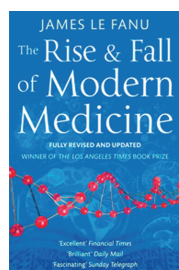


The Review Reviews

**2030: THE FUTURE OF MEDICINE:
AVOIDING A MEDICAL MELTDOWN**
RICHARD BARKER
Oxford University Press, 2011
PB, 129 pp, £14.99, 9780199600663



**THE RISE AND FALL OF MODERN
MEDICINE**
JAMES LE FANU
2nd edn, Hachette, 2011
PB, 291 pp, £14.99, 9780748131433



'For the family doctor to remain an expert resource for the management of the more complex conditions, they will need three kinds of capability at their fingertips: on-line decision support, so that their diagnosis and treatment choices reflect the best clinical practice; access to community based diagnostics and imaging; and telemedicine links with specialists for the diagnosis and management of the most difficult cases.'

'The personal doctor listens carefully to what he is being told. He or she performs the irreducible minimum of investigations necessary to establish a diagnosis. He confines himself to the matter in hand and does not stray beyond to give impudent or gratuitous advice. He recognises the intellectual limits of human understanding and the practical limits of what medicine can legitimately be expected to achieve.'

Which doctor would you rather be? Which would you prefer to be seen by? The first is the doctor of the future characterised by

Richard Barker in *2030: The Future of Medicine: Avoiding a Medical Meltdown*. The second is the doctor for all times evoked by James Le Fanu in *The Rise and Fall of Modern Medicine* and described further in a referenced paper by James McCormick called 'Death of the Personal Doctor'.¹

Barker writes mainly of the future and Le Fanu largely about the past but both make predictions based on questionable readings of history.

In *2030* Barker writes that 'over the last 20 years, designer drugs, specifically shaped to fit known pockets in the proteins involved in disease, have largely replaced those found by trial and error'. I'm not sure that's accurate. Later he asks, 'When should we use genetic information?' and replies, 'The answer is simple. When the risk of conducting the test is in proportion to the health risk involved in the disease and something concrete can be done with the result'. That this is far from simple is evidenced by past and continuing controversies about screening.

Le Fanu begins with 'Twelve Definitive Moments' in the history of medicine: penicillin; cortisone; smoking identified as the cause of lung cancer — aetiology based for the first time on lifestyle and statistics; the Copenhagen polio epidemic and the birth of intensive care; chlorpromazine in the treatment of schizophrenia; open-heart surgery; Charnley's hip replacement; kidney transplantation; prevention of strokes — because everyone becomes a patient; cure of childhood cancer; first test-tube baby; and *Helicobacter* as the cause of peptic ulcer. This list is informative and notable for what it leaves out. H2 blockers and proton pump inhibitors transformed the management of peptic ulcer disease. HIV research turned a mysterious and almost universally fatal infection into a chronic disease for which medication made people not only live longer but also feel better. The NHS and the Royal College of General Practitioners made possible a system of socialised health care based on primary care, without which innovation couldn't be translated into widespread clinical practice, as poor outcomes in the US demonstrate. And the Scottish Intercollegiate Guidelines Network, the National Institute for Health and Clinical Excellence, and the evidence-based medicine movement provided an important framework for appraising and

disseminating the results of research.

Le Fanu has an attractive style of writing, technical enough to inform without alienating the reader. He tells good stories about the things achieved by people who are not only clever and persistent but also lucky. However, he seems to think that this serendipity is inconsistent with the scientific method — almost miraculous. He writes of the 'ineffable mysteries of embryonic development' and refers to antibiotics as the 'mystery of mysteries'. Sometimes he seems suspicious of science: he lauds the clinical skills of Hodder 'unencumbered by the trappings of technology' and suggests that meticulous daily recording of symptoms, signs, and test results in the 1940s constituted a new movement rather than part of a long tradition dating back to Withering's papers on digoxin in 1785² and beyond. In addition, he often takes a contemporary rather than a contemporaneous view: when specialists in 1971 found that they could transform the outlook for children with acute lymphoblastic leukaemia by means of cytotoxic chemotherapy they naturally tried to do the same for adults with solid tumours and he writes without justification that failure was inevitable.

What are the problems that modern medicine faces? Both Barker and Le Fanu mention money. Neither mentions health inequalities or socioeconomic deprivation although Le Fanu does refer to democratisation, the process by which technology tends with time to become cheaper and therefore more widely available. Barker has excessive optimism about imminent scientific breakthroughs and Le Fanu has equally misplaced pessimism about the 'brick wall' that he thinks technology has reached. More insightful is Le Fanu's analysis of the human barrier to progress:

'The culprit is not technology itself but the intellectual and emotional immaturity of the medical profession, which [seems] unable to exert the necessary self-control over its new-found powers.'

This is accurate and humiliating. What solutions do these two authors offer for the problems we face in health care?

