


Evolution and Religious Texts

with Shoaib Ahmed Malik, “Old Texts, New Masks: A Critical Review of Misreading Evolution onto Historical Islamic Texts”; and James Henry Collin, “Soul Making, Thesis, and Evolutionary History: An Irenaean Approach.”

OLD TEXTS, NEW MASKS: A CRITICAL REVIEW OF MISREADING EVOLUTION ONTO HISTORICAL ISLAMIC TEXTS

by Shoaib Ahmed Malik 

Abstract. With the increasing interest in Islam and evolution, some Islamic thinkers have vehemently rejected evolution, while others have eagerly embraced it. However, those seeking to embrace evolution sometimes err in their interpretation of historical writings. Indeed, there are texts written by famous historical scholars of Islam who *seem* to suggest that humans have evolved from lower forms of species. These include Ibn Khaldūn, Jalāl ad-Dīn Rūmī, al-Jāhiz, and The Brethren of Purity (*Ikhwān al Safā*). Although this may be true, such readings are a mistaken interpretation of the aforementioned authors who are actually referring to some form of the *scalae naturae* (the Great Chain of Being). This reference to the Great Chain of Being is unknown to some contemporary readers who mistakenly believe these writers to be discussing an evolutionary or a proto-evolutionary theory. This article demonstrates how and why these historical records do not actually represent any notion of evolution as it is currently understood, in the hope of avoiding any further erroneous claims that seem to be proliferating among modern thinkers.

Keywords: al-Jāhiz; evolution; Great Chain of Being; Ibn Khaldūn; Ikhwān al Safā; Islam; Muslims; Rūmī

The relationship between evolution and Islam is undoubtedly one of the most controversial subjects among Muslims. It has generated a lot of heated debate and polarized opinions. Unfortunately, there is, to a large degree, much confusion because of misunderstandings or misrepresentations of concepts either in science or in Islamic theology and hermeneutics (Hameed 2011). A further source of confusion is how historical Islamic texts are being used to demonstrate that past Muslim scholars were actually thinking of (or along the lines of) evolution (or a proto-evolutionary the-

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ory) as it is understood today. The motivation for writing this article is to demonstrate that this is an anachronistic reading. In fact, it can be stated at the outset that all the authors we shall review here do not discuss evolution, but are rather speaking under the broad framework of *scalae naturae* or what is known as the “Great Chain of Being” (hereafter referred to as the GCB).¹ Before we begin, then it will be helpful to juxtapose the GCB with the modern conception of evolution so as to make the differences between these two frameworks as clear as possible.

The GCB is a metaphysical framework that was derived from the works of Plato and Aristotle, and particularly flourished in Neoplatonism as a spiritual and philosophical account of reality (Lovejoy [1936] 2009, 61–63). It was enormously influential historically in Islam and Christianity because it established an ontological hierarchy of all beings, a principle and worldview that was theistic-friendly (Wildberg 2016). When the GCB was introduced into the Muslim world, it was appropriated to fit under an Islamic rubric, though not necessarily with any homogeneity, which is why we sometimes see differences among Muslim thinkers (Morewedge 1992; Twetten 2017). The reason why I stress this point is to establish that this idea was prevalent in the collective Muslim psyche, and it was a major frame of reference at the time (Kruk 1995, 31). Broadly speaking, at the very top of the chain was God (or the Absolute Good, The First Principle, or The One depending on the account that was adopted), which represented the highest level of perfection. After God, it was simply a downward degradation to lesser perfect beings. These included various tiers (such as the Universal Intellect or the Soul), angels/demons, celestial bodies, man, animals, plants, and rocks/minerals in that order (Netton 1991, 36–37; Netton [1996] 2003). By contrast, the increasing complexity from the lower levels to the higher levels demonstrated the increasing qualities of perfection. While minerals only had existence, plants had life and existence, and animals were better because they had existence, life, and movement, and so forth with increasing ascension. Each category also had its various subdivisions. For example, animals that demonstrated advanced levels of intelligence, mobility, and strength such as the elephant or lion were considered much higher in rank than, say, oysters in the animal tier (Nasr ([1964] 1978, 70). Or take another example: avian animals were considered superior to aquatic ones because of their increased mobility in air in contrast to water. So, these tiers or ranks were not due to some temporal or material dimension, rather they had to do with the metaphysical progression of perfection and not in any anthropomorphic or subjective sense (Nasr ([1964] 1978, 69; Lovejoy [1936] 2009, 24–98). On a more spiritual rendering, the lower level entities lacked the perfection found in the highest level and yearned for that reunion with God. That displacement between the lower entities and God creates a gradient that induces the creative or spiritual potential that drives that yearning (Morewedge 1992). The exact

mechanics and referents of this process varied from one thinker to another, but the underlying denominator in all of the variations of the GCB was the idea of an ontological gradation where each tier was a “fixed” unit.

By contrast, modern-day evolution seeks to explain the biodiversity that we see in the animal and plant world from a strictly materialistic framework. It rests on principles such as natural selection, variation, heredity, and differential reproduction (Scott 2009). In essence, evolution explains that biological traits can be passed down from the parent generation to the offspring’s generation but never with absolute similarity. This is because the genetic information is never carried over as an exact replica, leading to degrees of similarity and differences in the parent and offspring generations. Species carrying biological traits that are stressed from the external environment in terms of food and competitive survival tend to reproductively succeed. But with the constant flux found in nature, those stresses also vary through time and space. Branching of species, as modeled in the phylogenetic tree, occurs because of certain members diverging from the original group and adapting to different localities due to various reasons and possibilities (Stearns and Hoekstra 2005). So, there is a constant dialectic landscape between the genetics and the environment where chance-like events, that is, no long-term purposes in mind, can equally lead to positive, negative, or neutral traits to be expressed. Such chance-like events can be external, for example, natural disasters, or internal, for example, random genetic mutations, and when frequently active over several generations of change and adaption through deep time, we begin to see the biodiversity we recognize today, that is, species changing over time (Johnson 2015). In this account, humans are but one product of a long and complicated evolutionary pathway.

