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Book Review: The Rise and Fall of Modern Medicine by James Le Fanu

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Reviewed by Alick Dowling

Review

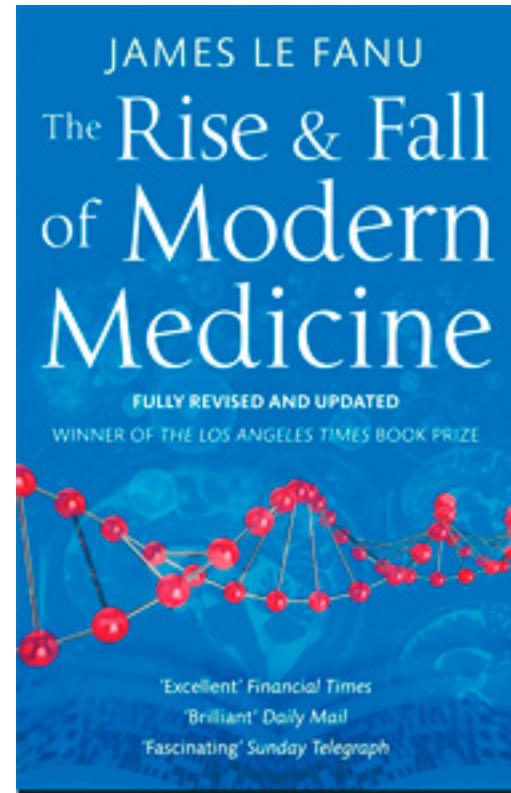
The new paperback edition, also available on Kindle was reviewed with enthusiasm by Michael Fitzpatrick, GP Hackney, London. (BMJ 21 April 2012). The original edition had widespread approval, though opposed by the Medical Establishment, especially cardiologists. It won many awards including the Los Angeles Times Book Prize in 2001. Friendly reviews came from colleagues Dr T. Stuttaford (Literary Review), Dr David Owen (Spectator), Dr Anthony Daniels (Sunday Telegraph).

A different readership saw a review of the original edition by John Brignell (a retired Professor of Industrial Instrumentation at University of Southampton) on Numberwatch. Excerpts are quoted below:

The Rise and Fall of Modern Medicine James Le Fanu 1999 Little, Brown and Company ISBN: 0-316-64836-1 (p 489) £20

"This is one of the most important books of the turn of the century. Dr Le Fanu has long been one of the finest of medical journalists, covering a wide range of subjects and carefully avoiding the pitfalls of junk science. In this tour de force he demonstrates how medicine has suffered from that disease of modern society, the retreat from rationality that marked the latter part of the twentieth century. In the first part of the book he records the rise of scientific medicine, delineated by twelve definitive moments, the great discoveries that did so much to extend and enhance human life.

The second part of the book shows how, despite all these triumphs, society began to move away from the scientific approach. One of the major factors was the launch of the Social Theory and the author quite clearly demonstrates the fraudulent grounds on which it was based; its creator simply ignoring facts that were inconvenient. It was seized upon by both sides of the political spectrum. The right loved it because it promised to be cheap and the left went for anything with social in the title. Another important factor was the new genetics. Of course, the new epidemiology, with its casual abuse of marginal statistics, also played a major rôle. Le Fanu has produced a most scholarly work, full of references, yet one that is eminently readable. In a rational world Le Fanu's book would have caused a furore, faultlessly exposing as it does the fallacious nature of some of the main tenets of the current orthodoxy, but as with inconvenient facts the new establishment simply ignored it."



16 January 2006 a Consultant Physician wrote: "James le Fanu comes from a very gifted family but got it completely wrong re serum cholesterol and heart disease - as did Prof McMichael who did a great deal of harm. Could it be that Le Fanu is firstly a journalist and self-publicist and secondly a doctor." <http://www.telegraph.co.uk/news/uknews/1553435/They're-all-going-on-a-statin-holiday.html>

Before embarking on this review read the new Preface:

Preface to 2nd edition:

"Over the past 50 years medicine has metamorphosed from a modest pursuit of limited effectiveness into a massive global phenomenon employing millions and costing (hundreds of) billions. Now, in the vast shiny palace the modern hospital has become, the previously unimaginable goals of transplanting organs and curing childhood cancer have become unexceptional, while every year tens of thousands previously doomed to blindness from cataracts or to immobility from crippling arthritis have their sight and mobility restored. Medicine has become the most visible symbol of the fulfillment of the great Enlightenment Project where scientific progress would vanquish the twin perils of ignorance and disease to the benefit of all.

