Islam and Ecology: Toward Retrieval and Reconstruction

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A consideration of the question of Islam and ecology ought to begin with one fundamental observation of a historical kind: in the construction of what we call the modern world, Islam has had only an indirect role to play. To be sure, one cannot possibly imagine, nor meaningfully speak of, the phenomenon generally known as the scientific revolution, or that which we refer to as the Renaissance, without keeping in view the formidable intellectual influence of Islam on Latin Christendom. But this legacy was appropriated—and here we see the complexities and ironies of the historical process—in ways that often were alien to the world of Islam itself. The reception in both the Islamic and Christian worlds of the work of the towering giant Alhazen (Ibn al-Haytham, d. 1038), or that of the great Avicenna (Ibn Sīnā, d. 1037), constitutes a case in point. Alhazen, who revolutionized the field of optics, was ignored in the Islamic world even as he became a central scientific figure in the West. Avicenna, an outstanding philosopher and physician, was *the* medical authority in Europe well into the early seventeenth century; but his system was developed on highly abstract mystical-spiritual lines in Islam, where he was often seen more as a “Visionary Reciter” [1] than a Hellenized rational thinker. Indeed, it is the Latin career of these figures that endured in the modern world, not the elaboration of their thought by latter-day Muslims.

I use the term “modern world” in its standard sense—signifying both the world-system and the worldview that began their joint career in Western culture after the passage of the European Dark Ages, and which, after going through a highly complex process of development, came to full maturity during what we call the Enlightenment. This modern world is marked not only by a set of spectacular scientific and technological achievements, all of which were cultivated and produced in the Western milieu; it is marked also by a set of attitudes, a *Weltbild*, that has become in our era the dominant global framework of our collective life, the only framework we recognize as defining the terms of our contemporary discourse. This *Weltbild* has given us its views of human nature, its economic theories, its governmental system, its lifestyles, and its secular ideology.

At the same time, there always lurk on the horizon of the modern worldview politically charged questions of power and control: this *Weltbild*, it has been feverishly argued, was coercively imposed upon the larger part of the globe we call the developing world. Here, operating in a strictly historical rather than moral perspective, one phenomenon ought to be

thrown into sharp relief: we do see disappearing from the developing world practically all indigenous systems and institutions—a disappearance brought about in the recent past largely by direct European colonization, effected as a matter of deliberate colonial policy, and sometimes attended by fierce local resistance. These days, the destruction of indigenous systems is largely a result of Western market forces whose reach has now acquired staggering global dimensions. The developing world's military apparatus and technique, the dress and lifestyle of its majority, its industries, economy, banking and finance, system of education, public-health practices, bureaucratic agencies and organs of government, and, above all, its print and electronic media—all these entities and institutions have, in general, been taken from the Western world or have been constructed in emulation of Western models.

The dependence of the developing societies on the Western world inevitably raises the overwhelming question of sheer survival. Take, for example, the issue of public health. We note not only that indigenous institutions of health and healing have either died or been irrevocably marginalized; we note as well that modern life has brought with it illnesses, epidemics, and injuries that could not possibly be handled by these institutions as they stood, or as they stand on the periphery today. This means that the developing world desperately depends on Western pharmaceutical industries and medical establishments; and this in turn means a need for hard currency to buy drugs and equipment and to train doctors and health professionals; and this then weaves an intricate web of need, dependence, frustration, fatalities, and political machinations.

All these issues rap at our doors when we take up the question of Islam and ecology. In the Islamic world a whole range of attitudes has developed in response to what is generally referred to as Western hegemony, a highly loaded term. In the social spectrum of the contemporary world of Islam—whose rulers and high officials typically belong to a small Western-educated elite—one finds crude apologetic attitudes on the one extreme, bitter resentment against whatever is perceived as Western on the other, and all manner of Islamic revivalist and reformist tendencies lying somewhere in the middle. [2] Thus, much literature is found among contemporary Muslims claiming that all intellectual achievements of modernity, all successful present-day scientific theories and technological ideas, in their *most minute detail* are to be found in the Qur'ān, if only Muslims were to search. Considering Islamic and Western societies to be incommensurable, this literature teaches that the environmental problems of today's world result from the hegemony of the West—the control of the world fell into the wrong hands. At the same time, other Muslim writers place the blame of the ecological crisis squarely upon Western science and technology, entities conceived to be *distinct* from Islamic science and technology, distinct both in substance and in morphology. This second line of argument, compared to the first, is relatively moderate; but it happens to be intractably problematic nonetheless.

Here lies a profound irony. Some seventy years ago, Sir Hamilton Gibb articulated a fundamental historical fact: Islam in its foundations belongs to and is an integral part of the larger Western society. He put it strongly: “Islam cannot deny its foundations and live.” [3] In other words, a conscious recognition of the fundamental fact of Islam’s community with the West is essential to its very survival. Like al-Bīrunī in the twelfth century, and reflecting the spirit of the Islamic modernist movement of the nineteenth and twentieth centuries, Gibb argued that Islam stands side by side with the Western world, in contrast to what he called the “true” oriental societies, those of India and East Asia.
[4]

This was because Islam had found itself—and had creatively and consciously made itself—heir to Classical Civilization. Moreover, in many ways that are nontrivial, Islamic culture can indeed be characterized legitimately as embodying Hellenism. Sir Hamilton had expressed it more picturesquely—the two civilizations of Islam and Europe, he wrote, were “nourished at the same springs, breathing the same air . . . , [only] artificially sundered at the Renaissance.”
[5]

Notwithstanding the specific details of Hamilton Gibb’s thesis, we have here an outline of a constructive methodology; in fact, it is a methodology that flows from the ideas of many a modern Muslim thinker. So we note that even though Islam’s role in the construction of the modern world is indirect, in its historical foundations this world descends directly from an Islamic intellectual milieu. It is more obscuring than illuminating to suppose that there is an inherent incompatibility between Islam and the Christian West, or a total historical break between them. But once the intellectual community between Islam and the modern world is acknowledged, we may recognize the Islamic roots of contemporary ideas, preoccupations, and institutions. At the same time—and this speaks to a more urgent need—we may see that the intellectual resources for understanding some of today’s pressing global concerns can be found in the Islamic tradition itself. Indeed, given the durability of the classical Islamic civilization that Gibb’s thesis brings into focus, one may legitimately seek ideas from Islam to guide the struggle against the environmental problems that threaten our globe today. [6]

We face an enormous task. It requires, *inter alia*, a grasp of both the complexities of the contemporary world and the substance and the historical context of the Islamic legacy; and it involves much reconstruction, adjustment, and revision. In the case at hand, the task becomes all the more daunting due to its real as compared to purely theoretical nature.
[7]

The issue cannot be handled meaningfully if its real dimensions are glossed over in the glow of a sophisticated theoretical discourse. The questions of power and control, distributive justice, economics and finance, the currents of market forces, policy-making and tactical politics, lifestyles and social values—these are all directly relevant here. And this means that

the issue belongs in a complex manner to several disciplinary domains at once: social sciences, ethics, and religion among them.

Still, it ought to be noted that this essay is essentially concerned with theoretical matters; and even in this domain, it is concerned narrowly with the normative sources of the Islamic religious tradition. Indeed, its scope is narrower still: it undertakes only to reconstruct doctrinally certain Qur'ānic concepts, to expound certain imperatives of what is known as the Prophetic Tradition, and to articulate briefly certain Islamic legal categories—a reconstruction, exposition, and articulation carried out with a view to recovering Islamic religious material that might serve to illuminate how Islamic culture regards our current global environmental concerns and guide Islamic thinking about them. But what is most interesting, in the internal context of traditional Islam, is that this enterprise, *by its nature*, would be considered not a partial but a comprehensive task, since religion is claimed, literally, to be all-embracing. For traditional Islam, examining religious sources means examining the universal canopy under which fall *all* aspects of life—since all aspects are religious aspects.

THE NATURE OF THE NORMATIVE SOURCES

It should be understood at the very outset that the Qur'ān, believed to be the actual speech of God revealed through an angel, is not a book of laws, or a manual of procedures, or a collection of tales; nor is it a systematic treatise meant to convey ethical doctrines or principles. As the experts say, the Qur'ān has to be received on its own terms—that is, as a genre unto itself. [8] A striking feature of this sacred Islamic text is its highly stylized cadence, its rhetorical structure, its literary diction, and its elegant use of language with "semantic depth, where one meaning leads to another by a fertile fusion of associated ideas." [9]

Thus, scholars have characterized the Qur'ān not so much as a doctrinal textbook but "more valuably as a rich and subtle stimulus to religious *imagination*." [10]

If this text is to yield a concrete system, it requires an imaginative reconstruction on the part of the reader; in principle, this reconstruction cannot claim epistemological finality, even though it may stand firm on grounds of overwhelming community consensus. This is precisely the position of classical Islam.

