

Book

Vaccine battles in the USA

When Hungarian obstetrician Ignac Semmelweis realised the infectious nature of puerperal fever in the 1840s and called on caregivers to wash their hands between the autopsy rooms and the wards, he was ridiculed, partly because his theory ran in the face of orthodox theories of contagion, partly because he did not properly publish his results, and partly because doctors were loath to accept that their own, dirty hands had caused the death of countless women. This cautionary tale seems to have modern reverberations in the debate about thiomersal and autism, which David Kirby chronicles in his new book *Evidence of Harm Mercury in Vaccines and the Autism Epidemic: A Medical Controversy*.

Vaccination against childhood diseases was one of the greatest public-health achievements of the 20th century. Smallpox has been eradicated, polio has all but disappeared from the developed world, and, in the USA, there has been a more than 99% reduction in measles and rubella since vaccines were introduced in the 1960s. Important efforts are underway to promote vaccination against preventable childhood diseases in the developing world. And as vaccines are, in general, extremely safe, so governments, the drug industry, and physicians all have a vested interest in promoting vaccination.

In the USA, a group of parents of autistic children challenged this effective public-health programme. Autism often presents its initial symptoms around the age that children receive a large number of vaccinations and some parents saw a potential cause, post-hoc as it may have been. Theories about vaccines and autism had begun to surface, with little evidence or support, in the 1980s. Nearly a decade later in the USA, a group of parents formed the Coalition for Safe Minds and set out to investigate the issue.

What they found shocked them: their children had received vaccines preserved with thiomersal (known as thimerosal in the USA), which contained 49.6% mercury by weight; five shots in one sitting gave children doses of mercury that exceeded reportedly safe concentrations in adults, although little is known about the toxic effects of ethylmercury,

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the form found in thiomersal. Some symptoms of mercury poisoning appeared to be similar to those of autism, and, by all accounts, autism was on the rise, seemingly since certain mercury-containing vaccines had been added to the immunisation schedule.

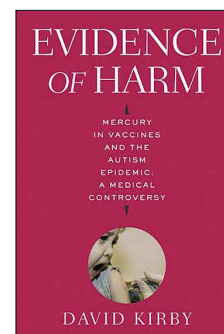
Claims of an epidemic were hotly disputed by the scientific establishment on the grounds of ascertainment bias: the classification schemes had changed to be more inclusive, and special education systems had become better equipped to diagnose children with autism. But as their opponents were quick to point out, there had not been declines in other developmental disorders that would account for this diagnostic shift, nor could anyone find the hidden hordes of autistic adults previously misdiagnosed.

David Kirby, an investigative journalist and regular contributor to *The New York Times*, took up the story in 2002 when he found that there had been a mysterious rider attached to the Homeland Security Act passed in the wake of 9/11 that provided indemnity to pharmaceutical companies for vaccine-related suits, shifting

them to a small federal court with a short statute of limitations. The language was originally part of a bill written by Senator Bill Frist, a conservative politician and former surgeon with strong ties to the pharmaceutical industry. If pharmaceutical companies were scared enough to pull political strings, were they hiding something?

In a story fraught with recrimination and allegations ranging from undisclosed conflicts of interest to a huge governmental cover-up, Kirby follows a group of parents lobbying for what they perceive to be justice. Although there are reports that the US government had considered calling for the removal of mercury from vaccines as early as 1982, and that Merck had calculated the bolus mercury dose children were receiving in 1991, the issue was not revisited until the late 1990s, at which point thiomersal was voluntarily removed from vaccines on the recommendation of the American Academy of Pediatrics and the US Public Health Service.

Several epidemiological studies have shown no association between thiomersal exposure and autism. Much of the parents’ argument hinges on preliminary analyses of one of these studies, from the Vaccine Safety Datalink (VSD), which originally found an association, and a leaked transcript of a meeting of government officials and scientists to discuss the data. In 2004, an Institute of Medicine (IOM) report, which commented on the differences between the preliminary and published data from the VSD study, concluded that the evidence favoured rejection of a causal association and that biological mechanisms were merely theoretical at this point. The committee publicly recognised that the perception that vaccines are dangerous could prompt parents to delay or refuse vaccination, having potentially disastrous public-health implications.



Evidence of Harm Mercury in Vaccines and the Autism Epidemic: A Medical Controversy
David Kirby. St Martins Press, 2005. Pp 480. \$26.95. ISBN 0-312-32644-0.

