

Book of the month**Karch's Pathology of Drug Abuse**

Over the past decade, the widespread use of 'recreational' drugs has been increasingly acknowledged. In a burst of revelation last year, politicians of various hues confessed to having used illegal substances—in their younger days. The police tell us that a substantial proportion of certain crimes are drug-related, and there is debate on whether the laws on drug use need to be modified. Meanwhile, governments have announced 'war' on drugs, and 'drug czars' have come on the scene.

The debate on drugs is not always well informed. Anyone who seeks good information on the subject would do well to consult the writings of Steven Karch, an American pathologist with many years of research experience in the area. I have regularly turned to his textbook *Pathology of Drug Abuse* in its two previous editions. A third edition was eagerly awaited, because knowledge of drug effects has increased and patterns of use have changed. For instance, methylenedioxymethylamphetamine (MDMA, 'ecstasy'), which originally reached Europe from America, has lately recrossed the Atlantic while cocaine is gaining ground on this side of the pond. In launching the third edition, Karch's publishers have saluted the author with an eponymous title—*Karch's Pathology of Drug Abuse*¹. The book is longer than its predecessor of six years ago and has an additional 800 references. It is not just about pathology; also covered are the toxicology and clinical effects of the drugs, as well as epidemiological data, drawn mostly from DAWN (Drug Abuse Warning Network) surveys. DAWN provides data on drug deaths in the USA. Of great interest are the historical introductions to each major group of substances.

Do not turn to this work for information on either alcohol or marijuana. The first is very reasonably excluded because it requires its own textbook; the second because there are too few data on pathological effects. Cocaine is the subject of the first chapter, 187 pages long. Karch has a special interest in this drug, which in DAWN surveys was the commonest cause of drug-related death (in the UK, the commonest cause is heroin). He begins with history. The purification of cocaine led to a wide range of medical and non-medical uses; it became a popular additive to wine and was used as a treatment for morphine addiction—a strategy promulgated by Freud though first recommended by American physicians. Cocaine was not the only newly discovered agent to follow such a course: for example, amphetamines were recommended for seizures, schizophrenia, multiple sclerosis, head injuries, migraine, radiation sickness and morphine addiction, and heroin was sold as a

cough suppressant. Cocaine toxicity was soon recognized, but many of the ill-effects had to be rediscovered when use of this agent exploded in more recent times.

One matter dealt with throughout the book is the interpretation of toxicological findings. For example, a chronic drug user who dies of a non-drug-related cause, such as being shot, may have a much higher concentration of the drug than someone who has died of an overdose. There is also the complication of post-mortem drug redistribution: thus, samples taken from separate anatomical areas may have widely different concentrations of drug; what then, is a fatal drug concentration? A very detailed description of cardiovascular pathology and cocaine includes discussion of deaths during arrest and in custody, and the contribution of postural asphyxia, excited delirium and other factors surrounding these often high-profile events.

After cocaine comes an examination of naturally occurring stimulants, including absinthe (a popular drink in the 19th century and before, and now enjoying something of a come-back in the UK), caffeine, ephedrine and khat. Khat, a plant that grows in parts of Africa, is a legal substance in the UK but illegal in the USA. The leaf (which is chewed) contains a stimulant, cathinone, similar to amphetamine; like amphetamine it can be associated with development of a psychotic illness. Ephedrine was used as a treatment for asthma and is a constituent of certain food supplements ('herbal ecstasy'). It was given to kamikaze pilots in the Second World War and ephedrine abuse was widespread in post-war Japan. Today it is used as a precursor chemical in the illicit manufacture of amphetamine and methamphetamine. In America methamphetamine is increasingly important in drug-related deaths, but this agent (in contrast to amphetamine) is seldom encountered in the UK. This chapter also deals with misuse of methylphenidate (Ritalin). All the evidence indicates that, as with methadone, methylphenidate is diverted from clinical use rather than being illicitly manufactured.

The chapter on hallucinogens includes mescaline, MDMA and similar compounds, phenylalkalines such as psilocybin (the psychoactive compound in 'magic mushrooms') and lysergic acid diethylamide (LSD). The MDMA section has been much expanded from the previous edition, reflecting the now widespread use of these drugs and the concomitant increase in published reports. Another agent discussed in this chapter is bufotenine. This substance was the active component of certain hallucinogenic snuffs described by 16th century explorers of the Amazon. It is famously present in certain species of toad, giving rise to use of bizarre toad products as hallucinogens.

