Semiotics of Nature

Recharging Nature with Meaning for Environmental Ethics and Action

Recep Şentürk

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earthna
عضو في مؤسسة قطر
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Contents

Foreword

Modern environmental thinking has been heavily influenced by Garrett Hardin's seminal paper, "The Tragedy of the Commons," published in *Science* in 1969. In this paper, Hardin argues that the lack of property rights over global commons—such as the oceans, forests, and biodiversity—results in a situation where resources owned collectively by everyone are effectively owned by no one.

Therefore, there is little incentive to conserve these resources because their depletion does not impose a direct cost on any one individual. Under this logic, whales can be hunted to extinction because individual hunter reap the benefits, but their loss is borne collectively by humankind.

In this example, whales are considered an "externality" within the economic system. Their existence does not register as a direct economic contribution, whereas heir hunting generates measurable economic activity. The same logic applies to the ecosystem services—such as water capture, pollination, climate regulation —provided freely by nature but often unaccounted for in economic systems.

Islam, however, grants people equal rights to access natural resources, recognizing their vital role in sustaining humanity. Consequently, no individual has the right to control or exploit these unique ecosystems. This principle is beautifully illustrated in the words of Prophet Mohammed (peace be upon him), who said: "*Muslims are partners in three things: water, pasture and fire, and their price is unlawful*". (Sunan Ibn Majah, 2472; Sunan Abu Daud, 3477).

To address a similar ethical challenge in modern times, economists concerned with sustainability have attempted to assign economic value to nature. By doing so, they demonstrate to policymakers that resources such as oceans, biodiversity, ecosystem services, and the climate, among others, possess significant financial worth. For example, the value of global ecosystem services has been estimated at upwards of USD 50 trillion per year. This approach has influenced policies developed to conserve nature and mitigate economic losses associated with environmental degradation. Many governments now acknowledge the value of conservation, recognizing not only the ethical imperative, but also the economic benefits.

But what happens when the monetary value of nature is not very significant? A hectare of a tropical rainforest may hold considerable economic worth, but what about a small desert plant with seemingly negligible economic value? Does it mean that these forms of life are not valuable? Clearly not, and instinctively, we humans understand that nature possesses

intrinsic value regardless of its economic utility, and that we have a moral responsibility to protect.

This issue raises fundamental ethical questions about the tendency to view nature purely through a utilitarian lens. This book aims to challenge that perspective by restoring an understanding of nature's value beyond its economic (i.e., utilitarian) significance. It provides a faith-based perspective grounded in Islam, emphasizing the concepts of oneness and transcendence *(tawḥīd)*. This faith-based approach does not conflict with the science of economics, rather, it complements it by integrating divine principles as outlines in the Holy Qur'an.

In the Holy Qur'an, Allah states: "*We shall show them our signs in the horizons and in themselves, till it is clear that it is the truth*" (Qur'an 41:53).

قوله تعالى: ﴿سَنُرِيهِمْ ءَايَٰتِنَا فِى ٱلْءَافَاقِ وَفِىٓ أَنفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ ٱلْحَقُّ﴾

The Holy Qur'an presents nature as a testament to the Creator *(āyah),* a source of knowledge, a manifestation of Allah's attributes, and a means to deepen faith. Forests, rivers, mountains, and even the smallest living creatures serve as reminders of the Creator's wisdom and artistry.

Therefore, readers are invited to explore the natural world and creation from an Islamic perspective throughout the chapters of the book, to foster ethical environmental values and

to guide actions that uphold the sanctity of life. This approach offers an ethical framework for responsible stewardship, encouraging behaviors that promote coexistence, and sustain both human and ecological systems. This commitment is driven not by its utilitarian benefits *(manfāʿah)*, but for the higher principle of goodness *(iḥsān)*.

We hope this book serves as a starting point to explore how faith can inspire a sustainable world in which nature and all creation are valued for their inherent worth.