With regard to the question of the cosmos and its relationship to human beings, one notes that the Qur'ān moves at three levels simultaneously—metaphysical, naturalistic, and human. But when one examines these levels in the totality of the Qur'ān, they turn out to interdigitate: on the one hand, the Qur'ānic notion of the natural world and the natural environment is semantically and logically bound up with the very concept of God; on the other hand, this notion is linked with the general principle of the very creation of humanity. The three levels of Qur'ānic discourse, therefore, do not manifest any independent conceptual self-sufficiency of, or a conceptual discontinuity between, the three realms of the divine, of nature, and of humanity. Indeed, this linkage is of fundamental importance to our concerns, for in our reconstruction of the cosmology of the Qur'ān, we can see that the historical-naturalistic is linked to the transcendental-eternal, and this means that there is no ontological separation between the divine and natural environments. At the human, psychological level, all this generates a particular attitude to the world as a whole.

As we shall see, the Qur'ān emphasizes the transcendental significance of nature. Because nature cannot explain its own being, it stands as a sign (*āya*, plural *āyāt*) of something beyond itself, pointing to some transcendental entity that bestows the principle of being upon the world and its objects. Nature, then, is an emblem of God; it is a means through which God communicates with humanity. One may legitimately say that insofar as the Islamic tradition allows for God's entry into the flow of history at all—that is, in the realm bounded by space and time—nature embodies one of the two modes of this entry, the other mode being God's Word, namely, the Qur'ān itself. Most significantly, the verses of the Qur'ān are also called *āyāt*, signs, and in the same emblematic vein—and this means that the objects of the natural world and the Qur'ānic verses are metaphysically on a par with each other.

On the naturalistic plane, the Qur'ān speaks of the cosmos as an integral system governed by a set of immutable laws that embody God's command (*amr*, plural *awāmir*). The phenomena of nature in the general run of things follow a strict system marked by regularity and uniformity, since nature cannot violate its *amr*, that is, its immutable laws. In this naturalistic vein, we find the Qur'ān teaching that the cosmos exists to nourish, support, and sustain the process of life—all of life, and in particular human life. Though human life does have centrality in the Qur'ānic system, it is a centrality mediated and reigned in by a set of moral and metaphysical controls; this we shall examine in more detail as we proceed.

A remarkable fact about the genesis story in the Qur'ān is that it speaks of God announcing to the angels that he is about to create a *khalīfa* (vicegerent) *on the earth*—in other words, Adam and his "equal half" (

zauj
)
[11]
were bound for Earth even
before
they committed the transgression. Life on Earth is here an integral part of the very concept of the human being, not a punitive fall from glory; the human being does not exist in a state of disgrace in the world of nature, nor is nature in any sense unredeemed.
[12]
To expound the Qur'ānic position summarily, the very principle of the vicegerency of God (
khilāfa
) made human beings his servants (
'abd
, plural
'ibād
), custodians of the entire natural world. Human beings exist by virtue of a primordial covenant (
mīthāq
) whereby they have testified to their own theomorphic nature, and by virtue of a trust that they have taken upon themselves in pre-eternity. There is a due measure (
qadr
) to things, and a balance (
mīzān
) in the cosmos, and humanity is transcendentally committed not to disturb or violate this
qadr
and
mīzān
; indeed, the fulfillment of this commitment is the fundamental moral imperative of humanity.

The three dimensions of the Qur'ānic discourse—metaphysical, naturalistic, and human—are thus mutually related in a complex manner, and any one of them cannot be understood in isolation from the others. Nature in its Qur'ānic conception is *anchored in* the divine, both metaphysically and morally. The expression is strong: "But to God belongs all things in the heavens and on the earth; And He it is who encompasseth (
Mu□ ī□
) all things" (4:126); note that the word
Mu□ ī□
can also be translated legitimately as "environment."
[13]
So we see that when the Qur'ān's notion of nature is reconstructed in the larger framework of this supreme Islamic source, it appears inherently connected with its notions of God and humanity—and all these notions, as we have seen, have their roots in the transcendental realm and then issue forth in the moral-historical field.

When we come to the ḥadīth literature, the corpus often referred to as Prophetic Traditions, we are in a different atmosphere altogether. Here we have a vast body of collections of formally authenticated reports about the words and actions of the Prophet of Islam, and sometimes of his companions who enjoy a derivative authority. The collection and authentication of ḥadīth was an enormous undertaking aimed at articulating Islam *as a function*, and for this purpose God's Way (*sharī'a*) had to be translated into a viable body of concrete codes of action and laws. Indeed, one material source for the understanding (*fiqh*) of *sharī'a* was the established tradition of the prophetic way (*sunna*). An authenticated ḥadīth was legally binding.

But the impressive discipline called the Science of ḥadīth (*'Ilm al-ḥadīth*) did not develop until more than two hundred years after the death of the Prophet, and in the meantime a whole corpus of fabricated ḥadīth had come into being. It was only in the middle of the ninth century that the first Correct (*ṣaḥīḥ*) collection of ḥadīth appeared; this was established after much sifting, systematizing, and a rigorous process of authentication. Five more massive *ṣaḥīḥ* collections were compiled during the following hundred years. But given the very size of the corpus of these transmitted reports and the inherent complications in the very nature of the chain of transmitters (*isnād*), even the six Correct collections vary widely in authenticity and content. Note that in ḥadīth authentication, as a general rule, practically all attention was paid to the *isnād* rather than to the actual content (*matn*) of what was transmitted.

It is for reasons such as these that the use of ḥadīth material in reconstructing the Islamic position on the environment and ecology is not a straightforward task. ḥadīth collections are manuals of what one may in a qualified sense describe as a body of case law. An *isolated* and independent ecological concern is not to be found here—this is a present-day

development—but spread all over the body of adīth, one does find reports concerning the general status and meaning of nature, and concerning land cultivation and agriculture, construction of buildings, livestock, water resources, animals, birds, plants, and so on. In addition, one notes the remarkable fact that the adīth corpus also contains the two fateful doctrines of
imā
and
aram
, land distribution and consecration. These two related notions were indeed developed by Muslim legists who articulated them particularly in their environmental dimensions, designating some places as protected sanctuaries.
imā
and
haram
developed into legislative principles of land equity on the one hand, and of environmental ethics on the other, and were subsequently incorporated into the larger body of the Islamic legal code. Note that ethical questions and environmental questions are here moving hand in hand; they are interconnected.

The most systematic source of codified Islamic religious norms is that of *fiqh*-law, developed on the foundations of the Qur'ān and adīth . One may legitimately say that
fiqh
-law is the comprehensive blueprint for the whole of Muslim life, covering the minutest detail of external human conduct, both public and private. Within this enormous body of legal regulations—which have now acquired a dogmatic character since the
fiqh
discipline is now practically dormant—the principle of
imā
is particularly well developed in the Mālikī school, one of the four legal schools followed by the vast majority of Muslims. But we note in the formally articulated and generally codified Islamic legal writings several other environmental concepts derived directly from the two primary material sources (
u ūl
), the Qur'ān and Hadith.

One such concept is that of *mawāt*, literally "wasteland." Some *fiqh*-legists have worked on
mawāt
in great detail; the concept typically appears in the extensive discussions on rivers, canals, and other water resources, their distribution and maintenance, rights and control. Similarly, for example, arising directly out of the moral and conceptual ethos of the two
u ūl
are

fiqh
rules governing the hunting, treatment, welfare, and use of animals, including birds. Once again, note how Islamic law is meant to implement Islamic ethics—legal and moral concerns belong to one and the same functional framework.

HUMAN NATURE AND THE NATURAL WORLD: QUR'ĀNIC EXCURSUS

Moving on the transcendental plane, the Qur'ān presents in its seventh *sūra* that famous sonorous verse known to embody the primordial covenant between humanity and its creator: "And when your Lord extracted from the children of Adam, from their spinal cord, their entire progeny and made them witness upon themselves, saying, Am I not your Lord? And they replied, No doubt You are, we bear witness!"
[14]
So powerful is the narrative here, and so deeply entrenched in the Muslim consciousness is the expression
alastu bi-rabbikum
(Am I not your Lord?), that the interrogative
alastu
has reverberated in the mystical and poetic chambers of Islam until this day. We see here that humanity in the very
principle of its being
has testified to the lordship of God. In other words, human nature is essentially theomorphic. To recognize God is to be in a natural state. Indeed, God had made human beings in the
best
of forms;
[15]
and, furthermore, to this supreme creature, to human beings, he subjected (
shakhkhara lakum
, "He subjected to you")
all
that is in the heavens and the earth.
[16]

But, then, in the next breath the Qur'ān links this metaphysical exaltation to a weighty moral burden. Humankind's superiority lies not in its enjoying any higher power or control or authority among created beings; it lies rather in the fact that it is accountable before God, such as no other creature is. This accountability arises out of the trust (*al-amāna*) that human beings accepted at their transcendental origin. It should be observed at once that this
amāna

entails a kind of global trusteeship, and this reading does no offense to the Qur'ānic concept of trust: "We did indeed offer the Trust to the Heavens and the Earth and the mountains—but they refused to carry it, being afraid of it. But the human being carried it: Ho! humankind is unfair to itself and foolhardy."
[17]

Note here the cosmological ethos of a transcendental narrative. And note also the last sentence—so enormous was the burden that the Qur'ān recognizes it by way of what ra man called a "tender rebuke," calling human beings unfair to themselves and foolhardy.