Opiates are awarded 142 of the book's 541 pages. Opium was mentioned by Homer and artifacts relating to opium predate the poet by a thousand years. Abuse of the drug has a long history, including Britain's war with China

to maintain her opium trade. Karch records the advent of the hypodermic syringe, which advanced the use and abuse of opium products. Whilst credited to the Scottish physician Wood, the idea was first suggested by Christopher Wren, who as well as being an architect and astronomer was a physician. Wren experimented by injecting dogs with opium. Another important event in the history of opiate abuse was the synthesis of heroin, by CR Wright at St Mary's Hospital in London in 1874. By the 1920s heroin abuse was so troublesome that the American Medical Association voted to prohibit importation of the substance. The first necropsy report of an opiate death was in 1852, but this has never been a popular subject for pathological study. Despite the large number of deaths in the 1990s, the interval between the first and third editions of Karch's book (ten years) saw only twelve new papers recording microscopical findings in opiate deaths.

A new chapter, on disassociative anaesthetics, includes descriptions of the effects of phencyclidine (PCP) and the chemically related ketamine and γ -hydroxybutyrate (GHB). These compounds have hallucinogenic properties. PCP first appeared in California in the 1960s. Its popularity in the USA has declined and it is not currently encountered in the UK. However, ketamine, which was developed as a legitimate anaesthetic, is well known on the dance scene under the name of 'special K'. GHB, currently lawful in the

UK, is likewise increasingly encountered on the dance scene and has been used as a 'date rape' drug. This agent has been associated with several deaths, particularly when combined with alcohol. It is produced in the body after death, so interpretation of post-mortem toxicological findings can be complex. Because of its property of stimulating growth hormone release, GHB has been popular with body builders. Anabolic steroids, another staple of body builders and athletes, are discussed in a separate chapter. The book also gives proper attention to solvent abuse, an often neglected but important cause of morbidity and mortality in which the victim is typically younger than in other forms of substance abuse.

Karch's book is well illustrated and extensively referenced. The appendices include useful tables on heart weights, volume distribution and blood alcohol concentration estimates and conversion formulas for drug concentrations. I warmly recommend it to anyone who deals in any capacity with the effects of substance misuse.

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REFERENCE

- 1 Karch S. *Karch's Pathology of Drug Abuse*, 3rd edn. Boca Raton: CRC Press, 2002 [541 pp; ISBN 0-8493-0343-5 (h/b); US\$89.95]

Fine Wines and Fish Oil: the Life of Hugh Macdonald Sinclair

Jeannette Ewin

358 pp Price £25 ISBN 0-19-262927-1

Oxford: Oxford University Press, 2001

Hugh Sinclair was born and brought up with advantages of money, social connections from an Army and distinguished engineering family, an impressive physique and lots of intelligence. As a medical student he became interested in a wide range of topics related to nutrition and biochemistry and how these interacted to determine health. He became leader of the Oxford Nutrition Survey in the 1940s, and Reader in Nutrition with his own laboratory. He then lost his post and his laboratory, and never published significant laboratory or clinical work. Why does this apparent story of promise and failure rate a biography?

I knew him as a tutor who did not care if we failed anatomy exams, as long as we learnt the importance of considering evidence. As director of the human nutrition laboratory he asked me to join him for a year as a postgraduate. We worked in a pair of large Nissen huts in the grounds of the Churchill Hospital. One day when Hugh

was working in the laboratory a bench away from me, his secretary brought me a note from him to the effect that, while I might whistle tunelessly, he had better things to do than to listen to me. I was a bit surprised; I did not know that little notes were the way Hugh normally communicated at home, with his mother and sister. Nor did I know that, when he boasted gently of being one of the youngest men ever elected to the Athenaeum, he neglected to reveal his mother had bought him in, by a combination of money and connections.

Not knowing that the rude remarks which he made in the laboratory about many of the influential figures in Oxford science he also made in public, we did not realize why they got on so badly with him. He lost his laboratory and his readership. He stayed on as tutor and was later vice-president of Magdalen, but that was all. Still, he knew the right people, and when much later he went on to an 'anti-coronary' Eskimo diet of seal meat and fish with no vegetable or land animal material, his seal was sent to him by the Danish ambassador. I remember having dinner with Hugh at Magdalen high table, an excellent meal, but Hugh ate his piece of grilled seal. He enjoyed his diet, he said, but when he pruned his roses his boots filled up with blood,

because his clotting factors had been somewhat disturbed by the diet, and each scratch bled.