And yet the more powerful and prestigious medicine has become, the greater the impetus to extend its influence yet further, resulting in the progressive 'medicalisation' of people's lives, to no good purpose and potentially harmful consequences. This takes many forms, from the over-investigation and over-treatment of minor symptoms to the inappropriate use of life-sustaining technologies, anxiety mongering about trivial (or non-existent) threats to health in people's lives, and the propagation of unreasonable expectations about what the current state of

medical research can reasonably expect to achieve.

These are no trivial matters. They warrant clear analysis and, if possible, remedial action; yet their significance has for the most part been concealed from view by the common perception, profoundly influenced by medicine's historic achievements, of it being on a continuous and upward curve of knowledge. Here the unknown is merely waiting to be known with, in principle, no limits to its further beneficent advance.

Yet it is not so, for as I proposed a decade ago in the first edition of *The Rise and Fall of Modern Medicine*, the current difficulties and discontents of medicine are ultimately linked to the changing fortune of the three forces that forged the therapeutic revolution of the post-war years - clinical science, pharmaceutical innovation and technical progress. This, in turn, has created an intellectual vacuum within which faulty and unrealistic assumptions of medicine's 'tasks and goals' have flourished. Now, ten years on, the 'massive global enterprise' of medicine remains as powerful as ever - if not more so, and as suggested by the continued exponential increase in National Health Service expenditure and the revenues of the pharmaceutical industry.

But the central thesis of *The Rise and Fall* . . . still holds, and so for this second edition I have revised but made no substantial changes to the original text. To this I have added an epilogue examining the three most significant factors in the continuing expansion of the medical enterprise over the past decade: the technical innovations that have extended the benefits of medical intervention to an ever ageing population; the ascendancy of *The New Genetics* in the aftermath of the completion of the Human Genome Project to become the dominant form of medical research; and, most importantly of all, how an ever wealthier pharmaceutical industry has successfully subverted the proper aims of medicine to its own very profitable advantage."

It is a tribute to Le Fanu's scholarship that ten years later the new edition needed few alterations; the central planks of his argument are still in place.

A known problem of using a Kindle edition is not realizing how much one has read. Useful to know that 68% is the end of the text. Beyond are the formidable list of references and the index. The book has an impressive structure, with "A Lengthy Prologue: Twelve Definitive Moments" from 1941 to 1984 - (3% - 29% for Kindle users):



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- 1) 1941: Penicillin
- 2) 1949: Cortisone: see Appendix I
- 3) 1950: Streptomycin, Smoking and Sir Austin Bradford Hill
- 4) 1952: Chlorpromazine and the Revolution in Psychiatry: see Appendix II
- 5) 1952: The Copenhagen Polio Epidemic and the Birth of Intensive Care
- 6) 1955: Open Heart Surgery - The Last Frontier
- 7) 1961: New Hips for Old
- 8) 1963: Transplanting Kidneys
- 9) 1964: The Triumph of Prevention - The Case of Strokes
- 10) 1971: Curing Childhood Cancer
- 11) 1978: The First 'Test-Tube' Baby
- 12) 1984: Helicobacter - The Cause of Peptic Ulcer).

Then Part I: The Rise, Part II The End of the Age of Optimism, Part III: The Fall, Part IV: The Rise and Fall: Causes and Consequences, with a new Epilogue for the Second Edition.

The book's first half tells the stories of 12 defining moments in the triumph of scientific medicine in the second half of the last century, listed above. A key theme is the prevalence of luck and serendipity over scientific insight, accident rather than design. The stories chosen are a mixture of the well known and the often forgotten. Le Fanu describes them with characteristic fluency and flair.

The second half describes the Rise and Fall, divided into 4 Parts. These are further subdivided into 5, 4, 3, and 2 sections respectively. It is not possible to discuss 14 topics in this review. Suffice it to say that all are fascinating in different ways, full of common sense and engagingly written.

The 'golden age of drug discovery' from 1940 - 1975 coincided with my 6 years as a medical student and 30 years of general practice. Then the supply of genuine new drugs dwindled. Statins were an exception, not making their appearance until after I retired. Many changes of emphasis (u-turns actually) were a regular feature of the advice we gave during those turbulent years.

Turning to Part III: 'The Fall', in the 70s optimism ended. New drugs became rare, many being 'me too' concoctions. The emphasis on "new genetics" and "social theory" claimed ill health was due to lifestyle, poverty and pollution. In 1999 Le Fanu raised the polemical stakes in his magisterial survey of modern medicine: "*Much current medical advice is quackery*" and he recommends "*the simple expedient of clos-*

ing down most university departments of epidemiology" which "could both extinguish this endlessly fertile source of anxiety-mongering while simultaneously releasing funds for serious research."