We see here the moral-naturalistic dimension of human theomorphism. Humanity cannot arrogate to itself absolute power or unbridled control over nature: in the *very principle* of its being, humanity was committed to following God's
sharī'a
, his Way. Furthermore, this
sharī'a
was not given to humanity as a fully articulated body of laws; rather, it was spread all over God's signs (
āyāt
) in the form of indicators with probative value (
adilla
). Recall that the term
āyāt
designates both the verses of the Qur'ān as well as the phenomena and the objects of the natural world. Thus the natural world is a bona fide source for the understanding (
fiqh
) of
sharī'a
, and therefore cannot be considered subservient to human whims. Indeed, as we have noted, for human beings to be on the earth is part of the divine plan; to be human is by definition to be in the flow of history. There is, then, no justification in the Qur'ānic context to consider human existence in historical time a curse, or to deem nature as something opposed to grace, or to consider salvation as a process of the humbling of the natural by the supernatural. Echoing Mircea Eliade, one may say that all nature, indeed, is capable of revealing itself as cosmic sacrality.

Quite evident too is the ethical thrust of the frequent Qur'ānic declaration that God has made the natural world "subject to" human beings. This clearly does not mean that nature is subject to man's unbridled, exploitative powers—for it is God's command (*amr*), not that of the human being, that nature obeys (see below). We note that the expression

sakhkhara lakum
(“he made subject to you . . .”) appears
always
with its attending moral dimension. So: “It is all from Him. . . . And He hath made subject to you whatsoever is in the heavens and whatsoever is in the earth—It is all from Him. Lo! herein indeed are portents for those who reflect.” [18]

The point is made frequently and with overwhelming rhetorical force:

He has made subject to you the night and the day, the sun and the moon, and the stars—they are in subjection by His command (*amr*): Surely, in this are signs for those who reflect!

And the things on this earth which He has multiplied in colors diverse—indeed, in this is a sign for those who recollect!

It is He Who had made the sea subject [to His law], that ye may eat thereof flesh, tender and fresh, and that ye may extract therefrom ornaments to wear—See, how the ships plough the waves! So ye seek of the bounty of God: Perhaps ye shall be grateful! [19]

Nature’s intelligibility to the human intellect, on the one hand, and its quality of yielding itself to human works and sustaining human life, on the other, both flow from the same principle of *amr:*

Seest thou not that by His command (*amr*) God has made subject to you all that is on the earth? And that by His command He has made subject to you the ships that sail through the sea? He withholds the sky from falling on the earth—but for His leave. For God is Most Compassionate and Most Merciful to humankind.

It is He Who gave you life, and then He will cause you to die, and then He will bring you back to life again: Ah, humankind is most ungrateful! [20]

In this natural-transcendental linkage, the moral question is fundamental. The Qur'ān promulgates what one may call a cosmology of justice, a cosmology that takes into its fold two realms at once, the human and the cosmic—or, rather, the human *within* the cosmic. As for the human realm, a concern for social justice runs throughout the Qur'ānic text, even in its chronologically earlier verses whose focus is on metaphysical issues such as the oneness of God, the Beginning and the End, and the finitude of the world. The dignity of the disabled,
[21]
the rights of the indigent and particularly of orphans,
[22]
honesty in trade dealings,
[23]
feeding of the poor,
[24]
condemnation of greed, and admonishment against hoarding wealth
[25]
—all these concerns are to be found from the earliest of the Qur'ānic verses, which are, by general scholarly consensus, the most powerful and the most sublime in their stylistic embellishment.

But these concerns operate within the universal field of cosmic justice; human relations thus acquire their meaning by virtue of their location at the very core of natural law. This effectively forges a conceptual link between natural law and moral law—natural law *is* never violated as things run their customary course; moral law *ought not* to be violated. The Qur'ān speaks of the existence of a cosmic balance (*mīzān*) and declares that everything except God is "measured out" (*qadar, qadr, taqdīr*)—that is, everything is given its natural principle of being and its place in the larger cosmic whole—and this is precisely the meaning of the *amr* (command) of an entity, a concept I shall take up again a little later. The same message is expressed in a moral language: "God intends no injustice to any of His creatures. To Him belongs all that is in the heavens and the earth."
[26]

The dread of humankind "corrupting the earth" (*fasād fi'l-ar*□), the catastrophe such transgression will unleash, and exhortations against it loom so large that they hang like a backdrop in the Qur'ānic cosmology of justice. The creation of the world was not a frivolous or trivial act: "And We have not created the heavens and the earth and what is therein purposelessly—that is the view of those who reject [the truth] or who are ungrateful."
[27]

Created with divine deliberation, nature is so coherently interconnected and integrated, and works with such regularity and order, that it is God's prime miracle: if good is done to it or in it, good will return; if evil is wrought to it or in it, what accrues is sheer terror:

And you see mountains and think them solid [and stationary] but they are fleeting like clouds—such is the artistry of God Who has well-completed [the creation] of everything. He is well acquainted with all that you do.

If any do good, good will accrue to them therefrom; and they will be secure from the terror of the Doom. And if any do evil, their faces will be thrown headlong into the Fire. [28]

It ought to be recognized that the Qur'ān does contain verses that *prima facie* give the impression that the natural world and all its creatures exist for the sake of human beings, but it would be a gross oversimplification to view such declarations in a moral vacuum. "In considering all these verses," wrote the outstanding jurist of medieval Islam Ibn Taymiyya (d. 1328), "it must be remembered that God in his wisdom brought into being these creatures for reasons *other than serving human beings*. In these verses God only explains the [human] benefits of these." [29]

It is interesting to note in this context that among the three grand monotheistic faiths, Islam does not have to carry the burden of any scriptural imperative to "subdue" the earth and seek to establish "dominion" over the natural world. There is a clear and explicit answer to the question as to where and to whom belongs the dominion over the natural world, an answer so obvious in the overall drift of the Qur'ān that it is expressed rhetorically: "Knowest thou not that to God belongeth the dominion of the heavens and the earth!?" [30]

And again: "Yea, to God belongs the dominion of the heavens and the earth. And to God is the final goal [of all]." [31]

Ironic though it may seem, human superiority—humans being created in the best of forms (*fī aḥsani taqwīm*), and humans being considered in the Islamic tradition the noblest of creatures (*ashraf al-makhlūqāt*)—turns out to be a supremely humbling quality. And the Qur'ān does humble humanity by saying that the creation of the rest of the cosmos is a matter *greater than*

the creation of people: “Assuredly the creation of the heavens and the earth is [a matter] greater than the creation of human beings: Yet most people understand not!”
[32]

We do not have exclusive claim to the earth, for “the earth He has assigned to all living creatures.”
[33]

And all living creatures are natural communities, with their own habitat, their own laws, and their inviolable natural rights: “And there is no animal in the earth nor bird that flies with its two wings but that they are communities like yourselves.”
[34]

One is here reminded of a medieval Arabic fable found in the famous *Rasā’il* (Epistles) collectively written in the tenth century by the fraternity that called itself
Ikhwān al-□afā’
(Brethren of Purity). This colorful and dramatically constructed fable is about a company of animals who present their case before the king of the
jinn
(genies), raising the question of whether human beings are superior to animals, and if so in what respect. The verdict is “natural and inevitable”:
[35]

human beings are superior to the animals—but not because they enjoy any higher moral or functional status. They are superior because of their heavy moral burden, of being the custodians of the earth. As God’s regents on the earth (
Khalīfat Allāh fi’l-Ar□
), they are accountable for their acts; nonhuman animals are not. The verdict, handed down by a nonhuman creature, reads further:

Let man not imagine . . . that just because he is superior to the animals they are his slaves. Rather it is that we are all slaves of the Almighty and must obey His commands . . . Let man not forget that he is accountable to his Maker for the way in which he treats all animals, just as he is accountable for his behavior towards his fellow human beings. Man bears a heavy responsibility. . . . [36]

QUR’ĀNIC NATURALISM AND THE NATURE-PROPHECY PARALLEL

If one makes an analytical excursion into the Qur’ānic discourse on the created world, three defining characteristics of nature fall into sharp perspective: first, that natural phenomena

have regularity, internal coherence, and elegance, and that they are self-sustaining; second, that nature as a whole has, within its own being, no logical or metaphysical warrant to exist; and, finally, that nature is an embodiment of God's mercy, or, more fully, that God's mercy is expressed through the creation of nature. These defining characteristics, one notes, do not appear in the Qur'ānic narrative in a doctrinal or even textual isolation from one another—they are frequently spoken of in the same breath, in the same passages, and in the same vein; together, they make a conceptual whole.