His style of supervision was to leave his research students to get on with it and not to advise them, except on the best kind of sherry. Sink or swim suited me, but it was not right for others. After a year's work I wrote my thesis, which was accepted. It had new ideas, but Hugh never told me to prepare a paper for publication. That was typical.

One might ask why bother to write a biography of a 'failed' Oxford don. There are three answers: he was an interesting man, he had one exceedingly important idea, and he exemplifies the problem that science has little place for critics. His idea was that there was an epidemic of coronary heart disease sweeping over the rich countries, and the evidence pointed to a dietary cause, which Hugh reckoned was lack of polyunsaturated fats in the diet. He was vastly knowledgeable about the published work of others, and often scathing about others' failure to understand the consequences of their own work. This did not make him universally popular.

Hugh did not have the patience needed to take a piece of laboratory work to a successful conclusion and publication. But he did know and think about other people's work. I remember a meeting of the Medical Research Society where Hugh spoke about relative deficiency of essential fatty acids. He was criticized on the grounds that margarine had plenty of polyunsaturates, and when he said that hydrogenation would convert many of these to useless cis-trans forms, there were roars of laughter at this improbable set of suggestions. Scientists do not like criticism, especially when the critic is not a laboratory achiever and is rude as well. Jeannette Ewin's biography brings out much of the strangeness of Hugh's life—the concealments, the oddities—but does not make clear how interesting he was to talk to; how, in spite of his conventional family background, he was truly interested in ideas and people who would think about things medical and scientific. He believed that epidemiology, clinical skill, and biochemistry were all required for an understanding of the way food supply altered human existence. In this he was a pioneer, though the huge data collection from his survey of nutrition at the end of the war, in Holland and Germany, was never analysed or published. He should have been used as a critic and consultant while others got on with the data, but then he was too difficult in his dealings with people for that to have worked well. The biography is scathing about Hugh's faults and does not capture his charm; it sets out an object lesson in how not to make friends but still, in the long run, influence people's thinking. As such it will repay reading by anyone interested in the history and development of medical science and nutrition.

We need people like Hugh Sinclair, who think about current problems in specific areas of science or medicine even if they do not contribute laboratory results or epidemiological findings. Philosophers of science deal with too broad an area to offer the detailed criticism that we need. In music or literature the critic is acknowledged as playing a vital role. Gifted critics can provide detailed analysis of a performance, and give insight and encouragement to new audiences, even though they are not performers. The science critic's role is still undefined and undervalued.

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The Ethics of Medical Research on Humans

Claire Foster

159 pp Price £17.95 (US\$24.95) ISBN 0-521-64573-5 (p/b)

Cambridge: Cambridge University Press, 2001

Claire Foster divides her book into three broad sections. The first introduces the ethical challenges of research, the balance between the need to know and the needs to benefit and to avoid harm. She follows this introductory material with her own way of considering ethics. A short transition leads to a final section which—as books on ethics should—provides cases against which to test the framework she proposes.

Foster chooses a form of limited ethical pluralism as her model. She suggests that our ethical consideration of research should be driven by three kinds of morality. First is a consequentialist goal-based morality which requires that we consider the goal of the research, the scientific validity and appropriateness of the methods proposed, and the ways in which the results will be disseminated. Second is a deontological duty-based morality, based on both natural law theory and Kantian categorical imperatives. Under this heading, we need always to consider the primary obligation of the medical person to act in the best interests of and for the benefit of each and every patient. Third is a right-based morality, again deontological in origin, which demands respect for the autonomy of each patient, an observance of criteria for informed consent, and a respect for confidentiality. Foster argues that this three-part model will remind us to balance our considerations, and that each moral system alone may lead us into error.

Her examples are generally good ones. Various aspects of transplantation (including xenotransplantation and embryo technology), investigations of alternative medical practice and the influence of pharmaceutical companies on publication content and practice provide

examples of the use of goal-based thinking. Placebo controls and non-therapeutic research are examined closely in terms of duty-based morality. Problems with consent and confidentiality provide opportunities to apply right-based morality.

The concluding section discusses how the three approaches can be combined, and how they may fail, and gives a brief history of research ethics committees and a critique of their strengths and weaknesses.