It would be an unfair anachronism if I were to criticize historical works of biology or zoology for not employing the particular language and concepts that current evolutionary biologists use. But this is not my argument. Rather, it is simply that the historical scholars we will review were not using the broad lens of modern-day evolution in their works. More specifically, my argument is that none of the works we will review indicate any notion of *species changing over time*, which I take as the fundamental denominator of all interpretations of modern evolutionary theories. The GCB is a metaphysical framework premised on the ascending perfection of beings, while evolution is a temporal and material explanation of plant and animal biodiversity. These are *fundamentally* different viewpoints. In other words, the GCB is a “vertical” scheme, whereas modern-day evolution is “horizontal” one. So, even though these scholars refer to potential similarities between species or observe (or utilize) the language of biological sequential order, as we shall observe shortly, their underlying principles are embedded in some variation of the GCB, not evolution. There may very well be some similarities in the language and schemes of these accounts but these

would not be due to any substantial parallels, rather they would be merely superficial or accidental similarities. Having cleared this preamble, let us review how various contemporary scholars have attempted to understand historical works as evolutionary (or proto-evolutionary) accounts.

Ironically, one of the earliest accounts that involves the praising of past Muslim scholars for thinking of “evolution” was John William Draper. He was responsible for nucleating a very aggressive confrontation (or in other words the conflict thesis) between Christianity and science when he wrote his infamous *History of the Conflict between Religion and Science* in 1875. The book, however, has been criticized for its lack of historical accuracy (Russel 2002; Principe 2016). Adding to this list of inaccuracies is the following quote: “[Christian] Theological authorities were therefore constrained to look with disfavor on any attempt to carry back the origin of the Earth to an epoch indefinitely remote, and on the Mohammedan theory of the evolution of man from lower forms, or his gradual development to his present condition in the long lapse of time” (Draper 1875, 188).

Draper goes on to praise the Muslims for going further than the Christians by teaching evolution in their institutions, writing, “[s]ometimes, not without surprise, we meet with ideas which we flatter ourselves have originated in our own times. Thus our modern doctrines of evolution and development were taught in their [Muslim] schools. In fact, they carried them much farther than we are disposed to do, extending them even to inorganic or mineral things” (Draper 1875, 118).

Among contemporary Muslims, referring to historical authors is a strategy that is particularly reinforced by advocates who want to demonstrate that evolution and Islam do not conflict. For example, after claiming that Darwin took the idea of evolution from Muslim scholars, T. O. Shanavas² praises Draper for his acknowledgement, writing “[t]he abundant evidence . . . demonstrates that Muslims are the originators of the theory of evolution, and William Draper is correct when he calls it the Muslim Theory of Evolution. The only difference one can cite between the Muslim scholars and Darwin is that Muslims believed that the existence of the ladder of nature was the result of divine will and providence” (2010, 126–27).

Consider a recent article entitled “An Untold Story in Biology: The Historical Continuity of Evolutionary Ideas of Muslim Scholars from the 8th Century to Darwin’s Time” that contains an argument for the unappreciated acknowledgement of Muslim scholarship on the topic of evolution (Malik et al. 2017). There the authors review eight Muslim scholars—three of which will also be looked at in this article including Ibn Khāldun, The Brethren of Purity, and al-Jāhiz—and concluded that “all eight Muslim scholars suggested that humans underwent some type of phenotypic evolution. Some of them specifically wrote about similarities between humans and apes/monkeys, in many cases stating that humans derived from an ape/monkey ancestor,” which is why “their theories were

evolutionary because they supported the notion that species change over time” (Malik et al. 2017, 13). Variations of such perspectives are rampant (Hamad 2007; Kaya 2011; Iqbal [1974] 2012, 121; Dajani 2016).

Other authors are much more implicit in their position. Nidhal Guessoum, undoubtedly one of the leading voices of evolution in the dialogue of science and Islam, is a bit more cautious. He introduces the idea of the GCB when relaying historical accounts of (apparent) evolution among Muslim thinkers while not clearly clarifying or stipulating his own position (Guessoum 2011, 305–08). However, on sending a letter to an editor as a reaction to the promotion of creationism, he indicates that they could be discussing evolution when he writes: “People may be surprised that many Muslims scholars of the golden era of the Islamic civilization, scholars like al-Farābī, al-Jāhiz, Ikhwān al Safā and Ibn Khaldūn, all noted the ‘gradation’ or even ‘evolution’, of organisms in nature. How much have we regressed!” (Guessoum 2011, 320).

This is by no means a conclusive point, and I am merely making an observation. However, having said this, it begs the question as to why someone would refer to such historical Muslim authors to make a point for *contemporary* evolution. Moreover, if we regressed as he says, regressed from what exactly? Though there are further points that can be mentioned regarding Guessoum and Malik et al. in their reading of classical thinkers, they will be postponed for later and relevant sections.

In spite of the aforementioned worries, I can understand the need for making evolution a more amenable position. Because of the negative associations linked with evolution in the Muslim world, a *possible* motive in projecting evolution onto historical Muslim scholars (knowingly or unknowingly) might be due to inducing the idea that Muslims are only reembracing age old ideas from their tradition. This was the position of Jamāl al-Dīn al-Afghānī, for instance (Shah 2010, 159). This set a lasting historical precedent (Elshakry 2014, 161–218). Regardless, the motivation behind this line of thinking could be to diminish the negatively charged polarization of evolution found in the Muslim world. However, though such a strategy might help reduce the social anxieties of Muslims, and thus potentially help them embrace evolution, it resorts to a false stimulus (for a similar observation, see footnote 10 in Chittick 2013, 88). Regardless of whether one is implicit or explicit in seeking an ideological footprint of evolution in historical works, the underlying problem with all these perspectives is that they are approaching them with a modern lens. The historical works we will look at were written in the framework of some version of the GCB. Unfortunately, they have been interpreted as works of evolution when the relevant paragraphs or couplets have been isolated and truncated from the wider text, which then conveniently provide an evolution-friendly reading. So, what seem like indications of evolution are, in fact, decontextualized interpretations.

