Shoaib Ahmed Malik. *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm.* Taylor & Francis 2021. 362 pp. \$190.00 USD (Hardcover 9780367364137); \$51.99 USD (Paperback 9781032026572).

Shoaib Ahmed Malik's Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm critically reconstructs the debate on evolution and Islamic faith. Chapter one covers the science of evolution, deconstructing arguments frequently used against it. Chapter two discusses Christian responses to evolution, highlighting intra-Christian differences and parallels between Christian and Muslim responses. Chapter three surveys Qur'anic verses and hadith that are relevant in the discussion over Islam and evolution. Chapter four maps Muslim positions on evolution, ranging from crude creationism to total acceptance of evolution (including for humans). Crucially, Malik distinguishes human exceptionalism from Adamic exceptionalism. According to the former, humanity started with the miraculous creation of Adam and Eve. According to the latter (originally advanced by David Solomon Jalajel), Adam and Eve were created miraculously, yet in such a way that their makeup and appearance did not differ from humans that hitherto evolved. Being the scriptures silent over pre-Adamic humans, their existence or non-existence are equally valid possibilities; one can suspend judgment about them (135). Chapter five explores Muslim authors whose outlook has been described as proto-evolutionary; Malik concludes that such an interpretation was obtained through de-contextualizing their ideas. In chapter six, Malik discusses whether chance and suffering encapsulated in, or entailed by, evolution challenge the Islamic concept of God; he concludes that they do not, relying on Al-Ghazālī (1058-1111 CE). Chapter seven discusses Intelligent Design (ID): the idea (used against evolution) that the biological microcosmos and the universe exhibit the existence of a design and hence of a Designer. Malik shows that, from an Ash'arite viewpoint, ID is irrelevant. In chapter eight, Malik explores evolution and morality, concluding that Al-Ghazālī's stance on human morality can be reconciled with evolution. In chapter nine, Malik explains the hermeneutic principles advanced by Al-Ghazālī; he attached importance to reason, considered science relevant in understanding the scriptures, and prescribed reading the Qur'an according to five "layers" that range from acceptance at face value to a reading based on analogies between things known in reality, and things mentioned in the Qur'an. In the last chapter, Malik evaluates, through Al-Ghazālī, the Islamic positions on evolution.

Malik's book has multiple merits. It is well and precisely written, constantly allowing the reader to clearly grasp the subject matter, the differences between scholars, authors, trends, etc. His

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comparison between Christian theological concerns and positions, and Islamic ones, is particularly laudable. Malik is extremely well-read; he conducts his discussion based on a wealth of literature including most recent contributions. Therefore, multiple chapters can be read as standalone pieces introducing the state of the art regarding specific debates. When discussing the science of evolution, Malik wipes away multiple, superficial objections-misconceptions ("evolution is just a theory," "evolution is unfalsifiable" etc.) that have been plaguing the debate on evolution and Islam/religion for decades (and are still widespread). Malik's book is also commendable in that it includes an accurate reconstruction of relevant and problematic scriptural passages (all too often, the discussion on Islam and evolution is developed piecemeal). The deconstruction of the idea that pre-modern Muslim authors were precursors of Darwin is remarkable, and so is Malik's discussion of theodicy and of ID. Finally, Malik sets a fine example of honesty in discussing and retracting positions he previously held. Overall, *Islam and Evolution* fruitfully raises the debate to a new level.

The following are some subjects for more in-depth conversation. Apparently, Adamic exceptionalism insulates Adam's creation from scientific criticism. To anyone who had not witnessed the moment of his creation, he looked indistinguishable from humans (Side remark: I wonder whether Adam was created with a navel to make him perfectly match other humans; but I suspect that Malik would regard this question as frivolous, in that it is undecidable). Seemingly, the scriptures provide no precise spatiotemporal coordinates for Adam's existence; nor do Adamic remains exist for scientific inspection. Additionally, Adamic exceptionalism makes it seem that there is no problem with science by accommodating human evolution. Other authors try to mitigate the challenge to science by opting for a metaphorical interpretation of Adam (or of scriptural passages about him that don't sit well with science). Malik disagrees with fully metaphorical interpretations, emphasizing that multiple statements about Adam can hardly be interpreted nonliterally, and that the Qur'an does not indicate that Adam should be taken metaphorically. Also, according to Al-Ghazālī's multi-tiered hermeneutics, metaphorical interpretations of Adam (e.g., as symbolizing repentance) may be maintained, yet in conjunction with the reading of Adam as a real individual (308). 'Science and scripture,' writes Malik, should not be treated 'unidirectionally in that science gets to completely determine what is and isn't valid' (297; here Malik is discussing Nidhal Guessoum's approach). So far, so good. I wonder, however, whether Adamic exceptionalism fully lives up to the promise of harmonizing Islamic faith with a scientific outlook.

14

Regardless of whether he was the first human or not, the mere fact that Adam is conceived of as a *real* being that walked on earth automatically exposes him to scientific constraints: if not in terms of scientific *inspection*, at least of scientific *thinking*. In this regard, accepting miracles, as Malik does, inspired by Al-Ghazālī, seems to me a major concession. Also, how close can one get to the identification of where and when Adam and Eve lived? In the Qur'an, they are attributed at least one direct speech (Q 7:23). Such an utterance may, or may not, be regarded as a realistic element discouraging metaphoric reading. The emergence and development of Arabic language, scientifically, can be dated and located. If Adam spoke Arabic at the time and place in which Arabic was first spoken (as per scientific information), since there already existed humans all over earth, establishing a genealogical link between Adam and all the humans who would receive the revelation seems challenging. This would be automatic if Adam had chronologically been the first. (To elaborate: If humans were revealed at some moment X that Adam is the father of humanity, there must be something that uniquely connects all humans with him: at least all those alive at X; and if he appeared late, someone may receive the Revelation that is not genealogically connected with him). Muslims have been debating the language of the Prophets. I wonder whether a plausible reconstruction is viable, possibly drawing on such tradition, harmonizing Qur'anic verses/theology, linguistics, and genealogy (if not genetics). Alternatively, one may opt for a metaphorical interpretation, but wouldn't this be a capitulation to science? More generally, if one is appreciative of science (as Malik is, praising Adamic exceptionalism since it takes care of the "genetic bottleneck" problem" - 328-329), how does one distinguish, exactly, between good exegesis and the case in which science is "unidirectionally" dictating options? Also, accepting that Adam may not have been the first human chronologically significantly impinges on the perception of his progenitorship. And if his progenitorship is reformulated relying on exegetic "epicycles," how acceptable will it ultimately be for Muslims? (E.g., one may propose that Adam appeared "late," but non-Adamic lineages were somehow wiped out; or that it is Revelation itself that establishes a connection between those who receive it and Adam as a "father," etc.). Finally, I wonder how Malik's theological epistemology may translate into scientific pedagogy and popularization. The "suspension of judgment" is presented as theological non-commitment. For instance, since the scriptures are silent on dinosaurs, it is prohibited and wrong to deny their existence arguing scripturally, and to claim that belief in them is Islamically essential (cf. 134); but on other levels Muslims may embrace the notion that dinosaurs existed. However, I fear that, practically, such

theological non-commitment might be perceived and implemented as a blanket prescription to treat certain subjects (not explicitly mentioned in the Qur'an) as negligible or as fields in which "anything goes." Among other problems, this would hardly harmonize with the Qur'anic invitation to observe the natural world (in which rich evidence for the existence of dinosaurs is available).

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