But the book is not a total success. The first and most fundamental drawback is Foster's curious selectivity in her moral models. She argues strongly that her form of moral pluralism will encourage people to think of countervailing moral arguments when they judge research proposals. I think she is right, but I am not clear why her approach will make such thinking any more thorough than, say, principlism. Foster admits that her approach will never solve all the dilemmas we may encounter in research ethics. Ethics, by its very nature, cannot make such promises. I am not a principlist by conviction or practice, but it seems to me that the conflicting issues Foster identifies with placebos, for example, are made just as evident by considering the principles of autonomy, beneficence, non-maleficence and justice as they are by thinking in terms of goals, duties and rights. Similarly, I am left wondering why feminist ethics, discourse ethics, and even some forms of virtue ethics are not pressed into service. Ethical pluralism has much to recommend it, and there are great practical advantages to breaking from the constraints of consequentialism and principlism, which still dominate a good deal of bioethical thought and writing. My point is that Foster perhaps does not go far enough, nor does her analysis of examples demonstrate that her three-fold ethics produces greater clarity or thoroughness than other approaches.

My second criticism is less serious. It is not really clear to me what Foster's audience is meant to be. There is a section in chapter 2, on research methodology, that would be useful to non-scientific members of research ethics committees, but it would be familiar territory for those who do research. Yet she writes 'This book has been addressed primarily to the moral agent, that is, the researcher, and not to the research ethics committee, although it is every bit as relevant to the latter as to the former.' It is indeed relevant to the ethics committee, and it seems to be addressed to an audience unfamiliar with both ethics and science.

There are also a few factual errors. On p. 73, Foster claims that one of the big problems for transplant recipients is 'graft versus host disease', which she defines as 'the recipient's immune system developing resistance to the donor's organ.' It is, of course, just the opposite—the phenomenon of the donor organ producing immunity

against the tissues of the host, and is seen particularly in the recipients of bone-marrow transplants for leukaemia. The common problem is host versus graft disease, usually called rejection. On p.74, she refers to the graveyards of World War I in France as 'crematoria', perhaps conflating the graveyards with the crematoria at the World War II extermination camps.

On balance, the book can be recommended for anyone taxed with judging the ethical aspects of medical research. But I would suggest that those who read it should keep their minds open to other modes of ethical thought.

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The Kidney at a Glance

C A O'Callaghan, B Brenner

128 pp Price £14.95 (p/b) ISBN 0-632-052066

Oxford: Blackwell

What a marvellous book: would that such had been available to me as a medical student nearly 40 years ago when I grappled semicomprehendingly with types I and II nephritis and the countercurrent multiplier system.

The kidney is, of course, the most sophisticated and fascinating of organs—the heart a mere pump; the brain an electrical junction box; the lungs crude bellows—and those of us who treat its malfunctions sit above such lowly specialties. The kidney protects us from dehydration and biochemical disequilibrium; filters metabolic and immunological garbage (recycling where possible); allows us to stand erect without our blood pressure and bodies tumbling; keeps our blood red and our bones strong; and limits the calamitous results of doctors' tendency to prescribe drugs and patients' enthusiasm for taking them. Small wonder that renal failure was the first replacement endeavour: and how spectacularly successful it has been.

By now you will need no persuading of the imperative for a sound undergraduate renal textbook, and *The Kidney at a Glance*, from the youthful O'Callaghan and the seasoned Brenner, offers the necessary blend of immediacy and balance. The forty-plus chapters give generous glances (lingering looks actually) at the topics mentioned above, and many more, each in a couple of crisp pages containing well labelled diagrams and easy-to-follow text, broken up with bullet points and other modern publishing techniques to make the information stick. Also, a website is available for help and to test one's newly minted knowledge against multiple choice questions. (A set of questions is provided for reviewers of the book, and on this, luckily for the publisher, I got full marks.) There is a formidable index.

Any postgraduate examiner would obtain satisfaction from a candidate possessing half the information in this book, and it would be helpful to mature specialists such as myself needing a shot of revision before delivering a lecture on, say, tubular physiology.