Finally, it could be contended that though this last observation may be true, these thinkers had some novel ideas that were not available in other intellectual traditions, say in Christian Europe, that anticipated modern-day evolution. I would like to point out that there are, unquestionably, some ideas and observations in *some of these works and thinkers* that can easily correlate with our current conceptions under the broad umbrella of evolution (or even biology in general), for example, al-Jāhiz discusses food chains (as we will come to see shortly). This observation is not being negated nor is it being downplayed in this study. Instead, the purpose here is to provide context for these thinkers, to make explicit the conceptual foundations on which these works are based. By doing so, we can pinpoint the isolated ideas that do have similarities with contemporary evolution without reducing their entire worldviews to an evolutionary framework through highly selective (and thus erroneous) readings. Thus, this work is a philological attempt: “the discipline of making sense of texts” (Pollock 2009, 934). Accordingly, the analysis to follow will not only look at the language of the texts but also their textual and contextual settings.

READING EVOLUTION ONTO HISTORICAL WORKS

I will review four scholars—Ibn Khaldūn, Jalāl ad-Dīn Rūmī, al-Jāhiz, and the Brethren of Purity—and the specific works that I will examine are *Muqaddimah* (Prolegomena), *Mathnawi* (The Spiritual Couplets), *Kitāb al-Hayawān* (The Book of Animals), and the *Risā'il Ikhwān al-Safā* (Epistles of the Brethren of Purity), respectively. I have specifically focused on these four for two reasons. First, from the author's engagement with the discourse on evolution and Islam, these seem to be the most widely quoted. Second, there is a large amount of material available on them from various other perspectives, including the historical, philosophical, and theological in English,³ which makes them very accessible for the avid reader.

Ibn Khaldūn

The following paragraph from Ibn Khaldūn's famous *Muqaddimah* is oft-quoted:

One should then look at the world of creation. It started out from the mineral and progressed, in an ingenious, gradual manner, to plants and animals. The last stage of minerals is connected with the first stage of plants, such as herbs and seedless plants. The last stage of plants, such as palms and vines, is connected with the first stage of animals, such as snails and shellfish which have only the power of touch. The word “connection” with regard to these created things means that the last stage of each group is fully prepared to become the first stage of the next group. The animal world then widens, its species become numerous, and, in a gradual process of creation, it finally leads to man, who is able to think and reflect. The higher stage of man is reached from the world of monkeys, in which both sagacity and perception

are found, but which has not reached the stage of actual reflection and thinking. At this stage we come to the first stage of man. This is as far as our (physical) observation extends. ([1377] 2005, 75)

One can easily surmise from this quote that Ibn Khaldūn is very likely talking about evolution. Two points indicate this. First, the initial sentences discuss a linear biological process from simpler entities to more complex ones that falls in line with contemporary evolution. Of particular interest is the specific point on the relationship between humans and monkeys toward the end. Second, in the very last part of the paragraph, a specific point is made with regard to the extent of physical observation. This is important because it seems to indicate an empirical account, a point also in line with modern-day evolution. Malik et al. quote this very paragraph to make the case for their evolution-friendly reading of him: “It is fascinating to see . . . Ibn Khaldūn most clearly professed his belief that humans themselves evolved specifically from an ape/monkey ancestor—a concept that a majority of both Muslims and people of other religions, including Christian creationists, find particularly difficult to accept” (2017, 12).

However, probing further into the text reveals otherwise. The first indicator of an alternative reading is the title of the section under which this quote is situated: *The Real Meaning of Prophecy*. If this clue is not obvious, at the very least, it should instigate the reader to think about the possible connection between the title and the previous quote. The second and much more explicit evidence that he is not speaking about evolution is provided by the following paragraphs that immediately follow the previous quote:

In the world of creation there are certain influences of the motions of growth and perception. All this is evidence of the fact that there is something that exercises an influence and is different from the bodily substances. This is something spiritual. . . . The soul . . . must be prepared to exchange humanity for angelicity, in order actually to become part of the angelic species at certain times in the flash of a moment. . . . The soul is connected with the stage next to it, as are all the order of the existentia, as we have mentioned before. It is connected both upward and downward. Downward it is connected with the body, thus acquiring the sense perceptions by which it is prepared for actual intellection. Upward, it is connected with the stage of the angels. There, it acquires scientific and supernatural perceptions, for knowledge of things to that come into being exists timelessly in the intellections of the angels. (Ibn Khaldūn [1377] 2005, 75)

In the first few sentences of this paragraph, Ibn Khaldūn seems to be discussing an influence in creation that is “different from bodily substances,” which he refers to as the soul, and it is this entity that connects the realm of man with angels. So, it seems that there is a continuation of being after the realm of man. The previous paragraph ends with humanity as a final stage and thus seems to be very evolution-friendly. However, when we situate these two paragraphs together, we see a different picture. Three points need

highlighting. First, if this is truly a reading of evolution, then its advocates would have to demonstrate what relevance souls and angels have to do in this account, given that these are immaterial entities as traditionally understood by Muslims, and thus also by Ibn Khaldūn. Second, recall the point made earlier regarding the comment on “the extent of observation.” If that statement is read and evaluated only within the context of the first paragraph, it would give the false impression that it is meant to be an empirical account of reality. However, continuing with the second paragraph, it seems that Ibn Khaldūn is still developing that point to prepare the link between man and angels through the soul, which is unobservable and thus contrary to all the entities mentioned in the first paragraph, for example, minerals, plants, animals, and humans. This is a subtlety that is lost and the text renders a polar opposite (i.e., evolutionary) reading when the first paragraph is truncated from the second. Now the question is why this link between man and angels is being established. This can be answered through the following paragraph:

They [prophets] thus move towards the angelic, sloughing off humanity at will, by virtue of their natural constitution, and not with the help of any acquired faculty or craft. The prophets move in that direction . . . and once among the highest group of angels, learn all that may there be learned. They then bring what they have learned back down to the level of powers of human perception, as this is the way in which it can be transmitted to human beings. (Ibn Khaldūn [1377] 2005, 78)

Recall that angels occupy a higher tier than humanity in the GCB. Furthermore, within each tier, there are subranks. The highest rank within humanity is none other than the prophets in Islam because they can “transcend” their human status in the spiritual sense (Netton 1991, 36). Finally, I want to point out again that the title of this section is *The Real Meaning of Prophecy*. Keeping these three points in mind, the purpose of establishing the link between man and angels is to demonstrate how prophets, who occupy the highest ranks among humans, can transcend the rank of man into the realm of angels so as to learn spiritual truths (revelation), and then come back down to the realm of humans to share that knowledge with the rest of humanity. Thus, what becomes clear is that Ibn Khaldūn was not discussing evolution. Rather, he was discussing the gradation of beings in the GCB with particular focus on what discriminates prophets from ordinary men and how prophecy itself operates, hence the importance of the title and the discussion of the soul that is responsible for the possible transformation from “humanity to angelicity.”

Thus, it can be conclusively said that Ibn Khaldūn is not talking about evolution in this paragraph and it would be an interpretative fallacy to state that he is. As pointed out earlier, to maintain an evolutionary reading of Ibn Khaldūn, one would have to answer how the points of the soul and angels

would fit in that narrative, which is not possible under a materialistic outlook like evolution. More importantly, one would have to entertain serious thematic gymnastics of the first quoted paragraph to make a case for evolution. Neither of these options seems to be tenable.

Jalāl ad-Dīn Rūmī

A similar mistake is projected onto several couplets taken from Rūmī's infamous *Mathnawi*. Take the following as an example:

I died to the inorganic state and became endowed with growth, and (then)
I died to (vegetable) growth and attained to the animal.
I died from animality and became Adam (man): why, then, should I fear?
When have I become less by dying? (Rūmī [1930] 2003, 218)

Up to this point it may seem like a perfectly acceptable account of evolution with the progressive sequence of the inorganic state to the vegetable state, from there to the animal state and finally to humans as mentioned in these two couplets. However, the immediate subsequent couplets indicate something else:

At the next remove I shall die to man, that I may soar and lift up my head
amongst the angels;
And I must escape even from (the state of) the angel: everything is perishing
except His Face [God]. (Rūmī [1930] 2003, 219)

In continuing with the phase-changing storyline, the next phase seems to be from man to angel with a final pointer to the imperishable God. Since angels do not take part in evolution, or in any modern understanding of evolution as a matter of fact, this clearly refers to a nonevolutionary account. However, before we can convincingly dismiss this as an evolutionary reading, we need some context to understand what is being implied here to make an alternative reading plausible. To begin with, it must be pointed out that Rūmī was one of the most noteworthy mystics in Islamic history. Keeping this very important point in mind, let us view William Chittick's—one of the most respected, contemporary scholars on Islamic spirituality (and by extension Rūmī)—remarks on the contextual background of Rūmī's passages on "evolution" as follows:

When Rumi and others talk about what has been labelled as "evolution." They are talking about the manner in which human beings go back to God. . . . The idea of a "return" is meaningless unless we begin by acknowledging that creation has come from God in the first place. In other words, every "evolution" demands a prior "devolution" . . . The basic principle in all Islamic discussions of "evolution" is that the human soul needs to undergo a synthetic and unifying growth by which it can go back in happiness and wholeness to the unitary realm from which it arose. (2013, 84)

The idea here is that there has been a separation, disintegration, and dispersion of the human soul and the creator. So, there is a longing and a process to unite with God. Thus, “the goal is to awaken the intelligent and the intelligible light of God that the Quran calls the ‘spirit’” (Chittick 2013, 84) or what is known as “origin and return” (*mabda’ wa ma’ād*) in Sufi literature. Accordingly, “the return to God is a gradual ascent on a ladder whose steps mark the increasing unification and intensification of the *spiritual and intellectual light*. This can only happen because human beings came into this world by successive degrees of darkening and obscuration. The integrative movement of the return to God is the reversal of the dispersive movement of creation” (Chittick 2013, 86, emphasis my own).

Thus, what seem to be physical stages of evolutionary development are actually just spiritual states expressed in Sufi/mystical and metaphorical expressions. As explained by Chittick, “It is because people have descended from God in stages . . . that they are then able to ascend from the mineral and plant stages (*in the womb*), to the animal stage (*in infancy and childhood*), to the human level (*as adults observing the necessities of human goodness*), and then to even higher levels, following Mohammad in his Night Journey” (2017, emphasis my own).

So, similar to the erroneous reading of Ibn Khaldūn, the quoted couplet seems to be a truncated and selective reading of Rūmī. Another oft-quoted stanza is the following:

Man first appeared at the level of inanimate matter,
 Then it moved to the level of plants,
 And lived years and years a plant among the plants,
 Not remembering a thing from its earlier inanimate life.
 And when it moved from plant to animal,
 It did not remember anything from its plant life,
 Except the longing it felt for plants,
 Especially when spring comes and beautiful flowers bloom,
 Like the longing of children for their mothers,
 They don’t know the reason for longing for their breasts,
 The Creator pulled Man – as you know – from its animal state,
 To this human state,
 And so Man moved from one natural state,
 To another natural state,
 Until he became wise, knowledgeable, and strong as he is now,
 But he does not remember anything from his earlier states,
 And he will change again from his current state. (quoted in Guessoum 2011,
 308)