The principle of autonomy of nature—that it is regulated by its own laws—manifests itself forcefully in the fact that whenever the Qur'ān speaks of the *actual cosmological processes* of natural phenomena—and it does so quite often—it speaks in naturalistic terms. Thus, the human being was a natural creation: Adam was fashioned out of baked clay (
 al āl
), from mud molded into shape (
 amā' masnūn
);
[37]
from dust (
turāb
);
[38]
from a blood clot (
'alaq
);
[39]
from earth (
 īn
)
[40]
that produced through a confluence of natural processes an extract,
sulāla
, that functions as reproductive semen.
[41]
In fact, there exists a fully biological account:

Humankind We did create from a reproductive extract of clay. Then We placed it as a drop of sperm in a receptacle, secure. Then we made the sperm into a clot of congealed blood. Then of that clot We made a fetus lump. Then We made out of that lump bones and clothed the bones with flesh . . . So blessed be God, the Best of Creators! [42]

References to nature, natural forces, natural phenomena, and natural beings abound in the Qur'ān ; out of its 114 sūras some 31 are named after these. In all cases, the physical world in its *real* operation is described in a naturalistic framework, in the framework of physical forces and processes that occur uniformly and with regularity. Thus, we see here the contours of a theistic naturalism:

Why! do they not look at the sky above them? How We have built it and adorned it and there are no gaps in it?

And the earth—We have spread it out, and set thereon mountains, standing firm, and produced therein all manner of beautiful growth. This, for the observation and commemoration of every created being who reflects.

And We send down from the sky rain, charged with blessings. And We produce therewith gardens and grains for harvests. And tall and stately palm trees with shoots of fruit stalks, piled over one another—as provision for God's servants. And We give new life therewith to the land dead. . . . [43]

In an even more robust expression of naturalism, the refrain re-emerges:

And the earth—We have spread it out, set thereon mountains firm and immovable, and produced therein all kinds of things in due balance (*mauzūn*). And We have provided therein livelihood (*ma'āyish*)—for you and for those whose sustenance (*rizq*) does not depend on you. And there is not a thing but its bountiful sources are with Us; and nought do We send down unless it be in due and knowable measure (*bi-qadrim ma'lūm*).

And We send down winds to fertilize vegetation in abundance, then cause the rain to descend from the sky, therewith providing you with water in plenty—though you are not the guardians of its sources. . . . [44]

We fashioned humankind out of baked clay, from mud molded into shape. And, in the time preceding, We had fashioned the *jinn* from the fire of scorching winds. [45]

The Qur'ān, then, admits the principle of natural causation, avowing the sum total of natural processes as the proximate, autonomous, efficient causative forces operating in the world. It is the fertility of the earth, we see, and the natural qualities of water, and favorable winds—in other words, certain natural phenomena themselves—that causally but proximately explain all vegetation; it was rain that revived dead and uncultivable land, and it was clay that constituted the substratum for the human animal as a natural entity. Besides, in what is to be legitimately considered an anthropological vein, all this in its turn is causally related to human livelihood (*ma'āyish*) and actual subsistence of the human community—the narrative here brings into clear view activities and processes such as land cultivation, harvest, fertility, production of gardens, yielding of fruits and grains; it speaks of real, as distinct from metaphysical, human provision (*rizq*), with its attending economic and social ramifications.

It is the dual principle of cosmic justice, which we have examined earlier, and this thoroughgoing naturalism that explains a central doctrine of Qur'ānic ethics—that of *ulm al-nafs*
(self-injury).
[46]
Indeed, this doctrine embodies a moral tenet that seems to carry the seeds of a comprehensive ecological philosophy. As I have said elsewhere,
[47]
in the actual world as it exists in the immediate palpable reality, human beings are
part
of nature; they are a
natural
entity, subject fully to the laws of nature just like any other entity, participating as an integral element in the overall ecological balance (
mīzān
) that exists in the larger cosmic whole. And this means that to damage, offend, or destroy the balance of the natural environment is to damage, offend, or destroy
oneself
. Any injury inflicted upon "the other" is
self
-injury,
 ulm al-nafs
—and this is a prime doctrinal element in the foundations of Qur'ānic ethics: "Whoever transgresses the bounds of God has done wrong but to himself";

[48]

and again: “God wronged them not, but themselves they wronged.”
[49]

The rule is that wrongdoing ultimately recoils back upon the perpetrator—for when the balance is willfully disturbed, this disturbance takes the culprit too into its fold.
[50]

On the other hand, the naturalistic posture of the Qur’ān is attended by an epistemological posture that has fundamental heuristic and methodological consequences for the human search for natural knowledge. There is nothing in the cosmos that does not possess a due balance (*mauzūn*), and nothing that is not fully differentiated and measured out in a way that it is beyond the comprehension of the human intellect; everything, we read, exists in a *knowable* measure (*bi-qadrim ma‘lūm*), and the cosmos is thus, in principle, intelligible. The epistemological point is compelling: there exist immutable laws to regulate nature, these laws are both uniform and subject to systematic cognition, and they are captured when human reason casts its net. Indeed, in the Qur’ānic narrative we find virtually countless exhortations for the use of reason, appearing often in the pathos of the subjunctive: “Perhaps you may exert your mind!” or “They might perchance reflect!” or “May you not see?” or “Would you not exercise your intellect?” or “What! Would you not reason out?” So, heuristically, we have here a Qur’ānic anchorage for a scientific exploration of the cosmos, an exploration with which humanity has been squarely charged.

This links our discourse with both the second defining characteristic of nature as it appears in the Qur’ān and the methodological implications of its epistemological stance, which we just examined. Throughout, I have been pointing out a fundamental feature of the Qur’ānic narrative—namely, that it identifies the *locus* and *ground* of the real and the temporal in the transcendental and the eternal, constantly forging a link. And so the second defining element of nature we already noted: nature is nonultimate, for within its own being it has no logical or metaphysical warrant to exist. Nature exists only because God had bestowed existence upon its being. A plant did not bring about its own existence; it *received* existence and thus became a sign (*āya*) of something beyond itself. And again, it was through an act of divine mercy (*ra□ ma*) that humankind *found itself* in existence, for within itself lay no inherent principle to cause this existence. The ontological point is that the existence of nature in historical time is a flowing process of a cosmic

observance of God's
amr.

Let me take up the Qur'ānic notion of *amr* again. Recall that the word literally means "command." At the mechanistic level, one may consider
amr
to be a denotation of a universal operative principle whereby every created natural entity plays its assigned role and takes its assigned place as an integral element in the larger cosmic whole. Thus,
amr
is the specific principle of being of each thing in
relation to that of all other things
, inhering in it according to the command it uniquely receives from God. This can be put in another way: laws of nature express God's commands, commands that nature cannot possibly violate—and this explains why the entire world of phenomena is declared
muslim
by the Qur'ān : "Do they, then, seek an obedience other than that to God, while it is to Him that everyone [and everything] in the heavens and the earth submits (
aslama
)?"
[51]
So once again, we have here an integral conceptual system in which the transcendental is coherently linked to the naturalistic, the temporal. Nature originates in and ultimately recoils back into the transcendental.

But at the operational level—and here is the methodological point—*amr* can be viewed legitimately to be a system of independent, self-governing, and self-sustaining laws of nature. Thus it was the *amr* of a mango seed to grow into a mango tree; and that of an egg to hatch into a bird; and that of sperm to develop into an embryo; and that of the oceans to sustain a multiplicity of life in their bosom; and that of the sun to rise from the far horizon. In the scientific investigation of the physical world, then, in this process of the human intellect's discovery of natural laws as such, no nonnaturalistic, no nonrational principle need be invoked. But there is a caveat: such investigation is without reference, and therefore meaningless, if it remains suspended without being anchored ultimately in the transcendental from which issues forth moral imperatives—that is, moral law, God's
sharī'a.

And this leads us finally to the third defining characteristic of nature given by the Qur'ān : nature is an embodiment of God's mercy. Indeed, given that God's will is not bound by any

other will, and given further that God is omnipotent, he could well have chosen the chasm of utter nothingness as opposed to the creation of a full plenitude of being. That he chose the latter is a manifestation of his mercy (*ra□ ma*). Louis Gardet once observed that in the totality of the Qur'ānic teaching God's mercy and his omnipotence are inseparable: "These two perfections," he wrote, "are the two poles of divine action, at the same time contrasted and complementary." [52] God's creative action is a special expression of his mercy—for not only did he bestow being upon his creation; he also provided sustenance for that creation, and sent guidance for that creation; and made himself the very end (*al-Ākhir*) [53] to which the entire created world was commanded by him to return finally.