And yet, and yet . . . Where is the *passion*? I have been a privileged navigator to scores of patients and relatives steering through the arduous journey of renal disease. Many have symptoms which I have only been able to palliate and all the molecular biology in the world is not going to help end-of-the-road patients and relatives wracked by the decision whether to have one last crack at interventionist medicine. This is the warp and woof of bedside renal medicine which few textbooks come near to conveying and which gives nephrologists the greatest rewards—knowledge of having been of personal assistance. And where is the *context*? How will an undergraduate fresh to renal medicine know that renal stones are more common in children in Karachi than Kidderminster and that unexplained and life-demeaning urinary frequency and urgency are more common than nephrotic syndrome? Presumably the educationalists, assembling the joined-up medical curriculum, will ensure these are covered in the ethics and communication skills and epidemiology courses, but I wonder whether students will make the necessary links with clinical practice. Academic nephrologists neglect or delegate these wider aspects of our blessed specialty at its peril; the young watch and mark.

And now an admission. My daughter cramming for part 1 MRCP(UK) spotted the review copy on my desk, skimmed it through, declared it 'cool' and filched it. Perhaps her judgment is the one to be heeded.

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Tarnished Idol: William Thomas Green Morton and the Introduction of Surgical Anesthesia

Richard J Wolfe

672 pp Price \$125 ISBN 0-939495-81-1 (h/b)

San Anselmo, California: Norman, 2001 (PO Box 2566, San Anselmo, CA 94979-2566 [e-mail: orders@jnorman.com])

Surgical anaesthesia is surely one of the greatest benefactions to humankind. William Morton's place in its history is clear; he was the first to show how ether could be used to allay the pain of operations. This was at a public demonstration to the surgeons of the Massachusetts General Hospital, Boston, on 16 October 1846, for John Collins Warren to excise a tumour from a patient's neck. Equally clear is that he was neither the inventor nor the discoverer of anaesthetics.

It is sad that such an epoch-making event should have been followed by 20 years of acrimony, vituperation and litigation between three contestants each claiming to have originated anaesthesia, though none of the three was actually the earliest. Morton immediately patented ether, hoping to retain its use exclusively for himself. Later he made repeated appeals to the American Congress for financial recompense for his 'invention'. Morton's instructor, the chemist and geologist Charles Thomas Jackson, said it was he who had made the discovery and had suggested that Morton should try it out. Horace Wells, the dentist from Hartford, Connecticut, put forward his well-substantiated claim to have produced anaesthesia two years earlier with nitrous oxide.

This much has been well known for the last century and a half. Wolfe's contribution is to have revisited everything, published and unpublished, that has relevance to these events. As librarian and for 45 years curator of manuscripts at both Harvard University's Francis A Countway Library of Medicine and the Boston Medical Library, he is well equipped to do so. He has studied a huge archive in Boston, New York and Washington, much previously unknown. He presents a very different picture from the standard view of the post-anaesthesia events. His book is long and detailed; no stone remains unturned and his findings are recounted exhaustively. Nevertheless he writes fluently, graphically and with touches of dry humour, the latter noticeably in his chapter titles.

Wolfe believes, and many would agree with him, that if any single individual originated the idea of anaesthesia it was Wells and that he should receive the credit. He had already propounded this view in 1994 in his *Festschrift* for Wells' sesquicentennial entitled *I Awaken to Glory*. He regards Jackson as an able and well-respected scientist, more sinned against than sinning, who seems only to have wanted the honour of the discovery, though noting that Jackson was notoriously keen on litigation and had already shown a tendency to adopt others' work as his own.

Wolfe finds no redeeming features whatsoever in his tarnished idol. He clearly regards Morton as an unmitigated villain who from his teenage years was unscrupulously fraudulent. After a series of failed enterprises Morton eventually settled into the business of making dentures in partnership with Wells in Boston. Wolfe considers that Morton was intellectually incapable of realizing the significance of anaesthesia and used his role opportunistically, purely as a means of reaping a financial reward by being the only person who could extract teeth painlessly. This became a lifelong obsession with him and he stopped at little to achieve it.

Two sidelines I found particularly interesting. First, the role of Henry Bigelow, then junior surgeon at the Massachusetts General. Wolfe feels that it was Bigelow

who foresaw the potential of anaesthesia for patients and surgeons alike when he published the first account in the *Boston Medical and Surgical Journal* and local newspapers. Wolfe shows that Bigelow gave unwavering support to Morton for many years, regardless of the latter's disreputable activities, and hints that his reputation also emerges a little tarnished. Or I wonder was Bigelow merely guilty of poor judgment? After all, years later when senior surgeon at the Massachusetts General he was on record as opposing attempts to improve the education of the Harvard medical students. Second, Wolfe gives a fascinating insight into the political, social and medical attitudes of the time. It is surprising that so many eminent people, both within Congress and elsewhere, could take up such polarized positions and waste so much of their time during a momentous period in American history.