Again, this quotation seems to very plausibly imply that Rūmī is discussing evolution. However, this specific quotation is from Guessoum, who translated these verses himself from Arabic.⁴ The problem here is that the *Mathnawi* was originally written in Persian (Farsi), so this is the product

of a double translation. Reynold Nicholson, who was a leading expert on Rūmī, translates the same couplet from Farsi as follows:

First he came into the clime (world) of inorganic things, and from the state of organic things he passed into the vegetable state.
 (Many) years he lived in the vegetable state and did not remember the inorganic state because of the opposition (between them);
 And when he passed from the vegetable into the animal state, the vegetable state was not remembered by him at all,
 Save only for the inclination which he has towards that (state), especially in the season of spring and sweet herbs —
 Like the inclination of babes towards their mothers: it (the babe) does not know the secret of its desire for being suckled;
 (Or) like the excessive inclination of every novice towards the noble spiritual Elder, whose fortune is young (and flourishing).
 The particular intelligence of this (disciple) is derived from the Universal intelligence: the motion of this shadow is derived from that Rose-bough.
 His (the disciple's) shadow disappears at last in him (the Master); then he knows the secret of his inclination and search seeking.
 How should the shadow of the other's (the disciple's) bough move, O fortunate one, if this Tree move not?

Again, the Creator, whom thou knowest, was leading him (Man) from the animal (state) towards humanity.

Thus did he advance from clime to clime (from one world of being to another), till he has now become intelligent and wise and mighty.

He hath no remembrance of his former intelligences (souls); from this (human) intelligence also there is a migration to be made by him. (Rūmī [1930] 2003, 472)

Two things need to be pointed out. First, the translation by Nicholson does not seem to be as mechanical as Guessoum's. For example, Nicholson is careful to add that the intelligence mentioned in the second-last couplet is referring to a spiritual state and not necessarily intelligence in the cognitive sense, which aligns with Chittick's remarks mentioned earlier. Also, the point of forgetting former intelligences (i.e., from plant to animals and then to humans) is an analogy of the stages of human development in which the previous stages are not remembered by the latter, and not in the sense of physical transformations as is understood in evolution: "This is . . . a spiritual climb, like that of an embryo to intelligence" (Chittick 2017).⁵ Second, and more important, Guessoum's translation is missing four couplets as emphasized in the quotation.⁶ This could be because his source material for this translation is an Arabic PhD dissertation on this topic rather than the original work. It is plausible that the author of the dissertation happened to have missed these couplets. Alternatively, it may be countered that Nicholson's translation which I have relied on might be in error. This is definitely not the case, as these missing couplets can be easily found in the original text.⁷ Furthermore, Jawid Mojaddedi (2017, 216), a contemporary expert on Sufism who has also translated Rūmī's

Mathnawi, includes these four couplets and also offers a very similar translation of this stanza in his translation.⁸ So, it seems that the real error stems from the Arabic translation in the dissertation which Guessoum has relied on.

Having cleared the problem of translation and selective readings, the use of terms like “universal intelligence,” which is one of the immaterial tiers in the Neoplatonic framework as pointed out earlier, found in the complete stanza is a clear indicator that it is premised on the GCB. But Rūmī also utilizes explicit terms like “spiritual Elder” and implicit ones like “disciple” and “master” that are common terms and ideas used in mystical writings. This should not be surprising because, as indicated earlier, Rūmī was well known for being one of Islam’s most vivid and impactful mystics. In fact, Rūmī premised his entire worldview on the notion of love. It is the single principle that drives the entirety of creation, be it cosmic, geographical, material, mental, or spiritual interactions. Ultimately, every entity is trying to reach a state whereby one is united with the Ultimate, which is God. In mystical terms, since a lover (creation) yearns for the beloved (God), it does anything it can to assimilate and ascend toward that unity in the higher realms from its multiplicity in the lower realms to the unity “above” (Nasr [1964] 1978, 53). Thus, as has been highlighted and stressed earlier, he is discussing, or rather alluding to, a spiritual account of nature within the GCB that has no resemblance to the mechanical forces of natural selection as outlined in the theory of evolution. The differences between the two accounts have also been pointed out by others (Hakim 1959, 32–42; Ghafouri-Fard and Akrami 2011, 26; Kartenegro 2016, 80). Thus, it is fair to conclude that Rūmī’s work “has only superficial resemblance to evolution in any modern sense” (Chittick 2013, 87).

al-Jāhiz

Al-Jāhiz’s *Kitāb al-Hayawān* is an encyclopedic seven-volume tome that discusses various aspects of the natural world. The problem with it is that it entangles theological, philosophical, and empirical perspectives into one matrix that makes it a challenge to interpret (Montgomery 2013). Furthermore, al-Jāhiz utilizes poetry, religious scripture, and accounts from local and distant cultures, in addition to his empirical observations. This sometimes makes it unclear what the overall objective or motivation in his work is. Nevertheless, it unquestionably contains a lot of empirical content “including the influences of various climates and diets on men, animals and even plants of different geographical regions; as well as discussions of animal mimicry, intelligence, and social organization” (Elshakry 2014, 268). Al-Jāhiz is also known to have compared humans with various other animals as noted by Saʿīd Mansūr in his detailed and masterful study of *Kitāb al-Hayawān*:

Al-Jāhiz notices the similarities seen in physical structure; for example, the face, the eye, the hand, the fingers, and the way they are raised, moved, and used to supply the mouth with food. In other respects also there is resemblance between monkeys and men as for insurance in marriage, jealousy, the way of laughing and imitating. . . . Even the cat in the general view of al-Jāhiz is thought to resemble man in her sneezing, yawning and cleaning herself. (Mansūr 1977, 279)

Or consider the following observation made by Mehmet Bayrakdar: “He [al-Jāhiz] says, ‘People said different things about the existence of *al-miskh*’ (= original form of quadrupeds). Some accepted its evolution and said that it gave existence to dog, wolf, fox, and their similar. The members of this family came from this form (*al-miskh*)” (1983, 311).