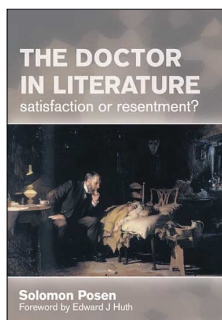
In Kirby's engrossing, if partisan, book, the so-called Mercury Moms battle against Big Government and the pharmaceutical industry with few allies. Kirby claims that representatives of government agencies and the pharmaceutical industry would not grant him interviews; the resulting one-sidedness renders his account incomplete. Although the book contains all the requisite facts, the evidence put forth is heavily editorialised, and the wheat is not always separated from the chaff—the parents argue at times on behalf of methodologically questionable research published in obscure journals. The parents' seeming lack of understanding of the politics of scientific publication and the careful wording of conclusions in peer-reviewed journals will be frustrating to medical readers. Nevertheless, the book is a

fascinating study of partisanship and the nature of discourse between the medical establishment and a campaigning group of parents when, as Kirby acknowledges, "each side accuses the other of being irrational, overzealous, blind to evidence they find inconvenient, and subject to professional, financial, or emotional conflicts of interest that cloud their judgment". While financial ties to industry are a pressing issue for physicians and scientists, the implication that epidemiological data were finessed to cover up a real association and that proindustry agendas compromised the safety of children may well be seen as inflammatory and insulting to those who have devoted their careers to helping the sick and preventing disease.

The history of medicine is rife with mistakes. Even the damning theory

that autism was a result of poor attachment to uncaring mothers held sway for nearly 20 years before enough biological evidence accumulated to disprove it. Perhaps, as evidence accumulates, the thiomersal theory may be validated, just as Semmelweis' work was eventually vindicated. Perhaps not. Inquiry into the aetiology and treatment of autism continues, though the seeming finality of the IOM report may stifle important research into environmental causes. Kirby's book, as biased as it is, prompts us to dig deeper into this vital issue. One can only hope that medical and lay readers alike will react to the book responsibly, with both scepticism and an open mind.

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The Doctor In Literature: Satisfaction or Resentment?
Solomon Posen.
Radcliffe Publishing, 2005.
Pp 304. £29.95.
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In brief

Book **Literary doctors**

Considering how different are the disciplines of literature and medicine, they remain surprisingly porous to each other's activities and preoccupations. Literary accounts of illness and medical practice are almost as old as the written record, and today they abound. Such accounts together constitute a vast canvas of suffering and the medical help it has summoned up across the centuries. Medicine has provided literature with innumerable materials about the diseases and malfunctioning of the human frame, and writers have drawn on these descriptions in their explorations of the meaning of illness and the nature of clinical authority. Medicine, itself, has drawn on literary sources and genres of representation, to develop narrative tools to help bridge gaps between the reported experiences of patients and the scientific understanding of disease.

The Doctor in Literature reflects both the liveliness and mutual interactivity

of this interdisciplinary zone. The book offers an anthology of quotations from some 600 works—novels, short stories, and plays, almost all in English—that depict especially strained relationships between doctors and patients that seem difficult or in some way unsatisfactory.

Solomon Posen, a retired professor of endocrinology (who studied literature before medicine), has selected passages that vividly illustrate many of the enduring tensions between doctors and patients. In assembling these passages (with little overlap) from all periods, Posen sets out some 1500 literary snippets that embody many aspects of past and present doctor-patient relationships, including intense emotionality, cold medical detachment, tragi-comic interactions, bizarre antics on both sides, and much humour. The inevitable brevity of many quotations is only partly compensated for by the range of literary sources that the author commands (which is

impressive), but this volume will surely lead many readers to immerse themselves in the original literary sources, which are well referenced and indexed.

Posen's book will whet appetites for medico-literary study at undergraduate and graduate levels. It attests to the growing recognition that literary studies in medicine can help modern day students—still par excellence students of fact—to develop their moral imagination, to discern and appreciate human foibles, subjectivity and ambiguity, and to tolerate paradox (<http://www.kcl.ac.uk/english/litmed.html>). For tomorrow's doctors, like today's, will come to realise as soon as they begin to practise, that medicine is not supported by facts alone. This book signifies how much we can all learn about medicine and the human relations of practice, from reading, studying, and enjoying literature.

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