Dr. Gonzalo Castro de la Mata
Executive Director, Earthna

Ruba Hinnawi
Technical Lead, Earthna

The tulip,
blooming as a single flower on a single
stem, symbolizes *tawhīd*—the oneness of God.
Its upright form resembles the Arabic
script of Allāh, serving as a natural
reminder of divine
presence.

Preface

Semiotics is the art of hearing without ears what is said without tongues. Its definition, in academic terms, refers to the study of signs and their meanings. Traditionally, the discipline has focused only on human-made signs. This book broadens the scope of semiotics to include God-made signs in nature, building upon the foundational principle: **everything stands for its maker.**

Nature is a sacred book authored by God and everything in it is a sign standing for God. In every creature, this semiotic function is beautifully intertwined with utility functions in an aesthetic harmony. This book introduces a semiotic approach to nature deriving from this seminal idea. It is a simple, self-evident, yet transformative perspective that reshapes our understanding of nature and redefines our relationship with it. Semiotics of nature is the new way to appreciate the silent eloquence of nature and to uncover the profound truths it reveals without words.

This shift in perspective naturally raises a crucial question: Can we, as stewards, build a meaningful and ethical relationship with nature without compromising our scientific

approach? My answer is a resounding *yes*. It is entirely possible to establish an altruistic and ethical perspective by adopting a multiplex approach—one that allows us to combine the study of nature from both semiotic (i.e., study of signs) and scientific (i.e., study of causes and effects) perspectives. But why should we pursue this approach, and how can it be practically implemented? This book will not only address these questions but also equip you with a fresh perspective to rethink nature and your role in its stewardship.

In a similar vein, this book draws upon my work on *futuwwah* ethics, which emphasizes developing an altruistic relationship with all of God's creation, including nature, plants, and animals. It emerges from the idea of a *universal fraternity* among all creatures, alongside the fraternity among human beings expressed through the concept of ādamiyyah. The idea of *futuwwah* and universal fraternity among all God's creation as His signs and servants underpin the notion of stewardship (*khilāfah*) over nature. We are simultaneously signs and interpreters of signs—in essence, we are words in the sacred book of nature while also readers of that book. We are connected to all other creatures the way words in a book are connected to each other.

This book also builds on my work on *multiplexity*—a multilayered worldview—which rejects the reductionist or *uniplex* study of nature. Uniplex perspectives view nature as a mere material object and treat it primarily as a resource for exploitation. This narrow approach confines the study

of nature to simplistic cause-and-effect relationships. In contrast, multiplexity offers a more holistic view of existence extending beyond the material realm. This comprehensive perspective transforms our perception of nature and thereby our relationship with it, culminating in a new framework for altruistic environmental ethics and sustainability.

This book has a long history, spanning Türkiye, Germany, and Qatar. My first serious engagement with the study of nature and environment began with a request from the late Professor Şerif Mardin (d. 2017), who invited me to present a paper at a workshop examining how Muslims' views of nature shifted with the introduction of modern science to the Muslim world. He specifically encouraged me to explore this question through the works of Erzurumlu Ibrahim Hakki (d. 1780) and his book *Mârifetnâme*.

Ibrahim Hakki lived during a period of transition marked by increasing global exchanges in scientific thought. Through my research, it became evident that the empirical and experimental approaches had long been integral to Islamic scholarship. Scholars like Ibrahim Hakki did not adopt these methodologies as something entirely new but rather engaged with emerging ideas in ways that were consistent with the multiplex approach of Islamic scholarship. For Muslim scholars, the study of nature's physical phenomena and its deeper semiotic meanings—as signs of God—had always been part of a unified intellectual framework, unlike their Western contemporaries. This holistic perspective rejected

the compartmentalization of knowledge, viewing empirical inquiry and the search for meaning as complementary pursuits within a cohesive worldview.

Later, in 2010, I was invited by Osnabrück University in Germany to deliver a talk on the "Semiotics of Nature," drawing on the works of Said Nursi (d. 1960) and Ibrahim Hakki. This presentation was later published as a book chapter in Germany. My research on Said Nursi's perspective on nature and science further reinforced my earlier findings: for Muslims, the scientific study of nature complements the semiotic study, with the two forming a unified approach rather than being in conflict.