From such evidence, some have gone on to contend that this is the first zoological account which discusses biological evolution in the Muslim world (Bayrakdar 1983; Shah 2010, 142). Two points need to be addressed here. First, it has been argued that the treatise itself is not strictly a biological account of nature even though it contains empirical observations. Consider Elshakry (2014, 269) who believes that al-Jāhiz’s book “is not so much a zoological treatise as . . . its emphasis was on philosophical and religious edification,” and points out how some thinkers have read al-Jāhiz’s work selectively while ignoring his other points such as “the transformation by God of sinful nations or peoples into pigs, apes, and other ‘lower creatures’.” Similarly, but much more potently, Mansūr astutely highlights that al-Jāhiz discussed the broader ontological interconnectedness between metaphysical entities such as God, angels, and demons with the animal kingdom (while, of course, also acknowledging their differences), clearly indicating a broader purpose rather than a simple treatise on zoology (1977, 299–301). Frank Egerton also remains unconvinced of a zoological reading, but he points out that al-Jāhiz does deserve the credit for mentioning the ideas of food chains (even though they were incorrect on some occasions⁹) when he writes:

The mosquitoes go out to look for their food as they know instinctively that blood is the thing which makes them live. As soon as they see the elephant, hippopotamus or any other animal, they know that the skin has been fashioned to serve them as food; and falling on it, they pierce it with their proboscises, certain that their thrusts are piercing deep enough and are capable of reaching down to draw the blood. Flies in their turn, although they feed on many and various things, principally hunt the mosquito . . . All animals, in short, cannot exist without food, neither can the hunting animal escape being hunted in his turn. (Egerton 2002, 143)

Second, Bayrakdar’s claim that al-Jāhiz believed in evolution based on the quote he provides does not provide real proof. Careful attention to Bayrakdar’s quotation reveals that it is not actually al-Jāhiz’s opinion. Rather al-Jāhiz is relating an account of what others believed. More importantly,

when the primary text is read it becomes apparent that Bayrakdar actually mistranslated and selectively quoted sentences from a wider paragraph. The full paragraph reads as follows:

The people said different things about the *miskh*. Some of them said that the *miskh* doesn't reproduce or doesn't remain (or survive) except as a lesson to mankind, and they [the people] were sure about that evidence. And some of them said that the *miskh* does remain and reproduces until it has been made into the lizard (*dabba*), the eels (*jirreeya*), the rabbit (*araanib*), dogs (*kalaab*) and others from the descendants of those that were metamorphosed into that form [*miskh*]. And the same is of their opinion regarding the snakes.¹⁰ (al-Jāhiz 1938, Vol. 4, 68)

Having quoted the original text, it is noteworthy to clarify three things. First, Bayrakdar translates *miskh* as “quadrupeds”; that is incorrect. *Miskh* actually translates into the transformation or the metamorphosis of an entity into an animal (Cowan [1961] 1979, 1065). It is derived from a well-known account in the Quran in which a certain group of people were transformed into apes and pigs by God as divine punishment (Quran 5:60; 2:65; 7:166).¹¹ Bayrakdar's translation of it as quadruped seems to be an idiosyncratic translation. Second, in light of the correction of *miskh*, the discussion of animals evolving is strictly within the subject domain of the *miskh* and not a general discussion applicable to all creatures. Third, it should be evident that in this paragraph, al-Jāhiz compares two perspectives and does not mention his own stance. So, to characterize al-Jāhiz as a pro-evolutionary thinker based on this paragraph is highly erroneous.

By contrast, al-Jāhiz rejected any kind of transformation:

[I]n spite of a certain resemblance . . . with man the monkey does not pass beyond the limitations of the monkeys to enter the boundaries of man. This means also that the monkey is confined to its own species. The similarity between man and animal . . . does not go beyond the limit of resemblance in al-Jāhiz's outlook. It may happen that a thing possesses an element similar to something else, but this does not mean at all that either of the two things will depart from the rules and limits of its own nature. Nothing that resembles man is ever able actually to cross the boundary of human nature and become man. What is true of animals holds also of man; man does not forsake his nature to take on theirs. It is clear . . . that al-Jāhiz completely rejected the possibility of the transformation of one species to another. Furthermore, he rejected the gradual development in animal life.¹² (Mansūr 1977, 280–81)

Interestingly, Mansūr (1977, 282) takes al-Jāhiz's rejection as an indication that some proto-evolutionary ideas were probably present and discussed at the time.

In summary, even though al-Jāhiz may have described various observations of the animal and plant kingdom in terms of food chains, environmental factors, and physical similarities, it does not follow that he believed in the changing of species (Stott 2012, 55). His empirical observations may

be similar to what we believe and know today, but he does not provide any grand narrative that parallels any kind of explanation where species evolve from one to the other. On the contrary, he believed in the fixation of species that is an immediate indication that he developed or adopted a version of the GCB. This is further substantiated with his inclusive mention and discussion of metaphysical entities as highlighted earlier. Restricting al-Jāhiz's work to selective empirical observations or evolution-friendly quotations insulates the reader from his wider framework that makes it impossible to draw an alternative reading, and this is where the confusion arises. Nonetheless, it can be concluded that al-Jāhiz, like the thinkers discussed before, did not adopt an evolutionary framework.

