latterly he has led an impressive development of online resources. In parallel, he has maintained a commendable flow of books and articles on pharmaceuticals and biotechnologies. This present work is something of a *tour de force*. With the museologist's feel for material culture and 'object lessons', Bud uses penicillin as a window on science and industry, medicine and popular attitudes, and the comparative politics of nations during and after the Second World War. The breadth is notable, the material rich and the narrative generally compelling.

The strengths of this book include discussions of 'wonder drugs', 'magic bullets' and the increased statutory control of drugs after sulphanilamide; a revision of the Fleming and Florey story showing how Florey was 'promoted' though the media of postwar Britain in support of the charity hospitals and the private companies threatened by nationalization; and the roles of empirical craft, chance and agriculture in the industrialization of penicillin production. The chapter on wartime medicine nicely integrates early penicillin use with the organized management of soldiers' wounds, and with the prominence of venereal disease. Bud illuminates the old and influential story of British resentment of the American patents on penicillin, but he also includes a wonderful comparative section on several continental countries and Japan. He then turns to penicillin's promotion and use: massively overproduced and heavily marketed, it was used for many more conditions than it cured, though doctors knew well enough that drug resistance could soon be a problem. The fear of resistance helped ensure that in Britain it was available only by prescription, but it did not prevent medical overuse; indeed, Bud suggests that the cost of antibiotics to the NHS was a major reason for the introduction of prescription charges. The complex politics of 'resistance' and controls occupies the rest of the book; sometimes there are a few too many stories, but there are lots of generally useful insights, for example about focus groups, patients and consumerism in the 1950s. Throughout the book, the integration of a wide range of topics and of countries is very impressive.

My (small) reservations largely concern the treatment of medicine. Bud is keen to present penicillin as both a marker and the main cause of a transformation in popular attitudes to