After moving to Qatar and taking on the role of Dean at the College of Islamic Studies at Hamad Bin Khalifa University, I was invited to speak at the Earthna Summit in 2022. My presentation on the semiotics of nature sparked a conversation with Gonzalo Castro de la Mata and Ruba Hinnavi from Earthna, who encouraged me to expand my ideas into a book. I am deeply grateful to both, for their support, thoughtful encouragement, and follow-up throughout this journey. The aim was to reconfigure the concept of nature as a book composed of signs—rooted in the traditional notion of the book of nature—while developing a new framework for environmental ethics and sustainability based on this renewed understanding.

Keeping this goal in mind, the book taps into the resources from the ancient traditions of the Eastern and Western worlds

guided by the principle of "rooted revival"—an approach that seeks to reconnect with foundational values and knowledge of Islamic civilization while adapting them to contemporary realities—framed within an interdisciplinary and interfaith perspective. Nature is a divine book addressed to humanity. Today, we lack the ability to read nature as our ancestors once so masterfully did. This is the global heritage of *natural literacy* that humanity has lost in today's world. This book aspires to rediscover, restore, and revive this heritage to address the pressing global environmental threat that humanity collectively faces.

Today, countless species face the threat of extinction, which signifies not only an ecological crisis but also the fading of God's signs inscribed in the book of nature. Yet, there is hope. By reviving the long-lost art of reading nature and reconnecting with its divine signs, as humanity, we have the potential to rediscover our role as the stewards of creation. This book seeks to inspire a renewed sense of purpose and responsibility by offering a path forward where we can protect the signs of God in nature and, in doing so, safeguard our own future as a vital part of this sacred creation. Through this revival, we can strive together toward a world that is harmonious, balanced, and sustainable for generations to come.

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Indeed, Allah, His angels, and those in the heavens and earth,
even the ant in its hole and the fish in the sea,
pray for the one who teaches people goodness.

إن الله وملائكته وأهل السموات والأرضين،
حتى النملة في جحرها، وحتى الحوت؛
ليصلون على معلم الناس الخير.

—Prophet Muhammad ﷺ

(Riyāḍ al-Ṣāliḥīn 1387)

Introduction

We will show them Our signs in the universe and in their own selves,
until it becomes manifest to them that it is the truth.
— Qur'an 41:53

Everything stands for its maker. Nature, in its entirety, stands as a testament to its Creator. Every object within it is a sign (*āyah*), while the whole of creation itself is the Sign (*al-ʿālam*). Every being that exists not only serves a utility function—fulfilling human needs in countless ways—but also holds a semiotic function, standing as a symbol of divine meaning. While science, in its modern form, primarily concerns itself with nature's utility—analyzing the material relationships within the physical world—the semiotics of nature offers a more comprehensive perspective by seeking to uncover the meanings behind these objects and the relationships between them.

The need for a comprehensive understanding is especially urgent as we confront an escalating environmental crisis. The destruction and degradation of the natural world—through pollution, overexploitation of resources, and extinction of species—are not isolated problems. Addressing this crisis

requires a shift from focusing solely on immediate symptoms to understanding and managing the underlying systems at play. Just as treating diabetes requires more than simply monitoring blood sugar levels, environmental challenges demand a holistic approach. This involves considering the broader ecological, social, political, economic, and ethical problems in the system that contribute to the current environmental breakdown. Such a comprehensive approach is essential, as the way we conceptualize these challenges directly influences the solutions we propose—determining whether we merely address surface-level symptoms or tackle the deeper, systemic causes of our ecological predicament.

This book argues that the environmental crisis is ultimately a spiritual and moral crisis—stemming from humanity's estrangement from its Creator. The materialistic, consumerist, and exploitative mindset that is driving this crisis is a symptom of this disconnection and alienation between humanity and the Creator. This disconnection has led to human carelessness and irresponsibility, resulting in the current state of environmental degradation, as expressed in the Qur'anic verse: "*Corruption has spread on land and sea due to what humans have done with their own hands*" (Qur'an, 30:41).

