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multiply, there is a possibility that things can go wrong, they can multiply excessively and migrate to improper sites. The first recognition that cancer spreads by the lymphatics was that of Henri François Le Dran in 1757 and it was only in 1829 that J C A Récamier described the invasion of breast cancer cells into the veins—the microscope was essential for progress, as was cell theory, which is at the core of Rudolf Virchow's studies on cell pathology. Cancer is now recognized as a clone that comes from a single cell whose offspring vary and are selected, unfortunately, for their own survival and not that of the host organism. It is a true Darwinian evolutionary process. The initial step is often a mutation and the first to be identified was that in the RAS gene. Survival into old age greatly increases the risk of cancer as there is more time for errors to accumulate. As A R Rich showed over sixty years ago, 25 per cent of men over seventy have invasive cancer of the prostate.

While as many as 20 per cent of Americans believe that cancer is infectious, the contrary is true. However, viruses can cause cancer. Nicolaes Tulp, the doctor in Rembrandt's *Anatomy Lesson*, did believe it was infectious. Even when cancer cells are injected into another human—it was actually done on prisoners in the USA—it has no serious effect. However, Greaves himself has a case of a mutant cell clone being spread from one identical twin to the other in the womb. Thus, contrary to Susan Sontag's metaphor for cancer, it is quite unlike infectious diseases such as TB. The environment also plays a role, particularly life style. Percivall Pott in the eighteenth century recognized that cancer of the scrotum was linked to the job of being a chimney sweep. Smoking is a major cause of lung cancer as shown by Richard Doll, and cancer of several organs like the liver and stomach are biased to the poor end of the socio-economic scale. Ironically, tobacco was originally thought to be a panacea for

a variety of afflictions from toothache to deafness. And in 1761 John Hill published a pamphlet cautioning against immoderate use of tobacco snuff. Yet the great geneticist Sir Ronald Fisher argued against a causal link.

Cure is a problem. "Cancer cannot be cured and never will be cured; but the world wants to be fooled", wrote Gui Patin in Paris in 1665. Greaves, too, is slightly pessimistic since as the cancer clone expands it evolves and so escapes negative selection by most therapies. There is unlikely to be, though we cannot be sure, any magic bullet to provide a universal cure.

This is a very useful and informative book.

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Christian Warren, *Brush with death: a social history of lead poisoning*, Baltimore, Johns Hopkins University Press, 2000, pp. xiv, 362, illus., £35.00 (hardback 0-8018-6289-2).

Christian Warren presents the social history of lead poisoning in twentieth-century America as a complex and compelling lesson in the shifting ways of perceiving and managing health risk. Warren unfolds this history as a set of dialectic interactions between individuals and groups (environmental activists, public health officers, victims and their advocates), medical and scientific techniques, and the cognitive frameworks that organize and legitimate intervention in the lead debate. It is a story not of heroes and villains, nor of battles definitively won or lost, but of mutating thresholds of sensitivity (social, technical) through which the dangers of lead to individual and collective bodies have been (and are being) continually reassessed.

Warren's account focuses on three categories of exposure: occupational,

paediatric, and environmental. Occupational health in the opening decades of the twentieth century was the first context in which the pernicious effects of lead were systematically investigated, and Warren details the work of Progressive era industrial sanitarians and company doctors with due consideration for their aims and successes, as well as their limitations. Here we first see the benefits of Warren's resistance to simple narratives of progress. Diagnostic and epidemiological techniques arising out of occupational health research constructed a definition of lead poisoning based on gross symptoms manifest in the bodies of adult workers, from which a blood content measure was derived and generalized as a binary health/poison standard for the population as a whole. On the one hand, this crude threshold enabled equally crude (though effective) changes in working practices palatable to industry on the grounds of relative cheapness and efficiency. On the other hand, by setting a narrow and acute definition for lead poisoning, the ravages of paediatric and environmental plumbism remained out of sight. The problem was thus "contained", not through explicit efforts at cover up by industry or its commissioned medical research, but by the very terms of recognition that these actors had been so instrumental in bringing about.

This dynamic of containment runs through the book, as Warren demonstrates how differing medical, scientific, and social definitions of lead poisoning act as enabling constraints, in that they simultaneously limit the range of possible action and yet make *some* action possible. Paediatric plumbism, "discovered" in the 1920s and 1930s, was, like its occupational version, confined, this time not within the physical walls of the factory, but in a social and conceptual space bounded by race and class. Still measured by adult symptomological standards, the threat of lead to children's fast metabolizing bodies quickly became understood as a threat to

the health of the economically and culturally "backward" living in the degraded inner cities. Again, Warren treats this constraint as at once enabling and limiting: it stimulated a vigorous and sustained campaign on the part of urban public health officials to tackle the challenges of the leaden ghetto, while at the same time occluding the broader environmental threats to child health (for example, the insidious and universal effects of leaded gasoline) by reinforcing the acute definition of lead poisoning.

