Reviews and reflections

Robert H. Moser, M.D., Book Review Editor, and David A. Bennahum, M.D., Associate Book Review Editor

The $800 Million Pill
Merrill Goozner
University of California Press, Berkeley and Los Angeles, 2004
Reviewed by Frank Davidoff, M.D., MACP

It happens all the time now. Standing in line, you see someone at the pharmacy counter, hit by sticker shock, walk away muttering without getting his prescription filled. Or it’s happened to you. How can this be? How can the very companies that bend every nerve and sinew to produce new drugs, and often very aggressively advertise them directly to consumers, then price those drugs so that many people can’t afford them?

It’s not that simple, of course. Many people do have drug coverage one way or another (now even through Medicare itself—more or less!), so most people very likely do get their pills when they need them. But the fact remains that the cost of drugs has skyrocketed in recent years, both for society as a whole (the increased cost of prescription drugs accounted for 44 percent of the total increase in health care costs in 1999) and for individual patients (the average price of drugs per prescription rose 48 percent between 1992 and 2000). Many people now increasingly face desperate choices between medicine and other basic necessities.

The $800 Million Pill digs into the mysteries of drug development, in particular the inner workings of the pharmaceutical industry, in an effort to explain how we’ve gotten ourselves into this “Alice in Wonderland” world of contemporary therapeutics. Former chief economics correspondent at the Chicago Tribune (now with the Center for Science in the Public Interest), Merrill Goozner approaches his subject as the veteran investigative reporter that he is. He tells the stories of individual drugs, and the people and organizations who made them happen. He uses an inductive, bottom-up approach, rather than making a deductive case, that the history fits a theoretical model.

Working from an extensive literature (his bibliography contains 59 books and reports) and in-depth interviews with many of the principals involved, Goozner weaves “who, what, when, where, and how” accounts of the development and marketing of erythropoietin, a range of cancer drugs, enzyme replacement therapy, and anti-retroviral drugs, adding important background on the development of certain technologies that made these agents possible. Although much of his focus is on the underlying chemistry and biology, he pays serious attention to a range of other crucial issues: the impact of Bayh-Dole legislation, changes in patent law, the administrative roilings of the FDA, the commercial competition that induces the introduction of me-too drugs, the switching of prescription drugs to over-the-counter status, and sales practices such as “detailing.”

His main conclusions are two: (1) Public funding, in huge amounts, has paid for the vast majority of the basic biological discovery that made these drugs possible. Industry has generally moved in at later stages to bring the drugs to market. While recognizing the value of industry’s contribution, Goozner deals harshly with its willingness to exploit these discoveries, while at the same time denying or ignoring the major public financial contribution. (2) The widely-quoted estimate of $800 million as the cost of developing a new drug, made in 2001 by the Tufts University Center for the Study of Drug Development, is seriously flawed. Aside from pointing out that funding for this estimate came largely from the pharmaceutical industry, he cites studies by other, perhaps more disinterested groups, that put the figure at anywhere from $71 to $240 million per drug. Although he recognizes the difficulties involved in making all such estimates, Goozner makes the case that industry is hardly justified in defending drug pricing on the basis of the Tufts studies.

At the end of the day (and the book), Goozner argues that the industry assertion that high revenues will facilitate therapeutic breakthroughs is a myth. He contends that we need a new, independent, publicly-funded institute that will provide solid, evidence-based information on therapeutics; that the FDA and patent laws need major reform; and that the therapeutic potential of hundreds of existing chemical entities, now languishing on laboratory shelves within the pharmaceutical industry, remains unrealized, probably because those compounds lack the potential to provide financial gain. He feels that it is increasingly possible for nonprofit groups to develop and market drugs successfully.

What doesn’t the book do? For one thing, it doesn’t consider the broader economic implications of drug therapy. As I pointed out in a 2001 editorial, although many common pharmaceutical interventions are probably cost-effective, about half probably are not. For another, it doesn’t get into much detail about computer-assisted drug development (CADD). Industry argues that CADD justifies much of the high cost of drugs, but others refer to it as a singularly unproductive form of “big, dumb science” that has driven many creative people out of the industry. Nor does Boozer consider a deeper biologic problem: most diseases result from loss of function, but creating gain-of-function drugs is vastly more difficult.
than creating drugs that inhibit biological activity. Finally, he doesn’t consider the potential advantages to patients, insurers, or the economy and to the pharmaceutical industry itself, of a voluntary scaling back of drug prices.

That said, Goorooz’s book is a terrific read: generally well written and carefully researched (aside from a few inaccuracies, such as the statement that methotrexate is derived from cortisone). His account has much valuable information and provides insight for people who haven’t followed these issues closely, as well as for those who thought they already knew a lot about them. Either way, the author gives you a chance to read—em—and weep.