Plentiful in the Qur'ān are references to the bounty of nature as an unfalsifiable expression of God's mercy. Indeed, this is the very refrain of the chapter *al-Ra□ man* , The Merciful, a collection of verses unique in the codex for its stylistic beauty, its rhythm and rhyme and cadence, and its lush imagery. Speaking eloquently of nature's bounty and the naturalistic cosmic order as constituting divine favors and blessings, and asking rhetorically how they can possibly be denied, the Qur'ān says:

The sun and the moon follow courses exactly computed. And the stars and the trees, both alike bow in adoration. And the Firmament—God has raised it high, and set the Balance . . . It is He Who has spread out the earth for His creatures: Therein is fruit and date palms, with their clusters sheathed. Also corn, with its leaves and stalk for fodder, and sweet-smelling plants. . . .

From this arises the resounding question that serves here as the refrain: "So, which of the favors of your Lord will you deny?" Again, turning back to the world in a naturalistic vein: "He created human beings from sounding clay, like the potter's . . . He let free the two seas that meet together, between them is a barrier that they do not transgress . . . Out of them come pearls and coral. . . ." Then comes the finale: "Of God seeks [its sustenance] every creature in the heavens and on the earth. Every day in a new splendor does He shine!" The undercurrent of the intervening refrain flows on: "So which of the favors of your Lord will you deny?" [54]

But this vast plenitude of being we call the cosmos was also an embodiment of God's *tanzīl* (sending down) of guidance (*hidāya*) to humanity. The *sharī'a*

, we have already noted, is not given ready-made in the form of a systematic, fixed, and fully spelled-out corpus of divine instructions for the creation of a moral order. Rather, it is up to humankind to exercise its moral and intellectual faculties, its *amr*, and perpetually construct and reconstruct God's *sharī'a* through an understanding (*fiqh*) of the guiding signs (*adilla*) that are provided in two modes—one of them the *āyāt* constituting the natural world. Thus, by virtue of what I would refer to as the Qur'ānic dynamics of *tanzīl*, nature is accorded the status of a legitimate source for the very knowledge of *sharī'a*—a status that is divinely sanctioned. And a dynamic process of ever-new *sharī'a* constructions it is, since human knowledge could never claim, nor is it capable of acquiring, epistemological certainty or finality.

But then God's guidance also came in a direct *tanzīl* in a clear and articulate language (*bayān*); this second mode of sending down *adilla* was the Qur'ān, that is, the Speech (*Kalām*) of God himself. Given this, we have here a remarkable metaphysical equivalence between natural entities and revelation, and thereby between nature and prophecy. Indeed, in numerous Qur'ānic passages the creation of nature is coupled with the revelation of the verses of the Qur'ān, and this has led many medieval Muslim sages to speak of an intimate connection and ontological parallel between the two; they spoke even of the identity of the two.
[55]

So just as nature represents the inexhaustible *logoi* of God,
[56]

so does the Qur'ān, but even more so—since, in fact, while the former is referred to as *āyāt*, the latter is the clarification (*tabyīn*)

[57]

of these
āyāt
, the bringing home of these
āyāt
(
nu arrifu'l-āyāt
),
[58]

and the detailing of these
āyāt
(
fa alna'l -āyāt
).
[59]

The verses of the Qur'ān are often said to be clear
āyāt
(
āyāt bayyyināt
), or, simply, clarifications or manifestations (
bayyyināt
). Note that this last expression is never applied to nature, and this creates a hierarchy of God's signs—a hierarchy in which the Qur'ān remains epistemologically prior.

Just as natural entities exist in the form of real-historical objects, so God's revelation is delivered by a real-historical Prophet, a human apostle who is no god and no supernatural being but is "from amongst yourselves." [60] And just as nature is a guide, so is the Prophet a guide (*hādī*) [61] *par excellence.* Just as nature receives and follows God's
amr
, so does the Prophet receive "a spirit from (God's)
amr
"
[62]

that the Prophet himself and the rest of humanity
ought to
follow. And just as natural entities, God's
āyāt
, express and manifest God's mercy, so was Prophet Muhammad, the one chosen to receive God's speech, his
āyāt
, "nothing but a mercy (
ra ma
) to all beings."

63

Given the uncompromising and radical monotheism of Islam, nature can never acquire divine status. Any idea of nature worship would crack the very core of Islam. But with this in view, one notes a further and delicate parallelism between nature and prophecy. The Qur'ān does speak of obeying the Prophet, his authority deriving from God. In juxtaposition to this, we place an interpretation of the great fourteenth-century Qur'ān commentator Ibn Kathīr : When the Qur'ān calls God "the Lord of the worlds (*Rabb al-'Ālamīn*)," [64] it means the Lord of *different kinds of creatures*, says Ibn Kathīr . Muslims affirm, he points out, that they submit to the Creator who made them and who made all other worlds. But, then, the commentator adds: "Muslims also submit themselves to the *signs* of the existence of the Creator and his unity. This secondary meaning exists because the word *'ālamīn* (worlds) comes from the same root [out of which stems the word *'alam*, which means 'sign']." Note that Ibn Kathīr is not alone in looking at the matter in this way. [65]

So one may say that while the Qur'ān teaches obedience to the Prophet as God's delegated commander, it also teaches obedience to the laws of nature. This generates an attitude of tremendous respect for the cosmos, and also implies, *inter alia*, a divine stricture prohibiting the destruction or injury of the natural environment.

PRACTICAL ISSUES: MODELS OF CONDUCT AND ISLAMIC LAW

In the famous Correct (□*a*□*ī*□) □adīth collection of al-Bukārī (d. 870), we read the elegant saying of the Prophet: "The earth has been created for me as a mosque (*masjid*) and as a means of purification." [66]

Indeed, to declare the whole earth not only pure in itself, but also purifying of that which it touches, is to elevate it both materially and symbolically. The word *masjid* literally means a place of prostration, and prostration involves *touching*

the ground. Thus, by virtue of this ḥadīth, the earth in its entirety acquires and manifests sacrality. And here we have a standard situation: an elaboration and extension of a Qur'ānic principle, which in this particular case appears in 5:6. It is, in effect, a bringing of a Qur'ānic rule into the human fold of action and conduct.

In one important sense, ḥadīth, as a discipline, can of course be described simply as a practical enterprise: it is a phenomenon of translating broad and general principles of the Qur'ān into detailed rules for the actual practice of the community. One may say that ḥadīth brings metaphysics into the domain of history. But more than that, it has an independent status too, for ḥadīth adds new practical issues to those found in the Qur'ān, sometimes even amending them or choosing between differing Qur'ānic positions on the same question. But it remains a practical enterprise nonetheless—the life of the Prophet, his established tradition (*sunna*), is a perfect model for all Muslims to follow; indeed, emulation (*ittibā'*) of this model is a
requirement
for the Muslim.

As a standard feature, ḥadīth collections are corpora of authenticated reports of prophetic traditions, thematically classified; the body of reports under a single broad theme constitutes a Book (*Kitāb*), and these books strung together constitute the whole collection. In the Sunnī Islamic world—and to this belong the vast majority of Muslims—the most authoritative of ḥadīth collections are held to be the "Six Corrects" (*al-Ṣiḥāḥ al-Sitta*),[67] among which the cited "Correct of al-Bukhārī" enjoys primacy; the Bukhārī corpus has 88 Books. The range of subjects covered in these collections is enormously wide, since ḥadīth is aimed at comprehending universally all aspects of private and public, individual and collective life. Diffused throughout the body of a single ḥadīth collection one finds concerns, expressed with a degree of urgency, pertaining to the natural environment, its status, its relation to human life, and what we may call environmental ethics. These concerns do not appear as isolated issues in their own right, to be sure; rather, they are fully integrated into a host of naturalistic, moral, and practical principles that form the core of righteous conduct.

Typically, among its many parts the Bukhārī collection includes separate books on animal sacrifice, agriculture and land cultivation, medicine, hunting, and water and irrigation. The "Book of Agriculture" is rich in material concerning the environment, speaking of the nobility of *sustainable* cultivation of land and encouraging it with moral force. Issues of land irrigation and the strict law of equal sharing of water are found in the "Book of Distribution of Water," of course, but also in the "Book of Ablution"; the report I cited at the beginning of this section comes from the "Book of *Tayammum*" (ritual ablution performed with earth). Also, spread all over one finds a very large number of reports concerning the treatment of animals and pastures, as well as what one may call animal rights. And in the "Book of Generalities" (

al-Jāmi‘
) of the famous collection
al-Muwa□□ā’
of Mālik ibn Anas (d. 795), the Master of the Mālikī school of law, one finds a reference to the important principle of
□ *imā*
—land protection and consecration—which is there linked, in its very essence, to the question of social and economic justice. So we see that much relevant material exists in □adīth collections, but this material exists as such, without having received any theoretical treatment in the framework of a system of environmental or ecological ethics. All we have is a body of classified reports, like case law collections, and this is what □adīth is.