This disconnection, accompanied by a fragmented understanding of existence and neglect of humanity's responsibility on earth, has led to a worldview where nature is seen in isolation rather than as part of a unified whole. From such a distorted lens, nature loses its significance and the

purpose ascribed to it by its Creator. It becomes a mere object of exploitation and utility, something that people compete over, commodify, and colonize in their quest for consumption, control and subjugation.

This shift in the perception of nature that paved the way for the environmental crisis we face today traces its roots to the philosophical and scientific transformations ushered in by the Renaissance and Scientific Revolution. Prior to this era, all religions and civilizations viewed nature as imbued with divine significance, a sacred realm reflecting the creative power of God. Human beings were seen as stewards of creation, tasked with maintaining order and balance on Earth.

The Renaissance, however, heralded a fundamental shift in humanity's self-perception and its relationship with nature. Thinkers such as Francis Bacon (d. 1626) and René Descartes (d. 1650) championed a mechanistic view of the universe, reducing nature to inert matter devoid of intrinsic meaning. In this emerging paradigm, nature was no longer regarded as a living, sacred entity but as a machine—a collection of parts that could be analyzed, controlled, and manipulated by human reason. Descartes famously proclaimed that humans must strive to become "masters and possessors of nature," a statement that epitomized the spirit of the time (Descartes, 2006, p. 51).

The Scientific Revolution of the 16th and 17th centuries further solidified this new approach to nature. With the veneration of the empirical method as the definitive path

to understanding the natural world, coupled with the rise of modern physics, figures like Galileo Galilei (d. 1642), Isaac Newton (d. 1727), and Johannes Kepler (d. 1630) fundamentally altered the prevailing understanding of the physical world. They proposed that the universe operated like a vast, mechanical clock governed by mathematical laws that could be discovered, quantified, and predicted. The reduction of nature to a system of cause and effect, devoid of purpose or spiritual meaning, became the defining principle of this new scientific paradigm.

Addressing the environmental crisis, therefore, requires more than technological advancements or a transition to a green economy; it demands a profound transformation in our worldview and consciousness about our own existence, life, and relationships. Ultimately, we must return to a holistic understanding of nature that acknowledges its divine significance and reclaim our role as responsible stewards, guided by reverence and accountability to the Creator.

Disenchantment of Nature: A Crisis of Meaning

As mentioned above, the environmental crisis arises from a spiritual disconnection that has shaped our perception of nature and, consequently, our relationship with it. This new perspective, which reduces humans and nature to their physical properties, has given rise to behaviors that lead to neglect, exploitation, and degradation of the natural world. Sociologist

Max Weber (d. 1920) characterized this worldview as over-intellectualization or *disenchantment*, explaining how it replaced the mysterious forces of nature with a framework that reduced the world to something that could be entirely mastered through calculation and technical means, as he wrote:

> There are no mysterious incalculable forces that come into play, but rather that one can, in principle, master all things by calculation. This means that the world is disenchanted. One need no longer have recourse to magical means in order to master or implore the spirits, as did the savage, for whom such mysterious powers existed. Technical means and calculations perform the service. This above all is what intellectualization means […] The fate of our times is characterized by rationalization and intellectualization and, above all, by the 'disenchantment of the world.' Precisely the ultimate and most sublime values have retreated from public life either into the transcendental realm of mystic life or into the brotherliness of direct and personal human relations (Weber, 2001, pp. 139, 155).