Brethren of Purity

The Brethren of Purity are by far one of the more interesting cases. They have been quoted with similar paragraphs as discussed by Ibn Khaldūn and Rūmī (Shanavas 2010, 118; Guessoum 2011, 271, 307), so we need not repeat the criticism here. It is well known that the Brethren of Purity were Neoplatonists and their worldview was saturated with all sorts of hierarchal structures and relationships (Netton 1991, 36; El-Bizri [2008] 2014). So such quotations are undoubtedly about the GCB. However, the most interesting feature of the Brethren of Purity is that, in addition to the ontological hierarchy, there seems to be a temporal aspect to their worldview unlike the previous thinkers we have looked at:

[A]ccording to the Brethren, there is in addition a certain chronological order which they follow, amounting almost to an anticipation of Darwinian evolution. Thus plants precede animals in the order of their appearance in the world, since they are to them what matter is to form. Similarly the lower animals "have preceded the more perfect, at the beginning of creation, in so far as they take a shorter time to develop, compared with the more perfect, which take a longer time . . . Moreover, sea animals have preceded land animals by a long stretch, because water came before earth, and the sea before dry land, at the beginning of creation." The appearance of animals generally upon the globe must therefore have come after plants, and prepared the ground for the appearance of man, for whose sake not only the animal kingdom but everything else beneath it were created. (Fakhry [1970] 2004, 177–78)

It is this particular feature that makes interpreting them tractable to evolutionary readings. For example, Malik et al. (2017) mention the following paraphrase from the Brethren of Purity as evidence that they are evolutionists:

Plants come before (*taqaddama*) animals in the series of beings and serve them as material for the forms of animals and food for the nutrition of their bodies. From this point of view, plants would be like a mother who eats

raw food, digests it, assimilates it and transforms it into pure milk which is absorbed very gently by those who drink it. The plants subsequently present this to the animals considered as their sons. . . . Plants occupy an intermediate position—necessary and salutary—between the four elements and the animals. All the parts of the vegetables which the animals consume such as seeds, leaves, fruit, and so on, come from the four elements digested and transformed by the plants. (2017, 7)

However, in order to fully appreciate such attributions to the Brethren of Purity, we need to carefully unpack their worldview before we can decisively render any evolution-friendly interpretations. As Neoplatonists, they believed in an ontological hierarchy with man in the center, the midpoint between the material and immaterial world. Within the material world, there are three kingdoms: minerals, plants, and animals. Each of these tiers acted as sustenance for the rank above it, so minerals fed plants, which, in turn, fed animals, and so on. The culmination of these ranks and sustenance end with humans, beyond which there will be no further gradation of physical forms. Once humans reach a state of spirituality that allows them to enter that reunion with God, the “process” ends. Thus, Seyyed Hossein Nasr states,

Man’s “evolution” is therefore inward; God does not create something after man as he created man after the animals, because man, by virtue of being able to return to his origin, fulfills the purpose of the whole of creation. All the other orders of beings were created in order that this final stage of reunion might take place. Once the reunion has occurred, there is no metaphysical necessity for another form to be created. Man is the link between the three kingdoms and the heavens and therefore the channel of grace for the terrestrial environment; the three kingdoms depend upon him, and man in turn has the right to make use of them. ([1964] 1978, 73)

It can be gathered from this that the Brethren of Purity were speaking largely in spiritual and teleological terms that aligned with the GCB. So, the previous quote by Malik et al. (2017) has to be situated within a broader metaphysical scheme rather than being taken as a simple material observation. Up to this point, it can be argued that this can perfectly align with evolution. It can; however, the Brethren of Purity do not stop there. As Neoplatonists, they believed in the fixation of species or natural kinds in the world of “ideas” that manifest into particulars in this shadow-like world. This is explicitly mentioned in their own words (quoted in Nasr [1964] 1978, 73): “The species and genus are definite and preserved. Their forms are in matter. But the individuals are in perpetual flow; they are neither definite nor preserved. The reason for the conservation of forms, genus and species, in matter is the fixity of their celestial cause because their efficient cause is the Universal Soul of the spheres instead of the change

and continuous flux of individuals which is due to the variability of their cause.”

In other words, there is fluidity in particulars but not essences. It follows from this that the Brethren of Purity occupied no conception of biological derivation of later species from earlier ones since every species is fixed; each one is an ontological and immutable designation defined by God who has set the spatial, temporal, and adaptive boundaries of each kind (Goodman and McGregor 2012, 31). Each species is elected (rather than naturally selected) to manifest a certain function in the grand scheme of things in coordination with the heavenly spheres:

Every creature's tenure is no more than God has allotted. Animals, humans, jinn—every kind has its domain and its moment. Each species has its habitat and mode of life, the implements and skills it needs to carry on—to reproduce, in the case of higher animals; or to be reborn, for those that seem to arise by spontaneous generation. Ants and bees industriously stow their stores and guard their young. But even the careless grasshopper and negligent ostrich are looked after. So their kinds persist—but not forever. Each kind endures or flourishes for just the era God has allotted, marked out by the revolutions of the planets and the spheres. (Goodman and McGregor 2012, 30)

Accordingly, there is no temporal sequence in the biological sense but instead a temporal divine prescription of ontological slots in alignment with the GCB that happen to have temporal implications. Even ideas such as “adaptation” need to be carefully understood as divine settings rather than material correlations:

“Adaptation to the environment” is not the result of struggles for life or “survival of the fittest,” but comes from the wisdom of the Creator, Who has given to each creature what corresponds to its need. In the deepest sense, what separates all these ideas of the Ikhwān from their modern counterparts is that for the Ikhwān the hands of God were not cut off from creation after the beginning of the world—as is the case with the deists. On the contrary, every event here “below” is performed from “above” by the Universal Soul, which is God's agent. (Nasr [1964] 1978, 74)

This makes the terrestrial similarities, for example, plants coming before animals, observed between the worldview of the Brethren of Purity and evolution accidental and not correlative in any substantial sense. It is indeed very surprising that, even as early as 1903, a philosopher by the name of Tjitze de Boer noted the problem of mischaracterizing the Brethren of Purity as evolutionists and attempted to rectify this reading:

They [Brethren of Purity] have been represented as the Darwinists of the tenth century, but nothing could be more inappropriate. The various realms of nature, it is true, yield according to the Encyclopedia an ascending and connected series; but the relation is not bodily structure, but by the inner

form of substance. The form wanders in mystic fashion from the lower to the higher and vice versa, not in accordance with inner laws of formation, or modified to suit external conditions, but in accordance with the influences of the stars, and, in the case of man at least, in accordance with practical and theoretical behavior. To give a history of evolution in the modern sense of the term was very far from the thought of the Brethren. For example, they expressly insist that the horse and the elephant resemble man more than the ape does, although the bodily likeness is greater than the last-named. In fact in their system the body is a matter of quite secondary consideration: the death of the body is called the birth of the soul. The soul alone is an efficient existence, which procures the body for itself. (de Boer 1903, 91–92)

