

Reviews

Maimonides—Medical Aphorisms Treatises 16–21. [Kitāb al-fusūl fī al-ṭibb] A Parallel Arabic–English Edition. Edited, translated, and annotated by Gerrit Bos. Provo, UT: Brigham Young University Press, 2015. xxix + 204 pp. US \$89.95.

This volume is the fourth and most recent in a series projected for seven, making the twenty-five medical aphorisms treatises of Spanish-born Rabbi, philosopher, and physician Moshe ben Maimon/Musa bin Maimun (1135–1204 CE), also known as Rambam, accessible to contemporary research in a well-done critical edition. It is part of an ambitious endeavor to publish all of the medical works by this prolific medieval author, an undertaking nestled within the overarching Middle Eastern Texts initiative sponsored by the Neal A. Maxwell Institute for Religious Scholarship of Brigham Young University in Provo, Utah. Given the very specialized subject matter and its excellent scholarly presentation, in addition to the high quality of the printing of both the English and the Arabic (and the occasional Hebrew), the binding, and the overall layout of the book, the price is just a token and appears to be heavily subsidized. The support for such truly scholastic enterprise is to be lauded, especially in a time obsessed with scientific and technological progress at the expense of caring for the cultivation of historical awareness.

The core of the book consists of the annotated bilingual, side-by-side presentation of the collections of Maimonides' medical aphorisms about women (16, pp. 1–16), the regimen of health (17, pp. 17–36), physical exercise (18, pp. 37–44), bathing (19, pp. 45–60), foods, beverages, and their consumption (20, pp. 61–94), and drugs (21, pp. 95–138). (The pagination is unusual, with odd pages on the verso.) The core is preceded by a list of “Sigla and Abbreviations,” a foreword by the publisher, an introduction by the editor, and a catalogue-like critical listing of existing manuscripts of the *Kitāb al-fusūl fī al-ṭibb* (pp. ix–xxix). The edition is supplemented by a critical comparison of the Arabic text with the Hebrew translations and the translations into English (pp. 140–43), extensive notes to the English translation (pp. 144–77), three separate bibliographies (translations of works by or attributed to Maimonides, editions of works by Galen, general bibliography; pp. 178–85), a subject index to the English translation, a “botanicals” [!] index (pp. 186–200), and a list of addenda and corrigenda to the fifteen treatises previously published in volumes 1–3 of the series.

While the reviewer cannot comment on the Arabic, he noted with delight the thoroughgoing critical editorial method applied and the care taken to present the texts in as correct a manner as possible. This is scholarship at its best. It invites serious engagement with the materials thus presented even by those who are not philologists of classical or medieval Arabic. Maimonides' works open a window into the way of thinking about health care by an accomplished physician in the high Middle Ages in and around the Mediterranean Sea; Maimonides died in Cairo, Egypt. Thus, his medical aphorisms reflect not only the multicultural reality in

that area at that time by writing in Arabic and quoting from Greek, Latin, and Arabic sources; they also show a pragmatic attitude informed by his own medical practice in treating complaints even when authorities like Hippocrates or Galen teach otherwise (see 16:4; 19:26; 20:67, 82).

The book is a treasure trove for historians of medicine and cultural anthropologists as well as for general readers, because it gives an informed, sometimes delightful insight into medical and therapeutic concepts of the time based on the idea of humoral balance as taught by Galen and others. If the humors are out of balance, disease sets in. The task of the physician is to help people stay healthy and if they fall ill to advise them on proper diet and exercise to regain the balance. Rest is regarded as being “very bad for the maintenance of one’s health just as moderate movement is very beneficial” (17:1). “One,” therefore, “should not neglect the movement of one’s body as scholars do, who diligently study the entire night and day” but that “the body and all its limbs . . . be moved evenly” (17:4). Yet, one should “not only . . . exert the body, but also . . . gladden and delight the soul” (18:2), because “the soul has eminence over the body.” Thus, “in all kinds of exercise one should strive after a combination of exertion with joy, pleasure, and gladness” (18:3).

When it comes to medical intervention, Maimonides stresses the tradition that “the knowledge of the powers of . . . foods is nearly the most useful kind of knowledge in the field of medicine, since there is a constant and never ending need for food, during both health and sickness” (20:2). Consequently, most of what one finds mentioned in the treatise on “drugs” has to do with plants, liquids, and meats used as food around the Mediterranean Sea (see also 20:6–89), because “a treatment with nutriments that have therapeutic powers is better than a treatment with drugs that have alimentary powers.” Physicians are admonished to “be careful not to use pure drugs, unless . . . forced to do so for some reason” (21:1) while they at the same time should keep in mind that “not every medication is beneficial for every person; rather, for each person there is a medication appropriate for him” (21:30). In a remarkably bold statement, Maimonides states, “If someone makes himself remember that which is not necessary to remember, it causes a deficient remembrance even of the things that should be remembered. Therefore, I advise remembering [only] the natures of the drugs that are often used in any place, whose names are well known, and that are employed internally” (21:67); this means that “the total number of drugs whose degrees should be remembered because of their frequent use is two hundred and sixty-five” (21:86), not more!