Weber's comments illustrate the modern perspective on nature. Grounded in materialism, modern science views nature as a self-contained system driven by causal relationships and governed by the laws of physics. This perspective strips nature of its intrinsic meaning, reducing it to mere resources and raw materials for human consumption. This disenchanted view of nature frames it as something to be dominated, controlled,

and exploited. In this paradigm, nature has no intrinsic value beyond its utility to human beings. As a result, our relationship with the natural world has shifted from one of stewardship to one of domination. The deeper meanings and spiritual connections that once enriched humanity's understanding of the natural world have retreated, as Weber notes, either into the "transcendental realm of mystic life" or into the "brotherliness of direct and personal human relations." Those who remain enchanted by nature are often considered savages. The reliance on technical means and calculations has replaced the need for other forms of understanding or control. Weber describes this modern perspective, ideology, and philosophy as one in which the ultimate and most sublime values have retreated from public life.

Furthermore, the commodification of nature—treating it as something to be bought, sold, or controlled—has led to widespread overexploitation of natural resources, pollution, and the degradation of ecosystems. This, combined with unsustainable economic systems that prioritize short-term profit over long-term sustainability, has intensified environmental problems.

The environmental degradation we witness today is not merely the result of technological advancements or industrialization. They are symptoms of a deeper crisis: a crisis of meaning that has emerged from humanity's growing disconnection from other realms of existence. This disconnection, as Taha Abdurrahman argues, goes beyond mere

physical or environmental damage; it is rooted in a spiritual and existential separation that has left us alienated from the very essence of nature and its deeper significance. Wael Hallaq summarizes Taha Abdurrahman's views as follows:

> The Islamic method governing modern differentiation rests on a fundamental fact, namely, the human is originally a connected or interconnected creature (*kāʾin muttaṣil*), both spatially and temporally. Even if human beings attempt to physically abandon a particular space or time, their soul—or, if you will, their memories, thoughts, or imagination—cannot be so easily erased. It is in the nature of humans to even connect with worlds beyond time and space, which is what we call spirituality. And no matter how sophisticated science may be, the spiritual realm cannot be diminished by new scientific discoveries, for while these discoveries no doubt obviate the magical and the superstitious, they neither reduce nor eliminate the mysteries of the world. If anything, Taha argues, the more developed these sciences are, the more wondrous the secrets of the world appear and the closer the connection one feels with one's own humanity. It is no wonder then that the disconnected man (*al-insān al-munfaṣil*) of Western modernity finds the world to have lost all meaning, precisely because he has been disconnected from the world's secrets and wondrous workings. The consequences of man losing confidence in the

> world have been immensely destructive. Abused nature has retorted with a wave of punishments for the misdeeds he has committed against it. This disconnection has, in addition, led to the emergence of the phenomenon of extreme fear of death, because for this man there is nothing that lies beyond this world (Hallaq, 2019, pp. 108–109; Abdurrahman, 2006, p. 52).

The consequences of modern approaches, particularly in how they prioritize human control over nature, can be better understood by exploring their connection to anthropocentrism (the belief that human beings are the central or most significant entity in existence), the reliance on mechanical techniques, and the notion of human sovereignty over nature. These ideas suggest that humanity views itself as having the right to dominate and exploit the natural world.

The core issue is not just inconsistency but the misguided belief that technological progress would bring happiness by granting humans control over nature for their benefit. While technology has permeated every aspect of life, instead of attaining freedom, humans have become subservient to the very tools designed to serve them. Moreover, the mindset of "what can be done must be done" has stripped away moral constraints and cleared the way for practices that alter creation and nature, contributing to crises such as food insecurity and the proliferation of nuclear weapons, among others. This unchecked rationalism, devoid of ethical guidance, carries within it the seeds of its own destruction.

It can be argued that the effects of a secular humanistic worldview—which often excludes the spiritual or divine—are more far-reaching than they first appear. If we recognize that secular humanism is closely tied to anthropocentrism and the idea of humans having ultimate authority over knowledge and existence—epistemic sovereignty—then it becomes clear that secular interpretations of the world contribute to the crises we see today. These crises include not only environmental destruction but also the erosion of social cohesion and other disruptive consequences of modernity.