Barker claims that because of 'the convergence of three dramatically different

waves of invention' there are 'at least eight frontiers on which we are poised to make further huge advances', suggesting in an 'agenda for practical action' that '10 radical levers can make the vital difference between balance and bankruptcy' requiring family doctors to have 'three kinds of capability at their fingertips'. Of these inventions, advances, levers, and capabilities, those that seem to me to show promise are bioscience, information technology, nano-technology, and keeping patients out of hospital. Others are unpersuasive. More prevention (other than immunisation, which is effective) means more iatrogenesis. Changes to research and development to replace the randomised controlled trial with a supposedly Bayesian model called 'learn and confirm' and an 'information infrastructure' that will enable a 'learning system, constantly collecting and sharing information on what works best', will lead us to overestimate the predictive value of biomarkers³ and therefore the effectiveness of interventions. And a 'middle way' for health care between the US market system and the NHS-managed system will make private healthcare providers like financial institutions; profitable for a few and too big to fail.

Le Fanu has two predictions about the future of technology, neither convincing. First, he suggests that many conditions will be found to have infective causes. Secondly, he regards biomedicine as unpromising. Genome Wide Association Studies put everyone in the top 5% of risk for at least one disease and nearly half of all people in the top 1%.⁴ Alleles account for less than 10% of the population variation in risk factors for diabetes and vascular disease.⁵ And the top 1% of the UK population in terms of loci associated with type 2 diabetes have only four times the population risk of developing diabetes.⁴ we can identify people with a 2–6 times the population risk of developing diabetes simply by eliciting a positive family history.⁶ So genetics hasn't led to substantial benefits yet, but it has potential and there's little reason to think it's reached an impasse.

In the present financial crisis I've been exhorted to 'do more with less'. I was pleased to find two examples of this, one from each author. Barker argues that a high turnover of patients increases expertise and lowers unit costs leading to better outcomes for less money. And Le Fanu writes that financial straits in post-war Britain limited the use of streptomycin to the famous randomised controlled trial that showed not only the sensitivity of the

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tubercle bacillus but more importantly, the organism's subsequent resistance.

At the start of this review I contrasted Le Fanu's doctor with Barker's. I came across one of these two books in a catalogue of new publications, went to a bookshop and bought it for cash. I chanced across the other after taking advantage of Amazon's offer of free Kindle software, clicked on the title and a few seconds later began reading on-screen. I held the paperback in my hand, underlined words and scribbled notes; I sat the e-book on my lap, highlighted text and typed comments. The physical book was '2030' and the e-book was *The Rise and Fall of Modern Medicine*.

Good doctors — like good books — combine the best of the old with the best of the new.

Wilfrid Treasure,

Single-handed salaried GP, Whalsay, Shetland, and Founder of the organisation Against Iatrogenesis. Wilfrid Treasure has written *Diagnosis and Risk Management in Primary Care: words that count, numbers that speak*, foreword by Roger Jones, and a series of articles called 'First Do No Harm' to be published in the *BGJP* in 2012.

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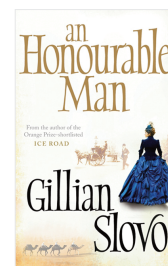
REFERENCES

1. McCormick J. Death of the personal doctor. *Lancet* 1996; **348**(9028): 667–668.
2. Withering W. *An account of the foxglove, and some of its medical uses: with practical remarks on dropsy and other diseases*. Birmingham, AL: Classics of Medicine Library, 1785.
3. Tzoulaki I, Siontis KCM, Ioannidis JPA. Prognostic effect size of cardiovascular biomarkers in datasets from observational studies versus randomised trials: meta-epidemiology study. *BMJ* 2011; **343**: d6829.
4. Donnelly P. Progress and challenges in genome-wide association studies in humans. *Nature* 2008; **456**(7223): 728–731.
5. Manolio TA. Cohort studies and the genetics of complex disease. *Nat Genet* 2009; **41**(1): 5–6.
6. Yang Q, Liu T, Valdez R, et al. Improvements in ability to detect undiagnosed diabetes by using information on family history among adults in the United States. *Am J Epidemiol* 2010; **171**(10): 1079–1089.

AN HONOURABLE MAN GILLIAN SLOVO

Virago Press, 2012

HB, 352 pp, £9.74, 1844088140



There are three reasons that, for doctors, this is a fascinating book. It provides graphic descriptions of 19th century military medicine, it charts the ease of descent into drug addiction when drugs were readily available, and it demonstrates the power of trusting human relationships even in the most dire of circumstances.

John is a doctor in Victorian London who, in 1884 volunteers to join General Wolseley's expedition to the Sudan to rescue General Gordon. Mary, John's wife, left behind in London, is bored and vulnerable. She has access to his dispensary and gradually succumbs to laudanum addiction. When they meet again, they have both had a brush with death, and discovered new strengths.

The drastic effect of Gordon's unbending belief in heroism, Empire, and Englishness is set against a tender evocation of his relationship with Tom, a servant waif. A recent *BMJ* editorial described 'the unholy mess' created by Lansley's bill: '... the resulting upheaval has been unnecessary, poorly conceived, badly communicated ...'.¹ Slovo's novel highlights political ineptitude in a different age and graphically describes the effects of another poorly conceived and badly communicated campaign. The comparison may be tenuous but it is fascinating.

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REFERENCE

1. Godlee F. The NHS is heading down a hole — should we stop digging? *BMJ* 2012; **344**: e805.