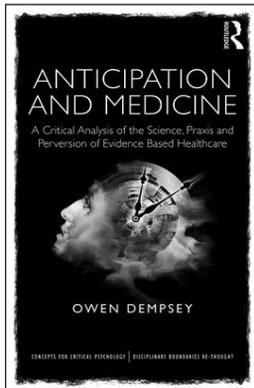


BOOK AND MEDIA REVIEWS

Anticipation and Medicine: A Critical Analysis of the Science, Practice, and Perversion of Evidence Based Healthcare

Owen Dempsey

New York, Routledge, 2019, 140 pp, \$45.95, paperback



Opening this book is a trip back in time. It brings the reader to the previous century and the halcyon days of Marxist philosophy and Freudian psychology when these schools of thought dominated not only the academy, but nearly every corner of thought and society. In the intro-

duction, the author explicitly states that this volume's critique of evidence-based medicine is through the lens of Karl Marx's analysis of capitalism and Jacques Lacan's psychoanalytical theory. While the author's integrity in laying these cards on the table is appreciated, it was hardly necessary: in the two pages prior to this acknowledgment and throughout the remainder of the book, the buzzwords and expressions of the narrative are quite recognizable to anyone familiar with the writings of these historical figures.

It is easy to understand the author's aversion to evidence-based medicine (EBM). Empirical data is not kind to the pillars of his approach, with the disastrous experiments in Marxism (eg, the former Soviet Union and the intriguing crossover experiment between Marxism and capitalism in China), and the near absolute lack of evidence of benefit from Freudian-style psychoanalysis.¹ While this worldview is likely contrary to that of many of those seeking to practice evidence-based medicine, it is worthwhile to hear the objections raised and view the topic from a different perspective... one that some of our patients likely hold.

The focus of the book is on EBM as applied to anticipatory guidance and preventative

health care, that the author believes is "anti-democratic... exploits desire, coerces compliance, causes distress, bankrupts, and destroys health and care for many" (p 17). The book's organization is logical, beginning with clearly explained definitions of terms, a presentation of the author's thesis, then a fleshing out of the specific points of the thesis using the British breast cancer screening practices to illustrate the points.

The author describes the current practice of EBM as the "takeover of *objective empiricism* by a humanist and *radical empiricism*, an elitist subjective version of what 'should' guide... practice" (Dr Dempsey's emphases, p 3). He objects that "neoliberalpragmatist ideology decides practice of EBM and prohibits any limits on new forms of anticipatory care or the harm this causes" (p 5). Phrased differently, much of EBM is the interpretation of data and the application of this interpretation to patient care by experts—expert opinion masquerading as objective facts. This is a valid criticism of the current practice of medicine—how often we encounter guidelines that list a strong recommendation for some action based upon a very low level of evidence! The Strength of Recommendation Taxonomy² is an approach developed by scholars of our discipline in an attempt to overcome this.

Another objection to the current practice of EBM is that "Population-based (care)... provides relief from the stresses inherent in interpersonal caregiving" (p 6), and "anticipatory care removes love from care" (p 94). With busy practices and current reimbursement schemes, it is easy to default to clicking the pop-up order set rather than to engage the patient in a discussion that will permit truly informed shared decision making regarding which screening strategies make the most sense for the individual. As family physicians who know our patients, their context, and their values, we should be leaders in rendering this objection moot.

Perhaps the most important objection is the "Anticipatory Healthcare Paradox"—in seeking to promote health, harm is inflicted. All health care interventions—medical, surgical, herbal—always have the capacity to do harm, and

preventative care is no exception. Yet there is a strong tendency to minimize the collateral harms that it inflicts in our phrasing of the benefit vs risk. As a physician, the discomfort of bowel prep and the possibility of perforation in a low-risk patient are worth the potential benefit of early detection of (likely absent) colon cancer. Not all our patients would agree.

The author makes a distinction between absolute (highest attainable) vs qualified (personally good enough) health, future vs present suffering, and population vs individual health. All are important considerations in the application of health care, and are value judgments for which there are no objective EBM answers. And that is, perhaps, the bottom line of this book.