But in the Islamic legal writings the principles contained in □adīth reports are identified and subjected to a highly sophisticated processing into a rigorous body of legal theory. These legal writings, often considered the *summum bonum* of the literary output of the Islamic intellectual culture, embody the discipline of
fiqh
, a word that literally means “understanding,” as we have already noted.
Fiqh
, or the Islamic science of jurisprudence, is a systematic and fully structured theoretical search for God’s
sharī‘a
, or Way, that had to be gleaned from and constructed out of the myriad
adilla
(here, legal indicators) provided for reflection throughout God’s
āyāt .
In concrete disciplinary terms,
fiqh
is the determination of the legal status (
□ *ukm*
) of an act, a determination arrived at through the application of
correct
, though not epistemologically certain, procedural rules (
u□ ūl
). These rules of correct procedure had been established by the middle of the ninth century, with the formal structure of logical inferences from the sources of law (
u□ ūl al-fiqh
) fully articulated. The supreme material source of
fiqh
-law was, of course, the Qur’ān—but next to that, and sometimes parallel to and in addition to it, was the
sunna
(custom) of the Prophet, which was by then available in authenticated □adīth collections. Again, true to Islam’s claim that it is a complete way of life,

fiqh
-laws are as a whole meant to be universal in scope—that is, comprehending all conceivable human acts. One may say, then, that
fiqh
is the structured articulation of the totality of Islam in its external functional manifestation.

The case of ḥ*imā* constitutes a pertinent example. As I have already indicated, this principle appears in the *Muwaṭṭ*ʾ; it is reported as a ḥadīth of the Prophet's rather well-known companion and the second Rightly Guided (
Rāshid
) caliph 'Umar ibn al-Khaṭṭāb, his word having derivative prophetic authority:

'Umar ibn al-Khaṭṭāb said to his freedman . . . whom he had placed in charge of ḥ*imā*, "Beware of the cry of the oppressed for it is answered. Do admit to
ḥ*imā*
the owners of small herds of camel and sheep . . . By God! this is their land for which they fought in pre-Islamic times and which was included in their terms when they became Muslims. They would certainly feel that I am an adversary [for having declared their land
ḥ*imā*
]— but, indeed, had it not been for the cattle to be used in the cause of God, I would never make a part of people's land
ḥ*imā."*
[68]

It is clear from this report that the principle of ḥ*imā*, which I shall explicate further, is at once an ecological issue as well as one of distributive justice and fairness. This twin significance of the principle is amply illustrated by the fact that it is explicitly invoked in the "Book of Business Transactions" of the highly respected *Mish*
*kāt al-Maṣ*ābīḥ
(Niche for Lamps), a manual of ḥadīth deriving from a work of one al-Baghawī (d.
c.
1116);
[69]
the book in question is concerned with the ethics of trade and commercial dealings. In the
ṣ*aḥ*īḥ
of Bukhārī too it is found in a chapter with the same title,
[70]
as well as in the "Book of [Equitable and Fair] Distribution of Water."
[71]
All this further reinforces the point:

 imā
is both an environmental concern and an ethical issue of fair public policy.

But it remained up to the *fiqh* legists to develop the *imā* principle systematically into a legal entity amenable to legislation, and this process is carried out, by definition, in the framework of practical ethics. In fact, *imā* had a long history of abuse. The word, literally meaning “protected, forbidden place,” names a pre-Islamic institution whereby some powerful individual or a ruling chief declared a piece of fertile land forbidden to the public or out of bounds. This was generally an exploitative act of dispossession and land confiscation. By virtue of
 imā
, those in power arrogated to themselves exclusive grazing, watering, and cultivation rights within the area the ground covered. Islam abrogated this practice and transformed the institution. Thus we read in the Qur’ān, “O my people, this is the camel of God, which is for you a sign (
āya
). Leave it to graze on the land of God.”
[72]
And in the Bukhārī we have the adīth : “Nobody has the right to declare a place
 imā
except God and His Messenger.”
[73]
In this way,
 imā
became a symbol of redress and restoration of justice and gradually acquired a status close to that of
 aram
(see below), in that it denoted a sanctuary, with its flora and fauna receiving special protection.
[74]

But the environmental dimensions of the institution of *imā* are readily apparent, and the Mālikī school of law, in particular, has developed these dimensions, preserving their intimate connection with social and ethical balance. Thus, four conditions were to be met for a piece of land to qualify as a possible *im ā* :
First was the condition of need and fairness.
 imā
was to be governed not by the whim or greed of some powerful individual or group, but by people’s generally felt need to maintain a restricted area; that is, it had to be an act
pro bono
. Second, under the condition of what we may call ecological proportion, the area to be

declared as
 imā
could not be too large, for this would be disproportionate. Third was the condition of environmental protection—the area under the
 imā
protection was not to be built upon or commercialized, nor was it to be cultivated for financial gain. Fourth was the condition of social welfare; the overriding aim of
 imā
was the economic and environmental benefit of the people.
[75]

This provides the outline of a concrete environmental policy concerning protected areas.

A similar institution articulated by the legists is that of *aram* (or *arīm*)—sacred territory, inviolable zone, sanctuary. Mecca was a
 aram
by the decree of God Himself.
[76]

Here, for example, no animal of the game species is ever put to death. By extension
 aram
became an environmental institution; it is often discussed in the section devoted to wasteland in legal works. Izzi Deen writes, “The
 arīm
is usually found in association with wells, natural springs, underground water channels, rivers and trees planted on barren lands or
mawāt
[wasteland]. There is [in some parts of the Islamic world] a careful administration of the
 arīm
zones based on the practice of the Prophet Muhammad and the precedent of his companions as recorded in the sources of Islamic law.”
[77]

It is quite striking that there exits in the adīth corpora an abundance of reports concerning plants and trees, land cultivation and irrigation, crops, livestock, grazing, water distribution, water sources and their maintenance, wells and rivers, water rights—all this is most promising material for our contemporary environmental concerns. Thus, in a report in Bukhārī’s a ī , the Prophet is quoted as saying, “There is none amongst the believers who plants a tree, or sows a seed, and then a bird, or a person, or an animal eats thereof, but is regarded as having given a charitable gift [for which there is great recompense].”
[78]

So praiseworthy and noble is the task of a
sustainable
cultivation of land that even in Paradise (

al-Janna
, which significantly means “the Garden”), existing beyond the physical world, it does not come to an end. So we read the Prophet telling his companions:

One of the inhabitants of Paradise will beseech God to allow him land cultivation. God will ask him, “But are you not in your desired state of being”? “Yes,” he will say, “but I would still like to cultivate land” . . . When the man will be granted God’s leave for this task, he will sow seeds, and plants will soon grow out of them, becoming ripe and mature, ready for reaping. They will become colossal as mountains. God will then say: “O Son of Adam, gather”! [79]

In another place, the Prophet is reported to have said: “When doomsday comes, and someone has a palm shoot in his hand, he should plant it.” [80] This saying accords a prophetic sacrality to all life: the bounty of nature is a good
in itself
, even at Doom—a good beyond any immediate or conceivable benefits that one may draw from it.

In the Bukhārī’s section on issues concerning the use, ownership, management, and distribution of water, one finds a meaningful play on the word *fa□l*, which means both “excess” and “grace”: “[Among the] . . . three types of people with whom God on the Day of Resurrection will exchange no words, nor will He look at them,” the Prophet is said to have declared, “. . . [is] the one who possesses an excess of water but withholds it from others. To him God will say, ‘Today I shall withhold from you my grace (
fa□lī
) as you withheld from others the superfluity (
fa□l
) of what you had not created yourself.’”
[81]

Note the moral principle here linking the real to the transcendental: it was not humankind that created water; God is the creator. Indeed, while in its legal developments the question of the ownership of wells, rivers, and other natural drinking and irrigation sources became a complex one, one thing remained abundantly clear on the moral plane: water must be shared *equally*, as the Prophet is consistently and insistently reported to have taught. This egalitarian ethical principle yields far-reaching ecological consequences: by virtue of this principle, no living individual, and this includes animals, can be deprived of water if it is available; likewise no piece of cultivable land, irrespective of its ownership, can be left without irrigation if water resources have the capacity. Again, and even more strongly, the “Book of

Business Transactions" of the *Mishkāt* quotes the Prophet's solemn declaration of a fundamental rule: "Muslims share alike in three things—water, herbage, and fire."
[82]

One is astounded to see how a large number of these ḥadīth principles were developed in their most minute detail, layer after layer, point by point, in the writings of *fiqh*-jurists, and woven into the vast legal fabric of normative ethics. A monumental example of such work is the *Hidāya* of the twelfth-century jurist al-Marghinānī, held to be the most authoritative single work of the ḥanafī school of law, followed by the majority of Muslims. In this grand manual, already translated into English in the eighteenth century,
[83]
one finds detailed discourses on wasteland (*mawāt*) and, in this connection, systematic discussions of water rights and resources and their maintenance.