Dr Theodore Dalrymple likewise proposed closing all clinics claiming to treat drug addicts, the modern bureaucratic institutionalization of Romantic ideas to put an end to the harmful pretence that addicts are ill and in need of treatment. In the former Soviet Union, there was a saying of the workers "We pretend to work, and they pretend to pay us." Drug addicts could say "We pretend to be ill and they pretend to cure us." *Junk Medicine*, T. Dalrymple p 114.

Nor need the NHS fund Obesity conferences and clinics. They could close with no harm to patients. Expensive world-wide jamborees allow 'experts' to discuss 'the obesity epidemic', but no patients lose weight.

During these ten years, despite increased health spending, there has been deterioration rather than progress in health-care deliverance. Fashionable risk factor epidemiology leads to over-prescribing of powerful drugs to an ever wider portion of the population, exemplified by 'statins for all'.

Le Fanu's quest to curb the power of the epidemiology establishment dominates his account of 'The Fall' (Part 3) with the failure of Social Theory & New Genetics to deliver on their promises. Among many other factors he discusses the use of cholestyramine for mass medicalisation of Americans in 1984 to cut blood cholesterol levels. It was abandoned after nearly 2,000 men had taken the powder for 7 years; 30 had a heart attack compared with 38 in the control group. The total deaths in both groups were the same as 'other causes' were responsible for deaths not attributed to heart disease.

To promote cholestyramine to prevent heart attacks was a challenge for the pharmaceutical industry when it reduced the risk of heart attack by only 0.5% at the price of chronic bowel symptoms, depression and increased risk of death from other causes. Nevertheless it was so promoted until statins (much more effective in reducing cholesterol) took over. Statins are still promoted for everyone over 50 in the UK.

Cholestyramine however has another more practical use: a treatment of choice for chronic idiopathic (self

induced) diarrhoea associated with excess of bile acids and needing a lower dose than that for cholesterol lowering. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1120155/> Perhaps statins will find a niche as even thalidomide has done for treatment of some cancers.

At the end of the text and before the final Appendices on Rheumatology and Pharmacological Revolution in Psychiatry (59% in Kindle), Le Fanu provides a short but substantial Epilogue summarized below:

Epilogue for the new edition

"The Broad outline of the medical achievement of the post-war years is by now familiar enough; the exuberant therapeutic innovation epitomized by the Twelve Definitive Moments had by the 1980s plateaued, creating an intellectual vacuum that would be filled by the ambitious programmes of the New Genetics and the Social Theory. Many factors, as noted, have contributed to that pattern of a 'Rise and Fall', but the two phases divide on 'philosophical' grounds, with a radically different interpretation of the nature of scientific inquiry.

Howard Florey, Philip Hench and all those who contributed to the golden age of drug discovery had a feel for the complexities of biology and, by definition, the limits of current knowledge. But they were also open to those clues and anomalous observations in the clinic and laboratory that, if pursued, might illuminate the seemingly obscure, while possessing the tenacity to turn them to therapeutic advantage. The impressive roll call of technical innovation was similarly predicated on recognizing that while a profound understanding of the pathological processes involved in, say, arthritis or cataracts might be elusive, they were nonetheless highly amenable to technical solutions.

The Social Theory by contrast is based on the almost antithetical premise, that science already 'knows the answers' - at least in principle - that many common diseases are due simply to the way people lead their lives, and thus can be readily prevented. The New Genetics too is grounded in an all-encompassing and misleading simplification: that the complexities of life and disease can be reduced to, or explained in terms of, the sequence of chemical genes strung out along the double helix.

The pattern of a Rise and Fall, written ten years ago on the cusp of the



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new Millennium, seemed to offer a grand unifying theory for the major historical developments in medicine as they had unfolded over the preceding half-century. A decade later, it is of interest to assess whether that pattern has 'stood the test of time' and where (inevitably) its judgments must be revised."

Le Fanu goes on to discuss these issues in a few cogent pages, considering the massive expansion of costs, with the equally massive increase in prescriptions and drugs prescribed to the 'worried well'. Then there is the problem of the Human Genome Project with its explosion of funding biomedical research. He examines the technical developments that have extended the benefits of medical intervention to an ever ageing population. On then to "The New Genetics Triumphant - or Not" and finally (and most importantly), 'Big Pharma Rules' to consider the increasing influence of an ever wealthier pharmaceutical industry on the medical enterprise.

