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A Fruitful Mistake Books

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The best doctor is also a philosopher. This was the opinion of Galen (129–210 C.E) and he had the authority of Hippocrates, some 600 years earlier, to back him up. The ancient "father of medicine," whose oath physicians still take today, taught that the true doctor needed to know not only philosophy, but also astronomy, to practice well. I suspect that if our general practitioners began correlating our symptoms with planetary orbits or the precession of the equinox, we'd seek second opinions fast.

But Hippocrates had sound reasons for his view. Knowledge of astronomy presupposed a mastery of geometry, which in turn presupposed training in logic. Such disciplines schooled the mind to proceed rationally from observable phenomena. For Hippocrates, as for Galen, the human body wasn't an isolated assortment of organs and limbs; the body moved within a larger universe in which everything, from the meanest insect to the farthest star, was interconnected.

For millennia, physicians and philosophers believed that the body was affected by four humours. The humours explained certain symptoms and they defined human temperaments. A melancholic suffered from an excess of black bile, which is what "melancholy" means in Greek, while a choleric character had too much yellow bile. An imbalance of phlegm could render you phlegmatic. Blood, not the red stuff of life in our veins but a subtler substance, was a fourth humour whose "fermented particles" caused fevers. And each of these, in good Hippocratic fashion, corresponded to one of the elements: Blood was paired with air, phlegm with water, cholera with fire, and melancholy with earth.

The history of these hypothetical bodily forces, which live on in our common speech — and to some extent, in our interior image of ourselves — forms the subject of Noga Arikha's excellent "Passions and Tempers: A History of the Humours" (Ecco, 396 pages,

\$27.95). In one sense, Ms. Arikha's account is a study of millennial wrongheadedness, since no such humours exist. But in a deeper sense, this persistent theory, reluctantly discarded only in modern times, has much to teach us. Beginning in ancient Greece and proceeding through the Middle Ages, Islamic as well as Western, with fascinating explorations of the Renaissance and the Enlightenment, Ms. Arikha brings her study up to our own "contemporary humours." As it turns out, the humours, though operating under aliases, are still very much with us.

From the outset, and until modern times, medicine and philosophy were twinned. This isn't as surprising as it seems. From antiquity onward, traditional societies explained existence and its disorders in supernatural terms. A god sent a plague, such as the one Apollo infected the Achaians with in "The Iliad." But medicine and philosophy sought rational explanations of reality. Both disciplines, quite radically, dared to explain phenomena in terms of indwelling principles of cause and effect. When a 10th-century vizier in Baghdad exclaimed, "Medicine is the stairway to apostasy," he was protesting the attempt by philosopher-physicians to trace the etiology of disease to natural causes rather than divine agency.

As Ms. Arikha shows in admirable detail, such attitudes — coupled with a sense of the sacredness of the human body — led to the prohibition of cadaver dissection in both the East and West. Ignorance of the inner workings of the body strengthened humoral theory, as the humours themselves were invisible or rarely seen; they had to be inferred by astute diagnosticians.

"Passions and Tempers" is an erudite book, drawing on historical and scientific sources in several languages, but a gracefully written one. There are many superb illustrations, informative notes, and an extensive bibliography. Ms. Arikha stumbles occasionally; there are some garbled names and terms in the chapter on Islamic medicine, and she sometimes botches the facts. The great Persian philosopher and physician Ibn Sina, known as Avicenna, may have died suddenly in 1038 from a

perforated colon aggravated by too many "celery-seed enemas," as Ms. Arikha claims, but his adoring disciple Juzjani, who was present, tells us that the master hastened his untimely demise by consorting with three concubines in succession on his last day, despite his faltering health.

It might seem perverse for a book to devote so much erudition to the history of a fallacy. Yet, mistakes are "necessary for correct theories to exist at all," as Ms. Arikha notes, and indeed, "even when wrong, a theory can help us understand, if not the world, then perhaps ourselves." A mistake that persists for more than 2,000 years must have much to teach us, and not only about our capacity for self-delusion.

One of the best things about Ms. Arikha's study, in addition to its wealth of intriguing detail, is that it is thoughtful. She points out that many traditional remedies are effective. We wouldn't "kiss a mule's muzzle" to cure a cold, as Pliny recommended, but "it still seems reasonable to eat root vegetables and 'warming' spices like mustard, ginger,

pepper, and cloves in the winter and 'cooling' foods like green vegetables and lemons in the summer," a regimen based on humoral theory. Blood-letting won't reduce a fever, as was once thought, but Ms. Arikha reminds us that it can reduce high blood-pressure. (Nor is the practice obsolete, as she claims; I've seen leech handlers awaiting their clients in the markets of Istanbul with jars of the slithery critters at the ready.)

Beyond individual nostrums, humoral theory rested on a holistic notion of the body; it provided an "explanatory structure," largely absent nowadays. "Medicine chops us into bits," says Ms. Arikha. She notes that doctors now find it hard to "accommodate their knowledge of individual organs with a sense of how interconnected our functions are." Ms. Arikha knows better than to prescribe a remedy for this theoretical malady, but on the evidence of her compelling account, maybe it's time, with a nod to Hippocrates, to put Astronomy 101 back into the pre-med curriculum.