When writing about bathing, the modern reader is surprised to find no mention of bathing as a means of personal hygiene or pleasure. Maimonides, instead, gives balneotherapeutical instructions by pointing out the medicinal properties of hot or cold baths, of the quality of the water (19:6, 7, 11), of water temperature, and the overall moisture in the bathhouse (19:32, 34). “Bathing evacuates only” the bad humors which are “near the skin,” whereas that “which is deep inside the body, spread in the flesh, is not” affected (19:1).

Ultimately, all concern for well-being is not for the purpose of staying healthy as such but for bestowing “excellent ethical qualities” (17:17), because “one’s moral character is impaired by bad habits in food, drink, exercise, sights, and sounds” (17:18). While one might doubt Maimonides’ judgment that “if pregnant women

constantly eat quinces, it improves the moral quality of their children" (20:87), one cannot but wonder about his astuteness in sharing the tradition and his own experience by informing professional colleagues about what to do and what to abstain from.

Besides the excellent editorial scholarship seen in this book, which certainly will yield its fruits in studies yet to come, the gain for the average reader of this kind of first-hand information from the Middle Ages is surprising, to say the least. May there be many individuals and libraries who, by acquiring a copy of this text, dare to be as courageous as the publisher in sponsoring the printing of these medieval documents of medical, botanical, and existential human knowledge.

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Galileo and the Conflict between Religion and Science. By Gregory W. Dawes.
London: Routledge, 2016. ix + 193 pp. Hardcover £85.

Gregory Dawes's book aims to breathe new life into the old claim that there is an irreconcilable conflict between religion and science, and that the progress of science has been, at times, hindered by its conflict with religion. This so-called "conflict thesis" is currently unfashionable and has come under heavy criticism from historians of science in recent years. It is held to be a naive, adversarial, and simplistic view of a complicated relationship. It is a thesis that, to quote the historian Peter Harrison, "is no longer taken seriously by historians" (2006, 223).

Pushing against this tide of fashion, Dawes argues that theologians, philosophers, and historians of science have so far been seeking conflict in the wrong place. They have attempted to locate an irreconcilable conflict between religious and scientific *communities*. Therefore, since the relationship between these two communities is *in fact* complex and historically contingent, these writers have mistakenly concluded that the conflict thesis is false. Dawes rejects this conclusion, arguing that the conflict between religion and science is not best construed as between religious and scientific *communities*, but as between the differing sets of *epistemic norms* which apply to members of religious and scientific communities (12–17).

Dawes's book is an enjoyable and scholarly, yet not overly technical, read. It contains nine chapters, the first two of which sketch a brief history of science from Aristotle and Ptolemy through to Copernicus. In the first of these, Dawes draws the reader's attention to the efforts of early medieval Christian theologians to come to terms with the proper relationship to maintain between religion and science. The emergence of the "handmaiden thesis" is noted (36), as is the late medieval "renaissance" in natural philosophy beginning in the eleventh century (39). The condemnation of 1277 is then put forward as a paradigmatic example of the conflict in action (41), and as a bad omen of what would later befall Galileo. His discussion of Copernicus in the second chapter is more balanced, emphasizing the well-known scientific shortcomings of Copernicus' theory of planetary motion,

as opposed to the theological objections that it also faced. In the third chapter, a history of the trial of Galileo is given, while two subsequent chapters outline the way in which differing scientific and religious epistemic norms surrounding the notions of *authority* and *certainly* were responsible for the Galileo affair. The final four chapters are more general, dealing with the relative place of critical thought in religion and science, and the importance of the distinction between faith and reason as a key to understanding the source of the conflict.

Notably in these later chapters, Dawes attacks a popular *tu quoque* argument that is often launched against secular epistemic systems. The argument usually runs that science, like religion, must hold certain principles above criticism. But if that is so, then science is as faith-based as religion, in the sense that science, like religion, accepts some propositions as unassailable, yet also unjustifiable. This argument is particularly common fare among intelligent design creationists. To defeat it, Dawes argues that *if* there happen to be any beliefs about which the scientist cannot afford to be critical, these would have to be the kinds of beliefs that Wittgenstein dubbed “hinge beliefs.” In particular, the hinge beliefs of science, were there any, would be of a *universal* sort. Such beliefs could simply not be doubted as a matter of principle, since they would be the very beliefs that enable us to function as rational agents. We could not *doubt* them, since we doubt *by using* them. Dawes does not commit himself to the position that science *does* accept any such beliefs as always beyond criticism (171). The point that Dawes wishes to draw attention to is that scientific criticism extends to the very outer limit of our critical ability. In contrast, the sacred myths that religion holds as beyond criticism are neither logically nor practically beyond criticism. Religion is the activity of treating certain beliefs *as though* they were hinges.