The latter involves the 'blockbuster' drug. "*Behind a veneer of beneficence and commitment to scientific progress the different drug companies engage in 'disease mongering' while manipulating the findings from clinical trials to suggest their drugs are much more effective than they really are.*" Le Fanu takes the launch of the acid-suppressant drug Zantac as an example. "*Promoted for treatment of stomach ulcers, it was the first 'blockbuster' with annual sales in excess of \$1 billion. It was not an original drug but a 'copycat pill', developed by Glaxo, but very similar to the widely prescribed Tagamet (or cimetidine) originally discovered by Nobel Prize-winning James Black, who was also responsible for beta blockers for high blood pressure.*

Zantac may have posed no threat to Tagamet's 'market dominance', but Glaxo's chief executive had different ideas, orchestrating a brilliant marketing campaign that would change the pharmaceutical industry for ever. Rather than an obvious gambit of undercutting Tagamet's price, he added a 50 % premium and then instructed his much-expanded sales force to promote the message that Zantac's higher cost reflected its greater efficacy. Then, in a brilliant and imaginative move that would become central to the 'blockbuster phenomenon', he enormously widened the range of symptoms for

which it might be prescribed beyond the relatively small numbers with stomach ulcers to include millions troubled at one time or another with heartburn - now rechristened as the much more serious-sounding Gastro-Oesophageal Reflux Disease or GORD. He then enlisted the Gallup organisation to conduct a nationwide survey that revealed half of Americans were troubled at one time or another by symptoms of heartburn/GORD, and recruited the star of a major television soap opera to describe how Zantac had cured her of her long-standing symptoms. And then, the crowning stone of the arch, Paul Girolami created the scientifically respectable-sounding Glaxo Institute for Digestive Health, committed to funding medical research into diseases of the gut. The beneficiaries included the Professor of Gastroenterology at the Bowman Gray School of Medicine, who subsequently described how Glaxo gave him \$15,000 for a study in which he gathered a dozen members of a local running club, fed them a light meal of orange juice, cornflakes, low fat milk and banana and sent them on a run.

He then monitored them for heartburn which he called 'runner's reflux (that he showed could be prevented by) giving them Zantac. Glaxo then hired a public relations agency to spread the word across the country about this newly discovered problem among the nation's runners and what brought them relief.

It worked brilliantly. Zantac's sales soared upwards to \$2.5 billion to become, at the time, the biggest-selling single drug ever produced. Paul Girolami's multi-faceted strategy of defining and expanding the indications for Zantac's use, creating the public demand with carefully targeted publicity campaigns, and subsidizing the research of prominent physicians, became the master plan that would shape the activities of his competitors desperate to find the Holy Grail of their own blockbusters..

By 1990 there were a further five; ten years later the number had risen to twenty-nine and by 2010 there were more than 100 - twenty of which generate up to six times the revenue of Zantac in its heyday. It is scarcely possible to exaggerate the implications, not just in salvaging the fortunes of the pharmaceutical industry from 'The Dearth of New Drugs' of the early 1980s but also in guaranteeing its

future prosperity; in just three decades up to 2010 its revenues would rise a staggering twenty-five fold." Le Fanu adds The dramatic shift in the ethos and priorities dictated by the blockbuster imperative has resulted in 'disease mongering' and the subversion of 'the probity of doctors and their academic institutions'.

Previously heartburn, after all, did not seem to warrant a prescription drug and was perceived to be well managed by over the counter remedies. GORD elevated the medical importance of the condition by presenting it as an acutely chronic 'disorder' with an underlying physiological cause and the potential for serious long term consequences if left untreated - a far cry from the 'plop-plop, fiz-fizz' perception of standard heartburn remedies. Further instances have 'talked up' normal physiological events such as the menopause which warrants long-term hormone-replacement therapy, premenstrual tension which becomes 'premenstrual dysphoric disorder', and variable blood pressure or cholesterol levels which are redefined in order to expand the numbers needing medication to lower them.

Prominent physicians or Key Opinion Leaders (KOLs) are paid generous consulting fees for their authoritative opinion on, for example, the need to treat the 'hidden problem' of social phobia' or the necessity to lower cholesterol levels still further.

This leads to the further regrettable consequence of the blockbuster phenomenon: the progressive entanglement and blurring of the boundaries between the pharmaceutical industry and the medical profession when it comes to evaluating the safety and efficacy of drugs.

This discussion deals with the increasing ethical problems, exploring them at the end of this new Epilogue. Some readers may find this subject uncomfortable. James Le Fanu has a reputation for honesty and plain speaking. His readers rightly trust him; when he asks for their opinion he knows he can rely on them being honest in return. His strength is the loyalty of his readers. He has the enviable knack of giving the impression that he is writing personally to each individual.

This new edition is a worthy testimonial of which James Le Fanu can be justly proud.

Alick Dowling, 23 May 2012