

## BOOK REVIEW

### SAXONY, SEXUALITY, SCIENCE, SOCIALISM AND STATISTICS

Theodore M Porter, *Karl Pearson: the scientific life in a statistical age*,  
Princeton, NJ: Princeton University Press 2004.  
Pp. viii, 342. £22.95. ISBN 0-691-11445-5. Hardback.

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Theodore Porter has written a commendable account of an extraordinarily energetic intellectual. In some ways the first major interests of Carl Pearson (1857–1936) were in Germany, particularly medieval Germany (not just Saxony, though he did love Dresden), and he was under serious consideration for an appointment as a lecturer in German when in 1884 he accepted the post of Professor of Applied Mathematics at University College London (after an earlier flirtation with the bar). It was probably his love of Germany which led him to change the spelling of his name to Karl. Even after his adoption of mathematics as his “official” profession, he continued to have wide interests, and indeed Professor Porter claims, probably with justice, that by 1889, when the “Men’s and Women’s Club” (which he had founded) dissolved, best known, not for his writings on mathematics, but for his historical and social writings on women.

After a pseudonymous, semi-autobiographical novel and a nineteenth century passion play, his first publications were completions of work by earlier authors, namely William Kingdon Clifford’s *The common sense of the exact sciences* and Isaac Todhunter’s *A history of the theory*

*of elasticity* . . . . The latter was in a sense no more than a continuation of the work Pearson had done while a student for the mathematical tripos, but the former did help Pearson work towards the philosophy of science he later developed in *The grammar of science*.

In its time *The grammar of science* was an important book, attracting the attention of many scientists (and of Lenin). Professor Porter gives a careful summary of Pearson’s view on the philosophy of science. In his words, “Valid knowledge, efficient summaries of experience might, [Pearson] argued, be favoured by natural selection, but untutored humans were ever being led astray by a desire for what science could never be. The inaccessibility of science, this alienated human condition, required that science be formulated as a self-denying method.”

He was very much of the view that mathematics should be developed in connection with mathematical physics and deplored the artificiality of the old style mathematical tripos.

Over the years, he became interested in questions of inheritance and their connections with the theory of evolution and hence came to be the chief intellectual heir of Francis Galton (of whom he wrote an immense bio-

graphy which in the words of Stigler<sup>1</sup>, “was a labor of love . . . and it similarly taxes the reader”) who was one of the early proponents of eugenics and is remembered by statisticians as the inventor of regression and correlation. It is often forgotten that the principal advocates of eugenics at the start of the twentieth century were men and women of the left, and Pearson, though very much an élitist, always considered himself a socialist.

Pearson spent much time teaching engineers and was much interested in the development of graphical statistics as a geometrical method of solving practical problems. He was clear that education should not take a narrow form, and wanted all students to know something of history and languages. On the other hand he was clear that teaching should be done by those with a live interest in the subject and despised writers of textbooks. In fact his commitment to teaching was Stakhonovite—according to his son Egon, “In 1894 he was single-handed and lectured eleven hours a

week; in 1897 he took sixteen out of the Department’s thirty-six hours of lectures (I think the work in the drawing office was in addition to this).”

Of course Pearson is nowadays best known as one of the founders of modern statistical methods, and in particular for the product-moment correlation coefficient, the  $\chi^2$  test and the “method of moments.” It may come as a surprise to those unfamiliar with this remarkable polymath that his statistical work as such takes up only some fifty pages in this biography, but there is no doubt that the structure of the biography gives a properly balanced account. It can be seen as a natural continuation of the author’s work on nineteenth century statistics<sup>2</sup>. It is not the place to look for an account of the technicalities of Pearson’s contributions to statistics, which are covered in Stigler<sup>1</sup> and Hald<sup>3</sup>, but it does succeed admirably in presenting Pearson in a phrase he himself used<sup>4</sup> “against the changing background of intellectual, scientific, and religious thought.”

#### NOTES

1. S.M. Stigler, *The history of statistics: the measurement of uncertainty before 1900*, Cambridge, MA: Belknap Press of Harvard University Press 1986.
2. T.M. Porter, *The rise of statistical thinking 1820–1900*, Princeton, NJ: Princeton University Press 1986.
3. A. Hald, *A history of mathematical statistics from 1750 to 1930*, New York, NY, etc.: Wiley 1998.
4. K. Pearson, *The history of statistics in the 17th and 18th centuries against the changing background of intellectual, scientific, and religious thought*, London: Charles Griffin 1978.