Dempsey's approach to the perils of the EBM is novel, and makes for an interesting read. The majority of the points he makes are valid, and are the same ones many others make, though they may start from a different place philosophically.

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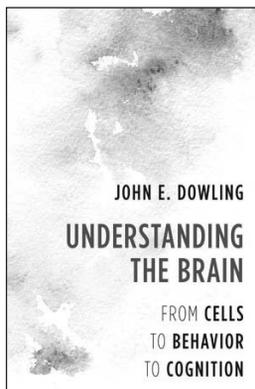
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Understanding the Brain From Cells to Behavior to Cognition

John E. Dowling

New York, W.W. Norton and Company, 2018, 299 pp., \$26.95, hardcover



John E. Dowling, PhD, is a teacher's teacher. He is a neurobiologist grounded in research, an emeritus professor of neuroscience in the department of ophthalmology at Harvard, and a writer who is in a position to comment on the current state of brain research and

to posit about its future. And while specialists may each have their own favorite organ or system, let's face it: the brain and mind are nearly everything.

Dr Dowling taught the introductory course on behavioral neuroscience for 30 years, as well as a freshman seminar titled "The Amazing Brain," that belies his love of the topic. His Harvard profile lists some 236 published articles,¹ and this book is an update of his *Creating Mind*, first published 20 years ago. In his preface, he asks "Where do we need to go?" His answer is ambitious: "In my view, it is the need to integrate neurobiology and cognitive science that gets at how groups of neurons and systems interact to support our higher order and complex behaviors" (p XII).

Family physicians will find this book clear, and certainly more engaging than Up-To-Date. Dowling divides the book in three sections: Part One—Cellular Neurobiology, Part Two—Systems Neuroscience Getting at Behavior, and Part Three—Cognitive Science Higher Brain Function and Mind. I found myself making marks and notes throughout the book, thinking of patients who I would share sections with when he references various diseases. His discussion (with illustrations) of multiple sclerosis, for example, is something I would give to my patients.

A discussion of synaptic vulnerability begins with toxins and considers drugs generally, with a tour of botulism, tetanus, curare, α -bungarotoxin (a component of cobra venom), and Calabar bean used as a "truth serum," to SSRIs. You can see why freshmen could be captivated by these illustrations of the complex physiology of the synapse. And for the practitioner, Dowling provides teaching stories for our clinical encounters.

We owe a lot to the fishes, and people who donate their bodies to science. When you read Dowling's publication list, you can see how invertebrates and various fishes contribute to his, and thus our understanding of neuroscience. I took a mental pause to thank the squid, mudpuppies, zebra fish and skates, and the dragonflies, for his examination of their ocelli and laminae. It recalls the many sacrifices made for science. It made me think about my own opportunity to prosect three brains. Long after one woman's death, as I held her brain, proud of my preservation of the Circle of Willis, noting discoloration under cerebellum posterior of the central sulcus parietal lobe, just above the temporal lobe, there it was: the blood from the aneurysm that killed her, like the

solid yolk of a boiled egg. Reading this book I found myself thinking about her, wondering in the last moments how the insult to her somatosensory area may have been perceived, and she inspires me to think about brain injury and recovery.

Dowling's discussion of systems, in part two is the book's strength. His discussion of vision, given his work, is a tour de force of how we see. In the third section about cognitive science and the higher functions as we move from brain to mind, Dowling becomes lyrical, as if looking back and then looking forward at the excitement of his field, and imagining what is on the horizon of scientific understanding. His discussion of language, learning, memory, emotion/rationality, and consciousness all extend arguments about how they are currently conceptualized, and what may come as we look for what he calls the proverbial "Rosetta Stone for neuroscience" that will elucidate consciousness in the awake and behaving animal.

Understanding the Brain delivers a great review of the neurobiology, systems, and frontiers of cognitive neuroscience. His chapters From Brain to Mind, and The Dynamic Brain are particularly helpful. As someone who manages a concussion clinic and works with patients after delirium, I think developmentally about the brain and the person, and these chapters were valuable to me in thinking about brain plasticity from cells to systems.

