knowledge (especially those linked to sexual desire), which were irrelevant or even counter to its explicit purposes, and which found their expression in sensational fiction and in late-century popular anatomical museums.

It is a credit to Sappol's imaginative approach to an eclectic range of textual and visual sources that he manages to connect these disparate anatomical worlds into a compelling analytical whole. There are elements of his ambitious and innovative study that are not entirely satisfying. The self-understanding required of modern subjecthood, for instance, seems to rest as much on physiology as anatomy, and despite his rich account of anti-anatomical rioters, too much is made of anatomy's public and medical appeal. Nevertheless, this is a work of keen intelligence and creativity, rich in detail, bold in its claims—a stimulating and innovative contribution to the cultural history of medicine.

## Ian Burney,

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Angelique Richardson, Love and eugenics in the late nineteenth century: rational reproduction and the new woman, Oxford University Press, 2003, pp. xvii, 250, illus., £45.00 (hardback 0-19-818700-9).

Love and eugenics in the late nineteenth century provides an illuminating examination of the ways in which feminist writers incorporated eugenics and notions of rational reproduction into fiction in the late nineteenth and early twentieth centuries. Focusing on feminists such as Sarah Grand and George Ellerton, who embraced the ideas of Galton and Darwin, and Monica Caird who challenged such views, Richardson provides a rich understanding of the ways in which eugenics informed the British literary world in the late nineteenth and early twentieth centuries. Drawing on a wide selection of fiction, periodical press cuttings as well as the writings of eugenicists such as Galton, Richardson challenges the reader to consider how widespread and pervasive the ideas of

eugenics and debates on women's role in promoting morality and empire were among feminist writers. Some of the most interesting parts of the book are also its illustrations. These deftly show the variety of ways in which ideas of evolution and selective breeding were depicted at the time.

One of the striking features of the feminist writers of the late nineteenth and early twentieth centuries is the way they promoted women as the natural champions of the empire and selective breeding. In this context women were encouraged to choose their reproductive partner rationally and carefully so as to protect and advance the human race. Women were seen as the vanguard of social and biological progress. By contrast, men were depicted as less rational and judicious custodians of the future. Using the novel and the periodical press, many feminist writers saw their task to educate and cultivate an ethos of responsible motherhood and citizenship to prevent what they perceived as the decline of the British race and empire. Strikingly, some of the feminist writers who encouraged women to choose their male partners rationally and to make life-long commitments did not always heed this in their own lives. Sarah Grand, for instance, who saw "the purpose of women's self-improvement . . . to primarily serve the marriage relation" (p.106), left her husband having borne only one child.

Not all feminist writers, however, shared Sarah Grand's view of marriage or of women's role in promoting rational reproduction and the empire. Moira Caird, for example, questioned whether evolution intended motherhood as a natural function for all women and saw eugenics and biological determinism as oppressive of individual rights. One of Caird's last novels, published in 1931, was an indictment of racial hygiene and the movement to prevent the birth of the "unfit". Like Grand, Caird drew on Darwinian ideas as well as on Lamarck, but she used this to co-opt "evolutionary biology into an alternative narrative which did not give to women the role of "policing society as evolution's 'consciousness' ". Instead Caird showed that women were themselves "subject to evolutionary change" and that they could modify

themselves "to reduce the imperative of the maternal role" (p.197).

Providing a wealth of quotes and provocative insights into feminist writings at the end of the nineteenth century, Richardson tantalizingly leaves the reader wondering what audience read such novels and periodicals in this period. What age and class for example were those reading this work, and how far did such writings change thinking among working-class and middle-class women of the period? None the less, while these questions remain unanswered, Richardson provides an important analysis for anyone interested in feminist thought and the eugenics movement at the end of the nineteenth and early twentieth centuries.

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## Marina Frasca-Spada and Nick Jardine

(eds), *Books and the sciences in history*, Cambridge University Press, 2000, pp. xiv, 438, illus., £52.00, US\$85.00 (hardback 0-521-65063-1), £18.95, US\$29.95 (paperback 0-521-65939-6).

One intriguing and possibly unexpected feature of the new electronic era is the way in which scholarship has enthusiastically shifted focus to re-examine the phenomenon of the printed book. This timely volume of essays emanates from historians and philosophers of science at Cambridge University and builds on distinguished studies in book history ranging from those by Don McKenzie, Robert Darnton, and Roger Chartier to Michel Foucault and H-G Gadamer, bringing to light a number of important functions of books across a wide range of sciences, places and periods. Medicine is mentioned only occasionally, but there is much here that is easily translatable to the history of the medical sciences, from the beginning of print in the middle of the fifteenth century right through to modern debate over the uncertainties generated by on-line biomedical authorship. All the contributors in one way or another explore

issues relating to shifts in the location of authority and credibility, and are particularly concerned with how printed materials came to be perceived as the primary and most legitimate form of scientific knowledge. Genre studies, material culture, publishers and booksellers, illustrative techniques, the rise of the periodical press, encyclopaedias and popularizations, editors, the troubled question of the death of the author, readers and reception theory, indexing and annotation each find their place in various essays. As an entity, it presents a substantial, innovative and stimulating assessment of what books—and more broadly printed matter in general—have meant during the long processes of construction, consolidation and diversification of western science from about 1453 to the year 2000.

The volume starts with Rosamund McKitterick's account of the dissemination of natural philosophical ideas before print, a necessary opener for a useful set of six or so essays on early natural philosophy that dwell in various ways on the physical arrangement and intended meanings of the knowledge contained in books. Cardano's medico-astrological charts and principles feature prominently in an interesting discussion by Anthony Grafton. The distribution of printing privileges, the rise of illustrated herbals and anatomies, and a strong account by Lauren Kassell of the mystical inductions needed in the sixteenth and seventeenth centuries for reading alchemical texts, follow on. In the second section, broadly devoted to the eighteenth century, William Clark covers the development of the research library, Richard Yeo deftly summarizes his important work on encyclopaedic knowledge, and footnotes, fashion, young readers, the physiology of reading and the periodical market make a fine showing.

A provocative theme that snakes through the earlier parts of the volume is the shifting emphasis on the act of reading itself. The voice as a means of communication—the lecture, the sermon—gradually gave way to bookish knowledge that depended more on literacy and memory, although not without scholarly misgivings, as Silvia De Renzi points out. The relations between print and other means of