In the 'Afterword' Wolfe gives away a secret—that after writing his book on Wells he had solemnly promised himself not to make a serious study of Morton. Is it possible that, for all his attempts at impartiality, his views on Morton were just a little coloured by his conclusions about Wells? In spite of himself he did study Morton, comprehensively and exhaustively, and surely this work will stand as the final account, so it is helpful that he changed his mind. The general reader may balk at the sometimes tedious and repetitive detail—though one has to say in mitigation that Morton's life was tedious and repetitive. Historians on the other hand will admire the author's scholarship and dedication and will welcome the opportunity to draw their own conclusions.

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Medical Ethics (3rd Edition)

Alastair Campbell, Grant Gillett, Gareth Jones
297 pp. Price £19.95 ISBN 0-19-558445-7 (p/b)
Oxford: Oxford University Press

Medical Ethics aims to provide 'a practical introduction to the ethical questions doctors and other health care professionals can be expected to encounter in their practice'. Divided into three parts, the opening section, Foundations, begins with a brief overview of the main discourses that have come to characterize western secular moral philosophy. An important omission is the failure to explore critically the assumptions underpinning the rationalistic outlook that unites these otherwise diverse ethical frameworks. There then follows an excellent chapter on the 'healing ethos'. After surveying the variant forms that the doctor-patient relationship has historically taken—ranging from the sacred (as in the Hippocratic Oath, for

example) to the paternalistic and, more recently, the consumerist models—the authors propose that a 'covenant model' might profitably be adopted, for it is only a formulation of this type that 'does justice to the religious or humanistic convictions of those who choose medicine out of a sense of vocation and a desire to help those in need'.

The New Zealand flavour to the book (each of the three authors has at some time been based at the University of Otago) offers many useful insights. This is most evident in the chapter on Health Care Ethics in Diverse Cultures, in which the authors display much respect and sensitivity for indigenous Maori cultural norms; also evident is their understanding of the very considerable impact of European colonialism which has, as in so many other parts of the world, irreparably fractured cultural narratives developed and nurtured over the centuries. But a willingness to appreciate the responsibility that must come from belonging to what has arguably been one of the most intolerant of world-views should not, they contend, lead to the other extreme, of uncritically embracing moral relativism. Here they draw on the (rather tired) example of female genital mutilation, contending that even though many African women view the procedure as an integral aspect of their identity it cannot be justified since it is ultimately oppressive. More illuminating for western-trained clinicians might have been an exploration of some of the moral uncertainties in a more mundane issue such as the treatment of the elderly. For many who come from traditions in which the extended family network is the norm, the western practice of discarding frail parents into nursing homes is utterly inhumane; the argument that many elderly people prefer not to be 'a burden' on their children is simply indicative of the way in which a capitalist individualistic culture has successfully institutionalized such moral wrongs, as is the case in those patriarchal African societies that continue to sanction female genital mutilation.

The section on Clinical Ethics is concerned with the broad range of concerns that one would expect to find in a text of this kind—ethical considerations and controversies at the beginning and end of life, tissue and organ transplantation, and the many issues that have arisen in the aftermath of the HIV pandemic. But there are also a few surprises, including very thoughtful discussions on the concept of personhood in those with advanced dementia and a section on 'the blessing of mortality'.

In the final section, Medicine and Society, are considered issues to do with research ethics, the concept of justice in health care provision and medicine and the law. There is also a very interesting critique of the evidence-based medicine movement and the ways in which a narrow understanding of scientific orthodoxy may simultaneously curtail innovation and devalue the artistic dimension to the craft of healing.

This is in summary an elegant, scholarly and sensitive introduction to western medical ethics. By building much of the text around case histories, the authors successfully render the at times intricate discussion into a form that is engaging and challenging. In this third edition the book should continue to enjoy broad-based appeal amongst health professionals. In addition I hope it will be sampled by at least some of our patients, for a common recognition of the complexity and uncertainty inherent in ethical health care provision is essential if we are to promote a covenant relationship that has as its essential feature 'a promise to show active concern for the other'.

