

undermine her thesis. As she admits, “The reader looking for proof in the contentious cases will find none.” In some cases, for instance in her chapter on Beethoven, Hayden is forced to acknowledge that “As much as we might like proof for a diagnosis of syphilis, there is none”. Yet, as subsequent chapters show, Hayden does not allow a lack of evidence to spoil a good story. Concluding her fifty-page chapter on Hitler, Hayden states, “There is no definitive proof that Adolf Hitler had syphilis, any more than there is undeniable evidence that he did not.”

The thesis is an interesting one, but the foundations of proof that Hayden provides are shaky. The argument is built on a structure of circumstantial evidence and conjecture that historians will find flimsy. In order to be a helpful addition to medical history such a discussion requires much more evidence than Hayden is able to provide. Without this evidence we are in danger of proving Cecil Graham’s charge, in Wilde’s *Lady Windermere’s Fan*, that “history is merely gossip”.

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Thomas Söderqvist, *Science as autobiography: the troubled life of Niels Jerne*, translated by David Mel Paul, New Haven and London, Yale University Press, 2003, pp. xxvi, 359, illus., £27.50 (hardback 0-300-09441-8).

This is a remarkable book about a remarkable man. Söderqvist describes and analyses the life of the immunologist Niels Jerne (1911–1994), who was awarded the Nobel Prize in 1984 and certainly belongs to the most prominent medical researchers and especially immunologists of the twentieth century. Jerne contributed decisively to the understanding of immunology with two theoretical approaches, namely the selection theory of antibodies and the network theory. Both theories were intended to be free of the cautious idea that the immune system would work only in response to antigens or toxins. The selection theory postulated that the organism would produce a range of different antibodies

spontaneously. The network theory saw the immune system of the human body as a kind of cybernetic system where all parts worked consistently. Söderqvist’s book relies on archival studies as well as over 150 hours of oral history interviews with Jerne himself and on talks with over 90 relatives, friends and colleagues.

These core data sound attractive but most outstanding is the life of Jerne himself. It does not correspond to the platonic idea of a Nobel-Prize winning professor in medicine with a straightforward career, who is married to his lab and produces marvellous scientific knowledge about the world. On the contrary, Jerne first of all slipped into the shoes of his father and worked as a sort of tradesman and inventor. His favourite pastime was reading philosophy and art books and discussing related problems and politics in cafés and bars. Although bound to the bourgeois world of his times, he was attracted by the bohemian life-style and disliked the idea of living an ordinary life. Jerne was a kind of “womaniser”, who tried to realize his erotic sado-masochistic fantasies when aiming to subordinate women to his own will. He was torn between anxious insecurity, watching and analysing himself and his environment from a distance, and a strong belief in his mastermind, which manifested itself in clear-cut and straightforward ideas and statements. Söderqvist describes Jerne as a sensible, fragile genius, who desperately tried to control his life and who found his way to medicine only after a period of successive stabilization. His Nobel Prize winning theories were moulded by and were an expression of his inner life, and they were rooted in his efforts to organize a chaotic world with the help of the arts and sciences.

As interesting as Jerne himself, is Söderqvist’s methodological approach. He tries to deliver an “existential biography”, which focuses on the life of the researcher and not primarily on the scientific achievements, as Jerne’s work “was an inseparable part of his life”. Söderqvist contrasts his own approach with that of “most biographies of scientists, which inevitably focus on scientific work and public achievements and leave the rest of life (if treated at all) at the periphery” (p. xxiii). Although the approach is interesting,

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it remains problematic for three main reasons. First—as noted by Söderqvist himself—many factors influence the scientist’s life. And in fact, Jerne’s life is shaped not only by his inner motivations but also, for example, by social networks: relatives, friends, colleagues, and, last but not least, his wives and girlfriends. Söderqvist describes all these factors and in fact he delivers a modern biography, which considers the cultural environment of the scientist. Therefore, I have some doubts whether the “existential biography” really serves as a new methodological approach. I think the consideration of the “inner life” of a person only complements the variety of aspects which should be considered in biographical writing. Second, the analysis is sometimes rather meagre, and the explanation of why the inner life shapes Jerne’s scientific theories is sometimes vague and speculative and not entirely convincing. There is no careful conclusive analysis. Third, when focusing strongly on Jerne’s personal motivations and ideas, there is danger of adhering too much to his own interpretation of his life. Jerne loved the existential philosopher Søren Kierkegaard; Söderqvist loves him too, and the outcome is an “existential biography”. Söderqvist explains the danger of a strong identification with the research subject, but the reader is left feeling uneasy.

Notwithstanding these criticisms, this biography is an important contribution to the history of science and medicine. It is a good read, it is very inspiring and—even if this is not its primary intention—it tells us a lot about the history of immunology. The book is above all a reminder of the need for personal aspects of a researcher’s life to be considered much more than hitherto, and—using a phrase of the historian Peter Moraw—that the scientist does not leave his personality and social relations in the wardrobe when entering the lab.

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Shelley McKellar, *Surgical limits: the life of Gordon Murray*, University of Toronto Press,

2003, pp. x, 270, illus., £28.00, US\$45.00 (hardback 0-8020-3739-9).

This book ought to be subtitled ‘The last dinosaur’. Gordon Murray was a Canadian surgeon who was born in 1894 and died in 1976. He was educated and practised in the era of heroic individualism, achieving worldwide recognition for his contributions to various areas of surgery. He continued to practise until the early 1970s, by which time the surgical mould in which he was cast had become outmoded and his work was increasingly ignored by the medical community, and in one instance brought upon him a degree of opprobrium.

He was born in rural Ontario to an immigrant Scottish family and had impressed on him from infancy the values of education and hard work. In 1914 he enrolled to study medicine at the University of Toronto, a city with which he was to be associated for the rest of his life. The First World War intervening in his education, he enlisted as an artilleryman and rose to the rank of sergeant. He returned to his studies after the war and graduated in 1921. Determined to become a surgeon, he travelled to the United States and England (it is sometimes forgotten how many students came from abroad to study in England in these years—a good subject for a PhD). In 1927 he took up a position at the Toronto General Hospital.

From the start, Murray had an interest in surgical research but was very much a loner. His first well-recognized work was on the use of the relatively newly discovered drug heparin, which he initially used in the treatment of thrombosis and embolism. He then employed it to produce haematological states that enabled him to carry out vascular surgery, notably suturing vessels, for instance after the removal of an aneurism. After the Second World War he turned to heart surgery, operating on children with congenital defects. He did not, however, continue this work into the heart-lung machine era. Always considering himself a general surgeon, Murray moved on and turned his attention to the development of an artificial kidney. His machine seems to have had some success, although ultimately it was a device