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Carl Zimmer. *Soul Made Flesh: The Discovery of the Brain—and How It Changed the World*. New York: Free Press/Simon and Schuster, 2004. 367 pp. \$26.00 (cloth). ISBN 0-7432-3038-8.

In telling the story of Thomas Willis and the collective investigations of body and brain in seventeenth-century England with tremendous energy and enthusiasm, journalist Carl Zimmer has written one of the best recent books of popular history of science. The full range of readers will be rewarded by Zimmer's synthetic scholarship and his evident pleasure in the language of the primary texts. While he owes much to the work of Robert Frank and Robert Martensen in particular, Zimmer has negotiated a vast secondary literature on the major figures of early modern natural philosophy. His decision not to discuss scholarly controversy directly, but rather to give accounts of these people that were consistent with the current consensus (p. 304) is understandable given the mass market at which he has successfully aimed; yet such a voice would bring a welcome freshness to specialists' debates.

As if in homage to eclectic early modern works, Zimmer includes a wide range of topics, allowing his narrative to lose focus as he digressively follows biographical and historical threads. Two introductory opening chapters give us the history of investigations into body, nerves, and spirits from the Greeks to Vesalius, and a potted account of the early "scientific revolution" from Copernicus to Descartes. Then he moves to England, weaving multiple narratives of Willis's life, work, and times, of his colleagues, patients, contemporaries, and rivals—we get sketches of Charles I, Wilkins, Petty, Hobbes, Harvey, van Helmont, Cromwell, Hooke, Boyle, Wren, Lower, Charles II, Anne Conway, More, Locke, and Sydenham, among others—and of the experimental and conceptual challenges facing the "neurologie" and "psycheology" of the time.

Zimmer doesn't always escape the bane of his genre—the quest for precursors. Phrases like "to create a scientific culture" (p. 93) and "relentless attention to scientific detail" (p. 142) are unnecessarily alien in this context: to say that Willis made the brain and nerves "a subject of modern scientific study" (p. 240) is unhelpfully to imply that Willis knew what "modern science" might be. But Zimmer is at least attempting something more deliberate with his creative anachronism, for he wants to use his historical eye to tell us something about the present, about our own "Neurocentric Age." Sometimes, when talking Willis up and stressing his foundational role, Zimmer shares in contemporary neuroscientific boosterism: denigrating Locke's skepticism about "the physical consideration of the mind," for example, he argues that it would take neurologists 150 years to show that Willis was right, that studying the anatomy and chemistry of the brain can indeed reveal the workings of the mind, that they can "map the geography of passion, reason, and memory" (p. 255). Zimmer too often writes as if the "brain itself alone produces love and sorrow, . . . composes our thoughts" (p. 5), and unaided governs "everything in our lives" (p. 264), and his final chapter is a swift impressionistic romp across an assortment of topics in the neurocognitive sciences.

But in a more interesting and uncertain tone, Zimmer acknowledges science's enormous ignorance about the brain and its functions, repeatedly comparing the pragmatic but ill-understood benefits of modern psychopharmaceuticals with the hopeful and fairly traditional treatments Willis recommended for his patients' ills. As "a backward-looking revolutionary" (p. 152), Willis retained many of the remedies of traditional Galenic medicine even when couching his accounts of their (limited) efficacy in new chemical terms. Ordinary experience retained an appropriate place in explanation as well as therapy: even when his avowed aim

was “to alter the corrupted corpuscles of the brain” (p. 240), Willis “did not try to reduce the psychological life to simple mechanics but tried instead to find a pattern of chemical events complex enough to match the complexity of people’s inner lives” (p. 228). The richly dynamic seventeenth-century schemes of leaping or wayward animal spirits, nervous ferments, cerebral folds, and distempered thoughts easily spanned the passions, mood, fantasy, and psychological confusion in ways in which later, more static visions of the nervous system could not.

The breathless heart of the book, however, lies in Zimmer’s rich evocation of the experimental thrill of the 1650s and 1660s when, working through the uncertain times with Lower, Wren, Boyle, and all, Willis “addicted [himself] to the opening of heads” (p. 174). With a fine nose for the oddest smells and stories from the period, Zimmer takes us through the work on fevers, blood, comparative brain anatomy, and cerebral pathology. He raises, without seeking to answer, some challenging historical questions about the activity of nervous matter, about what room Willis left for the rational soul, and about moral responsibility and self in that earlier Neurocentric Age. His book’s success is well deserved and can only encourage readers to wonder further about brains and history.

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Lawrence J. Nelson. *Rumors of Indiscretion: The University of Missouri “Sex Questionnaire” Scandal in the Jazz Age*. Columbia, MO: University of Missouri Press, 2003. 344 pp. \$39.95 (paper). ISBN 0-8262-1449-5.

In the early twentieth century, the young social sciences of sociology and psychology found a means of quick and quantifiable application through the use of questionnaires. At the University of Missouri in 1929, young, popular sociology professor Harmon DeGraff was teaching a course named “The Family.” A component of the class was a group project open to any subject that related to course material. Senior psychology major Orval Mowrer headed a group of classmates in a project whose stated intention was to gauge the effect of economic independence upon women.

The questionnaire contained what, at the time, some considered to be morally incendiary topics (such as “trial marriages,” “illicit sex,” and “easy divorce”). The questionnaire was sent out to a random sampling of students, a handful of whom raised concerns about the tenor of the questions, sparking a controversy on campus and in the community. In less than a month’s time, DeGraff and psychology professor Max Meyer were dismissed and suspended from the university, respectively.

Lawrence J. Nelson’s *Rumors of Indiscretion* chronicles the events that unfolded after the distribution of the questionnaire in meticulous detail. The author calls on a wide array of source material to reconstruct the times, giving the reader a thoroughly rich perspective (at times exasperatingly so) as the story moves from the initial reactions on the campus and in the community at large to a history of the campus culture of the era, before addressing the wide-reaching fallout of the scandal.

Nelson’s research is remarkably thorough, and his methods of weaving this vast amount of material into the narrative are admirable in their detail but ultimately detract from the flow