This link was shattered in the 1960s, when a new set of forces coalesced to create a radically different regime of sensitivity, one that displaced the long-held health/poison threshold with one that identified pernicious effects of exposure to lead at any measurable level. It is significant that the pioneer of this modern, universalistic approach to risk was a geochemist (Clair C Patterson) who became interested in the effects of environmental lead as a result of his concern for laboratory purity—for a lead-free space in which to experiment with sensitive lead isotopes. Through the high-profile advocacy of Patterson and others, lab-inspired standards of intolerance were transposed onto the leaden environment and its inhabitants, resulting in a refined epidemiology focused on asymptomatic and chronic conditions (notably lead's impact on mental function). Lead poisoning, in Warren's terms, shifted from the ghetto to the suburban nursery, no longer a crude assailant on the vitality of marked groups but a "pandemic thief of intelligence" (p. 236).

This broadened perception of risk accounts for the paradox that widespread concern over lead poisoning peaked at precisely the time that environmental levels begin to fall. But, as with earlier regimes, this universalistic threshold of risk brings its own form of containment. Increasingly stringent standards for acceptable levels of lead, Warren warns, now threaten to marginalize de-leading advocacy as an

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exercise in excessive regulation based on overly abstracted scientific norms. To counter this, Warren ends with a call for a reconstituted coalition of science and public activism. In this sense *Brush with death* participates in the history it chronicles: a book written with a rare combination of scholarly rigour and passionate public concern, it provides an intelligent and provocative platform on which to rethink our place in our leaden world.

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G Chamberlain, *Victor Bonney: the gynaecological surgeon of the twentieth century*, Carnforth, Parthenon Publishing, 2000, pp. xi, 140, illus., £19.95, US\$29.95 (1-85070-712-X).

For anyone contemplating a study of élite British medicine in the twentieth century this book is a must. This is particularly true if such a study centres on London and the inter-war years. Nowhere in Britain in the twentieth century could compare with London with its ostentatious display of the wealth and privilege bought by medical practice among the rich. Perhaps the acme of this culture was the Edwardian era, undoubtedly the most class-conscious period in British history. At that time many consultants arrived at the great London hospitals from their servant-riddled houses in W1 to have staff and patients alike bow and scrape before them. The doctors, of course, were giving their time *gratis* to the poor. This was the bourgeois version of *noblesse oblige*. During weekdays, the club or elaborate dinner parties occupied their leisure hours (which for some workaholics were truly few). At the weekends many of them retired to their country homes, to fly fishing and to create exquisite gardens,

tended and weeded by local gardeners. Many of these men were the most skilled diagnosticians or accomplished surgeons in the profession although, of course, other Harley Street practitioners flaunted the same style without having equivalent substance. Perhaps rather less flamboyantly and rather more nervously, display of medical opulence continued during the inter-war years, although the Rolls-Royce and the Daimler replaced the horse-drawn carriage. Democratic sentiments, socialist doctors and a murmuring about state medicine no doubt fostered this slightly more muted statement of the profession's ideal place in society.

Victor Bonney was born in 1872, the son of a general practitioner living in Chelsea. Under the tutelage of John Bland Sutton at the Middlesex Hospital and the Chelsea Hospital for Women, this promising young man had by the First World War become one of the most skilled general surgeons, with particular dexterity in gynaecological operations, to grace the London scene. Aged over forty when the war broke out, he had a distinguished publication record largely in practical gynaecology but also in pathological research. The years before the war saw him living in the obligatory relative poverty of the struggling doctor (along with a devoted wife) before the fruits of very hard labour could be fully reaped. War service was based at Clacton-on-Sea where a great deal of general surgery on wounded soldiers occupied the day. Branded a gynaecologist, Bonney never got the reward for his war work that he probably felt he deserved. If he did not, the fame and comfort of inter-war success must have compensated a little. Bonney became an international figure at this time. He had perfected new techniques for total hysterectomy and the removal of fibroids. A generation of Chelsea-trained gynaecologists learned these methods, which although largely not credited today, still live, lying deep in the surgeon's repository of tacit