The *Hidāya* contains an extensive "Book on the Cultivation of Waste Lands" with sections on the definition of *mawāt*, the rights of cultivating it, the treatment of adjacent territories, the status of adjacent territories, water courses in *mawāt*, matters related to aqueducts running through the *mawāt*, and so on. There is a large section here on waters, including issues of control and direction of flow, a large section on digging canals, on rivers, their kinds and cleaning, and rules with respect to drains and water courses. There is, furthermore, a whole section on water rights, which discusses the right to alter or obstruct water courses, dams, the digging of trenches, the construction of water engines or bridges, water vents—the minutiae here are daunting.
[84]

Even more striking than the abundance of Prophetic reports on vegetation and irrigation is the existence in the ḥadīth corpora of a large body of traditions, admonitions, rules, and stories concerning animals, their treatment, rights, natural dignity, and even their unique individual identities. Contained in the "Book of Striving" (*Jihād*) of the *Muwaṭṭā'* is the resounding tradition about horses: "In the forehead of horses," the Prophet is quoted as saying, "are tied up welfare and bliss until the Day of Resurrection."
[85]
Such compassion and care for animals is reflected in the same book in an account of the Prophet wiping the mouth of his horse with his personal cloth. Asked why, he replied: "Last

night I was rebuked [by God] for not looking after my horse." [86]

Again, in Bukhārī's "Book of Water," we have this report:

The one to whom his horse is a source of reward is the one who keeps it in the path of God, and ties it by a long rope in a pasture or a garden. Such a person will get a reward equal to what the horse's long rope allows it to eat in the pasture or the garden. And if the horse breaks its rope and crosses one or two hills, then all marks of its hoofs and its dung will be counted as good deeds for its owner. And if it passes by a river and drinks from it, then that will also be regarded as a good deed on the part of its owner. . . . [87]

Appearing in the "Book of Jihād" in the *Mishkāt* is a set of rules that the Prophet pronounced concerning the treatment of camels. "When you travel in fertile country," he said, "give the camels their due from the ground, and when you travel in time of drought make them go quickly. When you encamp at night keep away from the roads, for they are where beasts pass and are the resort of insects at night." [88]

It is remarkable that a sensitive concern for animals does not disappear from the horizon even during military engagements. In the same book, there exists a particularly stern admonishment against animal abuse—"Do not treat the back of your animals as pulpits, for God the most high has made them subject to you only to convey you to a place which you could not otherwise reach without much difficulty." [89]

Likewise we have a fable from the Prophet in Bukhārī's "Book of Agriculture": "While a man was riding a cow, it turned toward him and said, 'I have not been created for this purpose [of riding]; I have been created for plowing.'" [90] Here we have the Qur'ānic principles of *amr* and *qadr*, effectively the principles of natural and moral law and ecological balance, translated into practical ethics. And again, in the "Book of Jihād" of another *aḥīḥ* (Correct) adīth collection, the *Sunan* of Abū Dā'ūd (d. 888), one tradition clearly implies—and note that this implication is recognized by Muslim commentators—that each animal is to be considered *as an individual*, since the tradition speaks of animals being given proper names ("a donkey called 'Afīr"). [91]

Quite remarkably, this individuation effectively admits a *unique* identity on the part of each and every member of a given animal species. One wonders, then,

if Islam constitutes an exception to the “speciesism” of the classical world—as I have said elsewhere, this would indeed be a highly fruitful question to pursue.
[92]

Rather well-known in the Islamic world is the ḥadīth story of a woman who was condemned to hellfire “because of a cat which she had imprisoned, and it died of starvation. . . . God told her, ‘You are condemned because you did not feed the cat, and did not give it water to drink, nor did you set it free so that it could eat of the creatures of the earth.’” [93] This ḥadīth story forms the basis of the
fiqh
-legislation that the owner of an animal is legally responsible for its well-being. If such owners are unable to provide for their animals, jurists further stipulate, then they should sell them, or let them go free in such a way that they can find food and shelter, or slaughter them if eating their flesh is permissible. Given the requirement that animals should be allowed as far as possible to live out their lives in a natural manner, keeping birds in cages is deemed unlawful.
[94]

Large sections, or books, devoted exclusively to the hunting of animals and game, and animal sacrifice, are a standard feature of the ḥadīth corpora. All of this is treated with an ethical focus, underlying which is a particular conception of the natural environment that ultimately derives from the Qur’ān . At the same time, this ethical treatment of the issue generates both a philosophical and a moral attitude to the physical world that is uniquely Islamic, an attitude that manifests itself as an actual fact of the practices of Islamic societies. It is most instructive to recall E. W. Lane noting in his famous nineteenth-century work *Manners and Customs of the Modern Egyptians*
: “I was much pleased at observing their humanity to dumb animals.” But Lane found that the Egyptians had subsequently lost some of their traditional sensitivity to animals, and he explains: “I am inclined to think that the conduct of Europeans has greatly conduced to produce this effect, for I do not remember to have seen acts of cruelty to dumb animals except in places where Franks either reside or are frequent visitors.”
[95]

The Egyptians’ “humanity to animals” appears to be the moral harvest of Prophetic teachings with its numerous ecological ramifications. In fact, there is in the *Mishkāt* the saying of the Prophet, “If anyone wrongfully kills [even] a sparrow, [let alone] anything greater, he will face God’s interrogation.” [96]

We read in the same collection how vehemently the Prophet condemned the practice of branding animals; the story is narrated that he saw a donkey branded on the face, and it

upset him so much that he invoked God's curse: "God curse the one who branded it!" In fact, it is explicitly stated here that "God's messenger forbade striking the face of an animal or branding on its face." Similarly, he is reported to have forbidden all forms of blood sports, including inciting living creatures to fight with one another, or using them as targets—"The Prophet cursed those who used a living creature as targets."
97

The unusual intensity of this condemnation is to be gauged by the fact that these accounts speak of the Prophet cursing, and this is an exceptional feature of his character as it is portrayed in the tradition. In the same vein and with clear ecological dimensions, we have a story in Abū Dā'ūd's
Sunan
: "Once a companion of the Prophet was seen crumbling up bread for some ants with the words, 'They are our neighbors and have rights over us.'"
98

Islam does not prescribe vegetarianism and, of course, killing of certain kinds of animals for food is permitted, but only if the animal is killed in a specified manner *and*—in order to prevent cruel and arrogant tendencies from developing—God's name is pronounced over it. Islamic tradition has it that it is precisely the prevention of human arrogance and the inculcation of an ecological sensitivity in which lies the wisdom (
 ikma
) of the whole idea of
Dhab
(lawful killing of animals for food). Thus, there exist in adīth collections exceedingly detailed instructions concerning animal slaughtering. A report in the
Mishkāt
has the Prophet saying, "God who is blessed and exalted has decreed that everything should be done in a good way, so when you kill [an animal] use a good method, and when you cut an animal's throat you should use a good method, for each of you should sharpen his knife and give the animal as little pain as possible."
99

It is declared reprehensible by the Prophet to let one animal witness the slaughtering of another, or to keep animals waiting to be slaughtered, or sharpening the knife in their presence—"Do you wish to slaughter the animal twice: once by sharpening your blade in front of it and another time by cutting its throat?"
100

The jurist Marginānī, whom we have already met, has a whole chapter on *Dhab* in his *Hidāy a* ;
elaborating the matter in the finest of its details, as it was his manner, he writes:

IT is abominable first to throw the animal down on its side, and then to sharpen the knife; for it is related that the Prophet once observing a man who had done so, said to him, “How many deaths do you intend that this animal should die? Why did you not sharpen your knife before you threw it down?” IT is abominable to let the knife reach the spinal marrow, or to cut off the head of the animal. The reasons . . . are, FIRST, because the Prophet has forbidden this; and, SECONDLY, because it unnecessarily augments the pain of the animal, which is prohibited in our LAW.—In short, everything which unnecessarily augments the pain of the animal is abominable . . . IT is abominable to seize an animal destined for slaughter by the feet, and drag it . . . IT is abominable to break the neck of the animal whilst it is in the struggle of death. . . . [101]

We have already noted the rule of equal sharing of water, and this rule makes no distinction between human beings and animals. Thus, for example, in the “Book of Ablution” of the Bukhārī corpus, as well as in other corpora, there is the account of a man

who was walking along a road and felt thirsty. Finding a well, he lowered himself into it and drank. When he came out he found a dog painting from thirst and licking at the earth.

He therefore went down again into the well and filled his shoe with water and gave it to the dog. For this act God Almighty forgave him his sins. The Prophet was then asked whether man had a reward through animals, and he replied: “In everything that lives there is a reward.” [102]

“In everything that lives there is a reward” may be considered a broad central principle of Islam’s environmental ethics.

So we see the richness of Islamic material relevant to the question of the environment and ecology, and we also note the sophistication of treatment this material received in the Islamic culture, but the question is complex and larger. To capture a fuller sweep of the question of Islam and ecology, we will have to cast a much wider net—this essay does not even claim to contribute a smaller net; if anything, it offers some of its twine.

ENDNOTES

[1] See Henry Corbin, *Avicenna and the Visionary Recital* (New York: Pantheon Books, 1960).