In a nutshell, Dawes’s thesis is that the conflict between religion and science is one between religious *dogmatism* and scientific *fallibilism*. In this respect, Dawes’s argument has a distinctly Popperian flavor to it. In scientific communities, he says, even the most fundamental principles are regarded as open to criticism and revision (and here the problem of scientific hinge beliefs resurfaces). As far as the norms of the scientific community are concerned, there are apparently no limits to scientific criticism. He contrasts this with the situation for scriptural religions: the authority of sacred narratives is regarded as unquestionable (129). Religious communities do not allow criticism to be taken too far, and transgressions may lead to excommunication. These are two very different approaches to knowledge taken by two different communities.

To emphasize, Dawes’s argument is concerned with the approved *norms* of scientific and religious communities, not the *behavior* of its individual members. Thus, it may be the case that a particular scientist is overly dogmatic with regard to her findings, or that a particular Christian is overly doubtful with regard to the resurrection of Christ. These examples present no problem for Dawes’s thesis, however. Such agents would simply be violating the approved norms of their respective communities. These transgressors would just be behaving badly (16).

Throughout the book, Dawes limits his discussion to scripturally based religious traditions, and Christianity in particular, since these are the traditions that Dawes, an ex-Catholic with twin PhDs in biblical studies and philosophy, knows best. That said, while he does not discuss other religious traditions in the book, he

notes that he is inclined to imagine that his thesis holds for religion more generally conceived, because, he says, “all religions have certain texts, institutions, practices or persons that they consider ‘sacred’ and therefore unquestionable” (12).

The differing epistemic norms of religion and science are taken to be rooted in “differing epistemological views,” differing in the sense that scripturally based religions lay claim to a second source of knowledge alongside human reason (16). Faith in a divine revelation is taken to be a source of knowledge with a greater degree of certainty than anything achievable by our natural cognitive faculties alone. It is a *sacred* source of knowledge: unquestionable. Thus, as Dawes often stresses, if it comes down to a choice between *certain* faith and *fallible* human reason, it is clear which is going to win. Even when sacred religious beliefs are overthrown by the demonstration of some scientific discovery, the *revelation* itself is not shown to be in error. The revelation is regarded as inerrant. In any case in which science only gives probable or uncertain reasons, the common reading of scripture prevails. This is a description of a religious belief updating procedure that finds its origin in Augustine, and Dawes details the crucial importance of this procedure in the trial of Galileo (77–84).

I think it is clear, and Dawes has made it clearer, that there are important differences between the epistemic norms of religious and scientific communities. Dawes’s book is an important guide on *that* matter. I do not think, however, that these differences are sufficient (although perhaps they are necessary) to explain the conflict between religion and science. If religious communities encouraged an attitude of tentativeness toward faith in a divine revelation, should we really imagine the epistemological conflict would then cease to exist? I am not so sure. Even if only tentatively advanced, divine revelation would still be propounded as a legitimate method of knowledge acquisition, and that is surely an important source of conflict in its own right. Religion claims to use epistemic methods that science does not. Certainly, religious dogmatism can be blamed for (among so many other things) *souring* the relationship between religion and science at times, but this seems more like a contingent historical point. Yet the epistemological conflict between religion and science seems to be the kind of thing that remains no matter how strongly either party *feels* about their beliefs. It is not a conflict as between two lovers with incompatible *personalities*, but as between two builders arguing how best to prop up a load-bearing wall: one says use *this* method, the other advances a different method, and without any way to settle the dispute, an irreconcilable conflict ensues. Religion and science are like this. They remain, to borrow Victor Stenger’s phrase, *opposed epistemologies*. With regard to the case at hand, Galileo may not have encountered such *hostility* if religious communities embraced tentativeness over dogmatism, but there would nevertheless have been other relevant and unavoidable epistemological differences.

Dawes’s effort to rekindle the embers of the conflict thesis may not convince many skeptical historians or philosophers of science. (It will convince no contemporary academic theologians.) However, locating the conflict between differing sets of epistemic norms is a promising approach. Dawes has at least managed to show that there is a persistent *disharmony* in the relationship between religion and science. He identifies the roots of this disharmony, and he suggests that it

cannot be mended. Yet one cannot help but feel that, with enough relationship counselling, there could always be a chance of reconciliation.

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REFERENCE

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