

SURVEY REVIEW

FROM THE PERIPHERY OF THE HISTORY OF SCIENCE

Frank N. Egerton, *Hewett Cottrell Watson: Victorian Plant Ecologist and Evolutionist*. Aldershot, UK: Ashgate Publishing Limited, 2003.
Pp. xxvii + 283. US\$84.95 HB.

Michael Shermer, *In Darwin's Shadow: The Life and Science of Alfred Russel Wallace: A Biographical Study on the Psychology of History*. Oxford: Oxford University Press, 2002. Pp. xx + 422. US\$35.00 HB.

By Peder Anker

There is a growing body of studies devoted to the role of scientists working on the periphery of the scientific canon to shed light on well-known events. The above biographies of two Victorian plant geographers illustrate this trend. There are few historical studies of Hewett Cottrell Watson, and Egerton has done a fine job of bringing to light the role of a marginal scientist in the age of the Darwinian revolution. Alfred Russel Wallace is a more familiar figure, and Shermer investigates his psychobiography with an unusual methodology. They seek respectively to investigate unfamiliar sources or to use atypical methodology in order to illuminate familiar historical ground.

For the historian there is nothing like finding primary sources other historians have overlooked. It was such a finding that prompted Egerton to write this biography of Hewett Cottrell Watson (1804–1881). Watson corresponded with Charles Darwin about questions relating to evolution in the years leading up to the 1859 publication of *On the Origin of Species*. This raises the question of whether Watson contributed to Darwin's work. Egerton argues that Watson was practically the first to conduct research on plant evolution, and that he presented evidence about this issue to Darwin. Darwin, however, made better use of Watson's data than he himself did. This is only one of several incidents Egerton uses to portray Watson as a rather eccentric evolutionist, botanist and plant geographer (but not 'ecologist' as the subtitle misleadingly suggests). The point of departure in Egerton's account is "a lifelong personality disorder" that afflicted Watson (p. 233). This emotional disorder generated social obstacles and problems,



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but also an original outlook on the world that became a source for his scientific discoveries. His neuroticism, Egerton argues, largely explains Watson's intriguing career and achievements, and also why he came to play a peripheral rather than central role in the shaping of historical events.

Psychology is also the point of departure of Michael Shermer's equally interesting book about Wallace (1823–1913). Inspired by the psychologist and historian Frank Sulloway, Shermer sent a survey to ten historians of science and asked them to determine and rate Wallace's personality on a scale from one to ten with respect to five different character traits. On average, "84 percentile consciousness, 90 percentile agreeableness, 86 percentile openness to experience, 58 percentile extroversion, [and] 22 percentile neuroticism" was the outcome of the survey (p. 26). Having thus captured Wallace's personality in hard numbers, Shermer lays out his life and work in a beautifully-written biography. In terms of historical content this account does not offer much new material in comparison to Peter Raby's sympathetic biography *Alfred Russel Wallace* (Princeton, 2001). What is unusual in Shermer's book is his "scientific approach to history" (p. 10). His overall aim is to find a way out of the deadlock in the 'science war' between internalist and externalist interpretations of history. Only by using scientific means, he argues, can historical studies advance. Hence his attempts to "measure Wallace's personality" (p. 25) by using quantitative and statistical modelling not only of his psychology, but also of his social matrix and scientific production. The result, Shermer claims, is a *scientific biography* of Wallace's life and work.

Shermer is aware that this is not how most historians proceed, and he spills much ink in making a philosophical argument for his case. These methodological discussions are welcome, although the methodology itself scarcely yields impressive new insights into the life of Wallace. It is hard to track such novelties as do exist in the biography back to the methodology, and the reader is instead left struggling to find connections between methodology and content. This biography is a heroic portrait of a scholar with "broad observational scope and penetrating theoretical depth" (p. 128), a conclusion which may fit well with the eighty-fourth percentile 'consciousness' rating of Wallace. But one also learns that Wallace "observed to his horror" that some species were lost from his Amazon expedition (p. 73), an interpretation that does not correspond with his alleged lack of neuroticism: how can a person with only twenty-second percentile neurosis experience true horror over an event that could not have surprised many of his colleagues? The narrative contains many examples of inconsistencies between the psychological profile offered of Wallace and the story Shermer actually is telling about him. Further-

more, one looks in vain for the hypothetico-deductive hypothesis testing Shermer advocates in history (pp. 313–327), (and for a footnote to the philosopher Carl G. Hempel who helped develop this methodology). Nor is Shermer able to show that asking the counterfactual question ‘what if Wallace had discovered natural selection first?’ leads to new insights about his life (pp. 304–309). His methodological approach would have been more welcome if it generated novel understandings of the past. The proof is in the pudding, as the saying goes.

Shermer’s book is certainly an innovative biography of Wallace, though after reading the book one is left with the sense that the aim of this study is philosophical and psychological rather than historical. The agenda of the biography seems to be to try to inflame debate over the need to base the history of science on a scientific footing. Egerton is by contrast no iconoclast, and his scholarly book about Watson does not seem aimed at shaking the field. Instead, Egerton broadens our historical knowledge of Victorian biology with a book about a figure who may not have been at centre-stage of scientific events, but still played a significant role. The Darwin Industry has by now produced several bookshelves about the master, and both these biographies are helpful in gaining perspectives from the periphery of the history of science.

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