[2] Some samples of the first attitude are to be found in Ziauddin Sardar, ed., *The Touch of Midas* (Manchester: Manchester University Press, 1984); on resentment toward all things Western, see the discussion of "Westoxification" in John Esposito, *Islam and Politics* (Syracuse, N.Y.: Syracuse University Press, 1984). In the third view one would place the ideas of some of those called Modernists; see Esposito, *Islam and Politics*; also Fazlur ra□man, *Islam* (Chicago: The University of Chicago Press, 1979).

[3] Hamilton Gibb, *Whither Islam?* (London: Victor Gollancz Ltd., 1932), 376.

[4] Ibid., 377–378.

[5] Ibid., 376.

[6] See ibid., 377.

[7] Seyyed H. Nasr is one of the pioneers who have undertaken this exercising task. See Nasr, "Islam and the Environmental Crisis," *The Islamic Quarterly* 34 (4) (1991): 217–234; and Nasr, *The Encounter of Man and Nature* (London: Allen and Unwin, 1978).

[8] Cf. Hanna E. Kassis, *A Concordance of the Qur'ān* (Berkeley: University of California Press, 1983).

[9] George F. Hourani, *Reason and Tradition in Islamic Ethics* (Cambridge: Cambridge University Press, 1985), 86.

[10] Ibid., 86; my emphasis.

[11] The literal meaning of *zauj* is, indeed, "equal half"; in the creation story in the second chapter (verse 35) of the Qur'ān, this is the word used for the human being recognized by the tradition as Eve (*awwā*).

[12] For Thomas Aquinas, nature was unredeemed.

[13] This is pointed out by Nasr, "Islam and the Environmental Crisis," 219.

[14] 7:72. Translations of the Qur'ān used for this essay are *The Holy Qur'ān*, trans. Abdullah Y. Ali (Brentwood, Md.: Amana Corporation, 1989); and *The Qur'ān Interpreted,* trans. Arthur J. Arberry (New York: Macmillan Publishing Company, 1955). Commentaries include Ibn Kathīr, *Tafsīr*, in Muhammad A. al-Sabuni, ed., *Mukhta ar Tafsīr ibn Kathīr* (Beirut: Dar al-Qur'ān al-Karīm, 1981).

[15] 15:1–4.

[16] 2:22; 13:17; 14:32–33; 16:5–16; 16:80–81; 17:70; 21:31–32; 23:18–22; 43:10–12; 45:12–13; 55:1–78; 78:6–16.

[17] 33:72.

[18] 45:13.

[19] 16:12–14.

[20] 22:65–66.

[21] 80:1–9.

[22] 93 (entire); 89:17–18.

[23] 83:1–13.

[24] 89:17–23.

[25] 89:19; 100:6–11.

[26] 3:108–109.

[27] 38:27; cf. 3:191.

[28] 27:88–90.

[29] *Majmū‘ Fatāwā* , quoted in Mawil Yousuf Izzi Deen (Samarri), “Islamic Environmental Ethics,” in *Ethics of Environment and Development*, ed. J. Ronald Engel and Joan Gibb Engel (Tucson: The University of Arizona Press, 1990), 190; my emphasis.

[30] 2:107.

[31] 24:42.

[32] 40:57.

[33] 55:10.

[34] 6:38.

[35] Denys Johnson-Davies, *The Island of Animals, Adapted from an Arabic Fable* (Austin: University of Texas Press, 1994), viii.

[36] Ibid., 75.

[37] 15:26,28,33.

[38] 22:5.

[39] 96:1.

[40] 6:2; 7:12, etc.

[41] Fazlur Rahman, *Major Themes of the Qur'ān* (Minneapolis: Bibliotheca Islamica, 1989), 17. This work is a highly learned excursus on Qur'ānic themes by one of the finest modern scholars of our times.

[42] 23:13-14.

[43] 50:15-11.

[44] 15:19-22.

[45] 15:26-27.

[46] *On ʿulm al-nafs see Hourani, Reason and Tradition in Islamic Ethics.*

[47] See my chapter "Islam" in *A Companion to Environmental Philosophy* (Blackwell Companions to Philosophy series), ed. Dale Jamieson (Oxford: Blackwell, 2001). It ought to be noted here that this was the first articulation of my ideas on the question of Islam and ecology, and readers will note some parallels in the present essay; this is inevitable since the core of the primary normative sources remains constant.

[48] 65:1.

[49] 16:33.

[50] The Qur'ān is replete with the verbal form of the root word □ *alama* (to do wrong) along with several other verbal and nominal forms that morphologically arise out of it. But for □ *ulm al-nafs*
see particularly 2:231; 3:135; 7:23; 11:101; 27:44; 28:16; 34;19; 43:76.

[51] 3:83.

[52] L. Gardet, "God in Islam," *Encyclopedia of Religion,* ed. Mircea Eliade (New York: Macmillan, 1987), 30.

[53] 57:3.

[54] 55:5-29.

[55] Ra□man, *Major Themes*, 71.

[56] See 18:109–110.

[57] See 2:118, 219, 266; 3:118; 5:75.

[58] 6:65. I draw upon ra□man's *Major Themes* here.

[59] 6:97-98.

[60] 9:128.

[61] 13:7.

[62] 45:52.

[63] 21:107.

[64] 1:1.

[65] See Izzi Deen (Samarri), “Islamic Environmental Ethics,” 95.

[66] *Ṣaḥīḥ al-Bukhārī*, ed. and trans. M. Muhsin Khan (Chicago: Kazi Publications, 1976–1979), I:331.

[67] These are named after the masters who compiled them, thus: al-Bukhārī, Muslim (d. 875), Abū Dā’ūd (d. 888), al-Tirmidhī (d. 892) al-Nasā’ī (d. 916), and Ibn Māja (d. 886).

[68] *Muwaṭṭā* of Mālik ibn Anas, trans. Muhammad Rahimuddin (Lahore: Sh. Muhammad Ashraf, 1985), no. 1830.

[69] *Mishkāt; al-Maṣābīḥ*, trans. James Robson (Lahore: Sh. Muhammad Ashraf, 1990), 592.

[70] *Ṣaḥīḥ al-Bukhārī,* ed. and trans. Khan, 3:267.

[71] Ibid., 3:558.

[72] 11:64.

[73] □a□ī□ *al-Bukhārī, ed. and trans. Khan, 3:558.*

[74] See J. Chelhold, "□imā," in *Encyclopaedia of Islam,* new ed., vol. 3, ed. H. A. R. Gibb et al. (Leiden: E. J. Brill, 1971), 393.

[75] Wahba al-Zuhailī, *al-Fiqh al-Islamī wa Adillatuhu*, vol. 5 (Islamic Law and Its Material Foundations) (Damascus: Dar al-Fikr, 1984), 23–24; 571–575; quoted in Izzi Deen (Samarri), "Islamic Environmental Ethics," 196.

[76] 17:91.

[77] Izzi Deen (Samarri), "Islamic Environmental Ethics," 190.

[78] □a□ī□ *al-Bukhārī,* ed. and trans. Khan, 3:513.

[79] Ibid., 3:538.

[80] *Sunan al-Baihaqī* a*l-Kubrā* , quoted in Izzi Deen (Samarri), "Islamic Environmental Ethics," 194.

81 □a□ī□ *al-Bukhārī,* ed. and trans. Khan, 3:557.

82 *Mishkāt al-Ma□ābīh* , trans. Robson, 640.

83 *Hidāya of al-Marghnānī* , trans. Charles Hamilton (London: T. Bensley, 1791); cited here is the reprint from the 2d ed. of 1870 (Lahore: Premier Book House, 1957).

84 Ibid., 4:609–618.

85 *Muwa□□ā* of Mālik ibn Anas, trans. Rahimuddin (Lahore: Sh. Muhammad Ashraf, 1985), no. 990.

86 Ibid., no. 993.

87 □a□ī□ *al-Bukhārī,* ed. and trans. Khan, 3:559.

88 *Mishkāt al-Ma□ābīh* , trans. Robson, 826.

89 Ibid., 829; translation slightly amended.

90 □a□ī□ *al-Bukhārī*, ed. and trans. Khan, 3:517.

91 *Sunan Abī Dā'ūd* , trans. Wahid al-Zamân (Urdu) (Lahore: Islamic Academy, 1983), 308–312.

92 Haq, “Islam,” 123.

93 □a□ī□ *al-Bukhārī,* ed. and trans. Khan, 3:553.

94 Johnson-Davies, *The Island of Animals*, xii.

95 Quoted in ibid., xv, from the 1836 publication.

96 *Mishkāt al-Ma□ābīh* , trans. Robson, 874.

97 Ibid., 872.

98 Quoted in Johnson-Davies, *The Island of Animals*, xvii.

99 *Mishkāt al-Ma□ābīh* , trans. Robson, 872.

100 Quoted in Johnson-Davies, *The Island of Animals*, ix.

101 *Hidāya,* trans. Hamilton, 4:558.

102 Johnson-Davies, *The Island of Animals*, ix.