Reference

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Musical From Apartment 8: New and Selected Poems

John Stone
Louisiana State University Press, Baton Rouge, Louisiana, 2004
Reviewed by Fredric L. Coe, M.D. (AΩA, University of Chicago, 1961)

Here is a rare pleasure. One of our kind, a cardiologist, in fact, and a dean—who deals with students—has ready knew a lot about them. Either way, the author gives you a chance to read—em—and weep.

Some of his occasions are the commons of our trade. Making a “house call” to pick up vegetables, he remembers the vegetable man, who had aortic stenosis: “six, seven years ago/when you began to begin to faint/I painted your leg with iodine...” (from “He Makes a House Call,” p. 61). It is not hard for us to recall memories like that, but very difficult to voice them with a double, halting rhythm: “six, seven... began to begin...” a rhythm that makes the words into the idea of the halting heart.

Deeper into that curious realm in which poetry begins to take over from language, and individual reality begins to melt into universal consciousness, he turns his eye on our familiar, and the familiar becomes strange:

Death

I have seen come on slowly as rust sand or suddenly as when someone leaving a room finds the doorknob come loose in his hand.

The extra spaces, the shortening lines, the title becoming the first line of the poem all create the sound of the idea, and the idea persists, so long as the sound lasts. And, in case I have made this part of him too serious, here is a diabolic drinking man.

One Evening

And he said for God’s sake looking Death in the kisser... anyway the sun came up and time was recorded and copies... made about the same time the all 14 billion milliequivalents of him said in a loud barely audible voice to hell with this.

Medical poetry can detach from the truth of our trade; it can become a sermon, a sentimental encomium, a genteeel musing about what we have not done to correct the ills of the world, or worse, have done. John Stone simply states at the truth, and tells it in a truthful voice. Medicine is good when true, is it not? And the true is beautiful. As you go by, look back at the few lines about the man whose ions gave it all up, and see how much craft it took to see them on their way. And ask if that scene doesn’t ring true. I am an electrolyte expert, and to me the ions always seem like Ariel, forever wanting their freedom among the elements, forever held back in a kind of slavery, like rowers on some ancient galley, and forever ready to mutiny when weakness suggests an opportunity. I don’t know John Stone, but I think he is a lover of women: “Son, I am a blueberry muffin/on its way to becoming/your...”’ 4

Perhaps the poet might quarrel with my choice, but here, in this stark, harsh, utterly plain and terrible voice, I think he has caught something of the universal tragedy, something of what art can accomplish, against fate and against the terror. It is a voice burned free of pity, of sorrow, of all ordinary emotions, bent upon pure telling. And because it is pure, it has a power.

This is an important book. If you read it, your rewards will be the austere beauty of each poem, the truth that demurs, so be it. Your life will be poorer by a mote, and your conversation as well. In either event, you have been fairly informed. As for you, John Stone, I have enjoyed meeting you, and wish you well on your generous and humane pilgrimage. All the great poets wrote out of their occasions, even John Milton, and I delight to imagine you walking in their way. Be well, and write more for us, who can use your gentle persuasion as to the goodness of life, and the pleasures of a moment properly reflected upon.

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Genomic Medicine: Articles from the New England Journal of Medicine

Alan E. Guttmacher, M.D., Francis S. Collins, M.D., Ph.D., and Jeffrey M. Drazen, M.D., editors

The Johns Hopkins University Press, Baltimore, and the New England Journal of Medicine, Boston, 2004
Reviewed by Steven A. Wartman, M.D., Ph.D. (AΩA, Johns Hopkins University, 1970)

This compendium of 15 articles, published in the New England Journal of Medicine between November 2002 and September 2003, is an effort to gather current information and issues regarding genomic medicine, and intended to enlighten (as Dr. Drazen puts it), the “savvy” clinician. Presented in chronological order with a forward by Elias Zerhouni, M.D., director of NIH, the articles include a variety of topics ranging from the general (genetic testing, population screening, ethical, legal and social implications, and genomics as a profession and its “phenotype” to the more specific (pharmacogenetics and pharmacogenomics, hereditary colorectal...
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The disease-specific chapters are often superficial; the serious reader would hope for more depth and breadth. The authors attempt to grapple with this "heredity -cancer specialist," suggesting the importance of the genetic profile of a cancer cell at diagnosis can define its biological behavior many years later. And I particularly liked the comment that the "DNA sequence is not the Book of Life," emphasizing the complexity of gene identification for the complexity of gene identification for the nature of the technical breakthroughs, what are their limitations, and where is the technology evolving? The numerous diagrams found in most of the articles tend to approach cartoon oversimplification. The chapter on the ethical, legal and social implications is an excellent discussion that would be helpful to have more information about the scientific techniques actually being used for genomic research and applications. What has been the nature of the technical breakthroughs, what are their limitations, and where is the ethical, legal and social implications? The ethical, legal and social implications of the genomic era deserves more attention. The next chapter explores how competing values held by the clinician, the patient, and third parties (family, insurance company, HMO) should influence the direction of treatment. Peteet considers the relevance of moral decision making in planning a course of treatment. This includes considering several treatment options, identifying potential moral problems involved in each, then implementing an appropriate treatment plan that meets clinical and ethical criteria. The third chapter addresses the concept of caring, and the problems involved in truly caring for patients. It is a revealing discussion that would benefit all medical professionals. Peteet presents caring as a moral activity. Its components consist of:

- Compassion is suffering with someone else by perceiving what is being felt physically and emotionally, and expressing it outwardly.
- Caring is viewing as nurturing a patient's needs.