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The Nobel Prize in Medicine and the Karolinska Institute: the Story of Axel Key and Alfred Nobel

Bengt Ljunggren, George W Bruyn

232 pp Price 98 ISBN 3-8055-7297-2 (h/b)

Basel: Karger, 2001

The neurosurgeon Bengt Ljunggren and the neurologist George Bruyn here tell the story of the growth of Swedish academic medicine, and with it that of the Karolinska Institute and its association with the Nobel Prize in Physiology and Medicine. (Publication of their handsome book was timed to coincide with the centenary of the Nobel Prize.) They also recount the life of Axel Key, professor of pathological anatomy and rector of the Karolinska, whose studies in morbid anatomy culminated in the first detailed description of the ventricular system and circulation of the cerebrospinal fluid in 1876, and who was one of the most influential figures in European academic medicine in the late 19th century. With Key's story the authors have interspersed events from the life of Alfred Nobel, on the slightly tenuous grounds that Nobel and Key were exact contemporaries and spent one memorable evening together in 1893. Approximately the last quarter of the book is an authoritative and useful appendix giving short biographies of more than 150 of Key's contemporaries, and others mentioned in the text. The end result is rather a curious mixture.

Because there are so many strands, the book is not always easy reading. Much of the narrative is written in a rather staccato style, merely listing names, dates and events. Some of it is irrelevant to any of the book's themes—notably the 13 pages devoted to the life of a gifted young Russian professor of mathematics at Stockholm University, on whom Key happened to perform a necropsy after her

early death from pneumonia. Nevertheless, persistence is rewarded. Nothing in the first section prepares one for the splendid account of four months Axel Key spent travelling on the Continent, at the end of 1872. Here Ljunggren and Bruyn sensibly allow Key to describe his own travels, through his letters to his wife Selma. And what letters they are! Key displays the keen observation one would expect of a morbid anatomist trained by Rudolf Virchow, coupled with a lively interest in people and places, and a facility with words. We hear about the Belgian professor of surgery with a high postoperative infection rate who didn't know the work of Joseph Lister; we discover that Louis Ranvier, a convivial companion, became unbearably chauvinistic when drunk; that Paris appeared remarkably unaffected by the Franco-Prussian war, and that the trees were growing up fast along the magnificent new boulevards. He endearingly expresses surprise at finding that Strasbourg was not a fortified city on a hill overlooking the Rhine. I was fascinated by this section on his trip round Europe—essentially a tour promoting the journal *Nordiskt Medicinskt Archiv*, of which he was editor in chief.

'Close to the cathedral square is the magnificent new Galleria di Vittorio Emanuele. The light that radiates from all delightful shops in the Galleria is reinforced by two thousand gas lamps. In addition there is a tight circle of gas-jets around the cupola of glass in the centre of the gallery which are ignited by a special man on a small steam-wagon, using a paraffin lamp. Made myself comfortable at a bistro in the galleria ordering coffee and brandy. It was very relaxing.'

He could be snide:

'the Professor in Pathological Anatomy was a well-groomed gentleman who made a somewhat blasé impression. He kindly gave me a copy of his thesis from 1863. I was discreet and didn't ask him whether he had published any paper since',

but could laugh at himself

'in Rome I happened to get a newspaper, "Le Touriste", which is published in French and contains a column entitled "High Life". Previously I have always skipped such newspaper columns on various celebrities. Well, you can imagine my surprise when I found myself depicted in this column . . . It made me laugh. I will never miss a "High Life" column again but this notice cost me some money because it was clear that as a representative of "High Life" I could no longer wear the scarf I had found good enough until that moment'.

He was also generous to professional colleagues: 'I made several new and pleasant acquaintances, of which one with the professor of pathological anatomy, Wilhelm Krause, who is right in a question where the whole world including myself had believed him to be wrong'. This long trip of Key's, to more than thirty cities in half a dozen countries, gained him a few new subscribers to his journal and a large number of important academic contacts.

After this grand tour, the book's narrative meanders rather inconsequentially until 1893, when Key, on a second European voyage, once again takes up the narrative, to describe his meeting with Alfred Nobel in San Remo. In a long letter to Selma, Key tells her how, after he had left his card at Nobel's villa, the great man returned the call, visiting him at his hotel later the same day with an invitation

to dinner, after which he took Key on an extraordinary high-speed night drive down the coast. I cannot reproduce the whole letter; you will have to read it for yourself. It ends

'This evening with Nobel has been the culmination of my journey. Nobel himself is, quite simply, an extraordinary personality and one of the most interesting acquaintances I have ever made'.

I would say that Key is one of the most interesting people I have encountered for a long while, and I thoroughly enjoyed his story.

Jennian F Geddes

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