



## How doctors think

Jerome Groopman

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In this very engaging and well-researched book, Jerome Groopman, a practicing oncologist with expertise in AIDS-related malignancies, explores the interior landscape of the physician's mind. The explicit purpose of *How doctors think* is to give laypeople an understanding of the medical mind so that they can participate more actively in clinical conversations and improve the care that they receive. In a style familiar to readers of his *New Yorker* articles, Groopman uses detailed case studies of exemplary physicians to make clear, logical, and compelling arguments. Although intended for the general public, the book offers clinicians an irresistible promise of self-understanding, and in many ways succeeds.

In the first few sections, Groopman explores how, when, and why diagnoses are missed by some physicians and captured by others. The book begins with a description of a woman with abdominal symptoms who for years was diagnosed with a series of functional and mental disorders, including bulimia. An astute physician, beginning with careful elicitation of the patient's story, was able to set aside those prior diagnoses to discover that she in fact had celiac disease. Later, he describes a patient given a grave prognosis only to recover, revealing the faulty and limited logic of the physicians providing care. In another example, Groopman himself was the patient, and he documents how his physician lunged into certainty by reducing complex data to simple heuristic-driven formulations — these physicians were often wrong but were never in doubt.

Any professional who must assimilate and synthesize complex, ambiguous information must develop efficient means for processing data. As medical students, we were taught to gather a complete set of data — history, physical examination, laboratory results,

and epidemiological data — then make an exhaustive list of possible diagnoses that are eliminated one by one until the correct one is reached. This approach is hardly practical for busy clinicians and, in fact, often can lead experts astray. More efficient approaches use pattern recognition, heuristics (rule of thumb), and illness scripts, which provide coherent links between knowledge and experience. These cognitive shortcuts are highly personal — we each have our own internal “library” of interconnected facts, experiences, and procedures that help us locate a patient's expression of distress within a diagnostic framework quickly and accurately.

Groopman eloquently elaborates the dark side of these same approaches, especially when they become automatic, mindless, and unconscious — as the physician persists with a single formulation in the face of disconfirming data, sees only part of a whole picture, or assumes that the most accessible data are the most important. Further on, he describes how pharmaceutical advertising exploits these cognitive tendencies. Physicians like to solve problems, and pharmaceutical companies graciously oblige by both creating problems and offering solutions.

Groopman invites a more mindful practice characterized by attentiveness to the unexpected, curiosity, openness to possibility, and presence. He describes the importance of an ability to adopt a fresh perspective to a familiar problem — what others call “beginner's mind.” Groopman asserts that “language is still the bedrock of clinical practice,” providing the basis for his suggestion to start with learning how to listen deeply to the patient's story. Several difficult cases discussed were difficult only because no one took the time to set aside prior assumptions and truly listen. Second, he suggests cultivating doubt rather than avoiding it. The prospect of elic-

iting, living with, and exploring uncertainty is anxiety provoking for clinicians. Patients, too, are discomfited by expressions of uncertainty, yet he suggests that patients take an active role by asking, “Could this be something else?” or “Are you certain?” Physicians can act quickly, yet also entertain two seemingly contradictory formulations simultaneously while not entirely discarding the possibility that each might not be the right one.

There are three areas where I felt that the book was wanting. First, the story line of many of the anecdotes culminated in getting a test to finally arrive at the correct diagnosis, often at the insistence of a patient that more be done. However, life is not always so simple. Sometimes testing increases uncertainty or does more harm than good. Sometimes the “answer” is that the patient has a mental disorder. Second, he might have offered suggestions on how education should change to train more exemplary physicians. Putting so much of the burden of improving clinical practice on the patient seemed unrealistic, especially for patients with communication difficulties or low literacy. Finally, Groopman could have drawn more on a growing body of neurocognitive research that could offer a deeper understanding of how unexamined preconceptions can alter the way we perceive clinical data. This would provide an even stronger rationale for physicians to cultivate self-awareness and understand the effects of their own perceptual biases on the care they provide.

Groopman is on the right track. All clinicians should read this book — all of us can learn something. It is an easy read, engaging, and can be shared with family and friends. Hopefully it will reinforce all physicians' efforts to understand themselves better, for the benefit of their patients and perhaps also for their own well-being.