Nonetheless, it can be concluded that, with the constant imbuement of God or His agents (e.g., Universal Soul) as proximate causes, the terminology and the frame of reference for the Brethren of Purity are largely teleological and spiritual in nature rather than a mechanical one (Shah 2010, 148–49; Hameed 2014). More importantly, they denied any transformations of species, which is a marked difference with evolution. So, there is no *literal* change of species over time as advocated in the latter even though a temporal chronology can be found in their works. Relying simply on their broad terrestrial chronology renders an evolution-friendly reading that is acontextual, ahistorical, and anachronistic. At best, the similarities that are observed between evolution and the worldview of the Brethren of Purity are nothing but superficial.

CONCLUSION

From the preceding analysis of three thinkers and one group, it seems then that their quotations have been taken in isolation without understanding their underlying themes and context. These works are premised on the GCB, which is remarkably different from modern evolution in terms of its conceptual underpinnings. Thus, these works only suggest an evolutionary reading when read selectively. This is evidenced from the language that is used and the consistent conceptual schemes that join physical entities, for example, plants, animals, and humans, with metaphysical ones such as angels found in their works. Thus, I hope to have conclusively established that reading evolution onto such historical works of Muslim authors is entirely erroneous and contemporary thinkers need to be aware so as not to fall prey to such errors. If contemporary authors want to rely on these texts to have some respectful connection between modern science and Islamic intellectual history, then this is not the best way to go forward.

It could be countered that they could be read as evolutionary texts but are not because of bad renderings of the translations (Hameed 2014) since most of these are in Arabic (or in Farsi as in the case of Rūmī). This

is a plausible argument but not necessarily a strong one. I find it very difficult to believe that entire conceptual schemes can be reduced to bad translations. It is very easy to stretch a word to certain renderings but it is very difficult to divorce an entire worldview, a conceptual infrastructure that undergirds these works. When viewed holistically, it seems that these works cited here have been read superficially and selectively, as I have tried to demonstrate.

That said, I am not dismissing the possibility of historical documents revealing a close parallel to modern-day evolution. It may very well be that there remain yet undiscovered manuscripts that do genuinely discuss some prototype theories of evolution as it is understood today, that is, species changing over time, but as far as the author knows such works have not yet materialized. At least for the works that have been reviewed here, readers should remain cautious.

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NOTES

1. For an excellent historical overview of this concept, see Lovejoy ([1936] 2009).
2. He is not alone in thinking this. See Shah (2010, 153–54).
3. All references that have been quoted thus far and the ones that follow are being referred to within this point.
4. See footnote 79 in chapter 9 in Guessoum (2011, 393).
5. Recall the quote earlier by Chittick (2017).
6. It is surprising to find the same misquotation in the work of the iconoclast Muhammad Iqbal ([1974] 2012, 121–22). It can even be found in the works of contemporary authors such as Dajani (2016).

7. The following is the original text in Farsi with the missing couplets emphasized:

آمده اول به اقلیم جماد	وز جمادی در نباتی اوفتاد
سالتها اندر نباتی عمر کرد	وز جمادی یاد ناورد از نبرد
وز نباتی چون به حیوانی فتاد	نامدش حال نباتی هیچ یاد
جز همین میلی که دارد سوی آن	خاصه در وقت بهار و ضیمران
همچو میل کودکان با مادران	سر میل خود نداند در لیان
همچو میل مفرط هر نو مرید	سوی آن پیر جوانبخت مجید
جزو عقل این از آن عقل کلست	جنبش این سایه زان شاخ گلست
سایه اش فانی شود آخر درو	پس بداند سر میل و جست و جو
سایه شاخ دگر ای نیکبخت	کی بجنبد گر نجنبد این درخت
باز از حیوان سوی انسانیش	می کشید آن خالقی که دانیش
همچنین اقلیم تا اقلیم رفت	تا شد اکنون عاقل و دانا و زفت
عقلهای اولینش یاد نیست	هم ازین عقلش تحول کردنیست

8. The following is Mojadedi's translation (2017) of the missing couplets:

Like what disciples feel fill up inside drawing them to the Sufi Master's side.
The Universal Intellect's the source of this: the shadow trails its source of course.
The shadow fades in him eventually and he attains the strong pull's mystery.
How can another branch's shadow shake if this tree doesn't move? That's a mistake.

9. For example, Egerton (2002, 143) notes that al-Jāhiz claimed that the lizard was able to hunt snakes down.

10. The following is the original text in Arabic:

قال النَّاسُ في المَسْخِ بِأَقْوَابِلٍ مُخْتَلَفَةٍ : فَمَنْهُمْ مَنْ زَعَمَ أَنَّ المَسْخَ لَا يَتَنَاسَلُ وَ لَا بَاقِي الأَبَدِ مَا يَكُونُ مَوْعِظَةً عِزَّةً ، فَقطَعُوا عَلَى ذلكَ الشَّهَادَةَ . وَ مِنْهُمْ مَنْ زَعَمَ أَنَّهُ بَاقِي وَ يَتَنَاسَلُ ، حَتَّى جَعَلَ الضَّبَّ وَ الجَرِيَّ ، وَ الأَرَانِبَ ، وَ الكلابَ وَ غَيْرَ ذلكَ ، مِنْ أولَادِ تلكَ الأُمَمِ التي مُسِخَتْ في هذِهِ الصُّورِ . وَ كذَلِكَ قَوْلُهُمْ في الحَيَاتِ .

11. For an excellent historical analysis of metamorphosis in Islamic thought, see Cook (1999).

12. See al-Jāhiz (1938, Vol. 1, 211–15).

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