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The first chapter explores the approach to moral issues in mental health treatment. Peteet discusses how these feelings develop. The first chapter explores the concept of caring clinically significant problems in helping patients and clinicians achieve moral "authenticity" (the author's term). The first chapter explores the approach to moral issues in mental health treatment. Peteet discusses how these feelings develop.
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divorce or sacrificing for aging parents. This insightful process consists of examining the patient’s concerns and choices, appreciating the clinician’s own moral conflicts, and the added complication of dilemmas involving third parties (including spouses, parents, insurance companies, managed care organizations, etc.). Brief case descriptions clearly illustrate these issues.

The topic addressed in chapter five is helping patients deal with unfair suffering, a common concern of patients in psychotherapy. Patients ask questions: “Why me? Did I do something wrong? Am I being punished?” The therapist’s role is to recognize unfair suffering, try to help the patient master negative emotions and achieve a new positive attitude, and if possible assist the patient to become open to possible reconciliation.

In the sixth chapter, Peteet considers ways that patients deal with shame, guilt, and a sense of failure. He indicates that these emotions signal a need to change course. These feelings contribute to self-defeating behavior and impede insight. The therapist questions whether these feelings are really justified or represent a distorted aspect. This is achieved by direct questioning and then encouraging self-inquiry. The ultimate goal is self-forgiveness on the part of the patient, and, as appropriate, seeking forgiveness from others.

The seventh chapter explores the clinical significance of moral growth and transformation. Peteet indicates that such a process continues into adulthood, and the therapist’s role is to help patients achieve moral maturation. Examples include individuals recovering from addiction, who evolve from being self-centered and in denial to being humble, grateful, and concerned about others; patients struggling to find existential or religious direction; and demoralized individuals in search of a revitalized quality of life. In such a situation, Peteet emphasizes that the therapist more often witnesses or supports moral changes, rather than actually bringing them about.

The final chapter explores treatment as a fundamentally ethically-based enterprise, or as the author states, the relevance of the moral paradigm for helping patients and clinicians achieve authenticity. This section aims to integrate what has come before.

Many aspects of the monograph are of interest and enlightening to those of us who are not mental health professionals. Peteet delves into the origin of moral sensibility in humans presenting a perceptive and enlightening construct. Taking a developmental approach, he explores the cognitive and affective origins, from early childhood to adulthood, of such feelings as fairness, honesty, and concern for others. He stresses that neglect and abuse in early childhood and unresolved conflicts can lead to negative moral attitudes.

In addressing moral issues in the clinical situation, he indicates how a balance can be struck between the beliefs and attitudes of the therapist and those of the patient, with a powerful emphasis on what is best for the patient. This philosophic attitude should prevail in every clinical relationship.

Throughout the book, there are illustrative case studies that provide clear examples of the topic being explored, which include narcissism, masochism, guilt, and shame. The chapter on caring for patients is highly relevant for all clinicians, and in itself can be considered must reading.

The writing is clear and reads well. The exposition is well-crafted and well-structured. Peteet presents a thoughtful, detailed exposition of his topic. Although the book is explicitly written for mental health clinicians, all physicians, and others involved in patient care, will have their insight and sensitivity heightened by this book.

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2005 Alpha Omega Alpha Helen H. Glaser Student Essay Awards

The twenty-third annual Alpha Omega Alpha Helen H. Glaser Student Essay awards were made in April of this year. Three winners were selected.

The winner of the $2000 first prize is Alison Bickford of the Class of 2011 at Northwestern University’s Feinberg School of Medicine for her essay, “The Anatomy of Andreas Vesalius.”

The winner of the $750 second prize is Trang La of the Class of 2005 at the Columbia University College of Physicians and Surgeons for her essay, “Old Medicine in a New World: Two months in one of Southeast Asia’s busiest hospitals.”

The $500 third prize was awarded to Shawna Marie Cutting of Vanderbilt University School of Medicine’s Class of 2007 for her essay, “HIV and Liver Transplantation: Past, Present, and Future.”

Judging the essays were members of The Pharos editorial board: John A. Benson, Jr., M.D.; Robert A. Chase, M.D.; Peter E. Dans, M.D.; Lawrence L. Faltz, M.D.; Robert H. Moser, M.D.; Richard C. Reynolds, M.D.; Audrey Shafer, M.D.; Editor Edward D. Harris, Jr., M.D.; Managing Editor Debbie Lancaster; and national office administrator Ann Hill.

The winning essays will appear in future issues of The Pharos.