Dowling is a master teacher, having collected quips, stories, and illustrations over 30 years. He introduces most chapters with excerpts from other master teachers from Rosenham and Seligman, Sacks, Pinker, and Santiago Ramo y Cajal to name a few of these other great teachers and writers. I recommend this book to physicians interested in the brain, and in thinking about thinking, as it provides a rich review that we might leverage for our patients, and our own aging and dynamic brains and minds.

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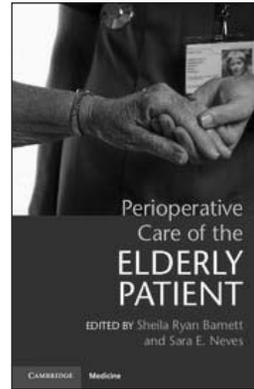
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Perioperative Care of the Elderly Patient

Sheila Ryan Barnett and Sara E. Neves (Editors)

Cambridge, UK, Cambridge University Press, 2018, 267 pp., \$64.99, paperback



Perioperative Care of the Elderly Patient is edited by two Boston-based physicians, both specializing in anesthesia and critical care medicine. It was conceived to help the team of providers taking care an elderly patient to manage care around the time of surgery. The book

addresses the unique needs of the elderly population from the vantage points of many different care providers.

This book is a fairly slim volume that breaks topics down by timing related to surgery. The first section covers general health considerations and preoperative assessment of the elderly. It includes chapters on ethical issues of informed consent or refusal, the perioperative management of hypertension in the elderly, heart failure, dementia, postoperative cognitive issues, renal and metabolic aging, and frailty and functional assessment. The next, and largest, section considers intraoperative considerations. Chapters are included on topics like the surgeon's perspective, geriatric cardiac procedures, geriatric trauma, elective orthopedic procedures, and cataract surgery. There are also several chapters devoted to specific anesthesia concerns like regional and neuraxial anesthesia in the geriatric population, as well as anesthesia for urologic and gynecologic procedures. The final section is devoted to postoperative issues. It covers critical care in the elderly patient, pain management, palliative care, and quality assessment and improvement in the elderly.

Most doctors do not take care of patients in all of these arenas, often not even participating in both outpatient and inpatient care. This book covers both environments on a superficial level, allowing each side to get a reasonable feel for what the other actually does without delving too deeply into the details. In some ways, the book reads like a general workbook intended for ambitious medical students or residents, but there are also pearls for the

seasoned primary care physician. It functions as both a quick reference book for those who know what they are looking for, and as an overview for the novice. The layout is clear and bulleted. Each chapter begins with key points summarizing what to expect. Subtopics are headed in bold print. The information is both specific and basic; for example in the chapter addressing consent, there are dictionary definitions of autonomy and competence. The conclusions drawn regarding decision-making capacity are not nuanced, but they are practical and concise. Much of the guidance is obvious, for example: "Type and Screen: These should be drawn prior to surgeries with the potential for significant blood loss. The presence of antibodies may make it difficult and time-consuming to find compatible products." The section on palliative care and hospice is similarly simplistic, but clearly outlines the concepts and purpose of these services.

For primary care physicians, the preoperative and general health and illness section covers everyday bread-and-butter assessments that are familiar ground and may not need much review. Validated screening tools are referenced and compared, and the surgery types most impacted by impairment are discussed. Data on cardiac

risks by procedure type are also outlined. This book may not be the most up-to-date source of this type of information, but it provides a concise comparison of the procedures in relation to one another that might be helpful in guiding a patient with questions. The intraoperative and largest section of the book would be less helpful to the outpatient physician.

In the end, this book largely addresses specific concerns faced by inpatient caregivers—especially those working in the intensive care units and anesthesia—but makes these concerns accessible to the whole team caring for the patient. Consenting a preoperative patient is generally the surgeon's job, but before that referral is made, or after a surgery has been performed, the primary care doctor has a large role in optimizing health, anticipatory guidance, pain control, maximizing function and mobility, and limiting polypharmacy. This book concisely renders a lot of specific information to assist in this task at your fingertips in an easily accessible resource.

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