From Uniplex to Multiplex Perspectives on Nature

Today, two competing worldviews shape our relationship with nature. The modern, reductionist perspective is uniplex, single-layered, and disenchanted. It posits that humans are in a struggle with nature—a struggle in which we must triumph through science and technology. Nature is viewed as a self-running machine devoid of intrinsic value and exists solely to serve human needs and desires.

Unlike the prevailing reductionist scientific approach that often sees these functions—utility and meaning—as incompatible and mutually exclusive, this book argues the opposite: they are complementary and mutually enriching. When properly understood together, they offer a more profound and holistic perspective that is also useful for addressing the causes of contemporary environmental

crises. Furthermore, coupling these two approaches will have constructive implications on environmental ethics and sustainability.

Take the example of a rose. To a scientist, it is simply a plant, examined for its biological characteristics and practical utility. Yet, this view does not exhaust the meaning of a rose. From a semiotic perspective, a rose embodies symbolic, semiotic, and aesthetic dimensions that transcend its physical properties. Positivist science dismisses these layers of meaning as irrelevant and incompatible with scientific inquiry. However, a multiplex approach to the study of nature, incorporating both semiotics and science, is not only possible but necessary for reconnecting with its spiritual significance and redefining our relationship with it.

Technological advancements, long heralded pathways to human progress, have instead contributed to significant harm and environmental destruction. This has prompted the call for an ethical renewal that focuses on building a sense of responsibility toward nature rather than viewing it merely as a resource for exploitation. However, solutions rooted in purely rationalist frameworks are insufficient. They tend to focus on material outcomes and immediate utility, neglecting the intrinsic value of nature and the long-term consequences of human actions. Rationalist approaches can also lack a sense of moral responsibility and fail to inspire the ethical duty required to care for the environment. By treating nature as a resource to be managed rather than a trust to be safeguarded, rationalist

perspectives miss the profound interconnectedness between humans and the natural world. Sustainable solutions require more than logic and efficiency; they need a holistic approach that incorporates spiritual and ethical values, encouraging a sense of stewardship and care beyond what pure rationality can provide.

In contrast, the multiplex perspective is multilayered and enchanted. It views Earth and nature as trust from God (*amānah*), framing our role as stewards. In this view, nature is a divine book, one that leads us to the Creator. The more we study nature scientifically, the closer we draw to God. Just as sacred scriptures like the Qur'an and the Bible convey divine wisdom, nature is seen as a text authored by God.. Recognizing this connection between nature and divine texts deepens our understanding of both. Therefore, nature, as a divine text, carries both practical and profound meaning, compelling us to safeguard it as a sacred trust.

To address our environmental crisis, we must first rethink our understanding of human beings. Who are we? What is our purpose in this world? We are part of a multiplex reality that encompasses both the invisible and material worlds. We must embrace our role as stewards (*khalīfah*) on Earth, recognizing that everything is given to us as *amānah*, and we are responsible for its sustainability.

This reconfiguration involves recognizing the intrinsic value of both humans and nature. From a modern perspective,

neither possesses inherent worth—detached from the multiplex metaphysical reality in which we are embedded, and its Creator, it becomes impossible to establish true value for ourselves or the natural world. However, from a religious perspective, God has imbued both with inherent worth. We must rediscover this meaning in ourselves, in others, and in the natural world. The practical outcome of it would be respecting each other and nature due to the inherent worth as bestowed by God.

Don't see the rose as just a plant. It holds both a socially constructed meaning and a God-given meaning. Socially, it symbolizes love and affection, an expression shared between people. Divinely, it serves as a sign of God, His mercy, and a manifestation of His actions (*tajallī al-afʿāl*). God is hidden in His essence but is manifest through His actions. Everything we see around us is a manifestation of Him.

We must shift our perception of nature from one of objectification and control to one of respect and stewardship. This transformation requires redefining not only our relationship with nature but also our understanding of ourselves within it. recognizing our responsibility to protect and preserve the environment for future generations is paramount. Our actions must be sustainable, ensuring we do not disrupt the delicate balance (*mīzān*) of the planet's ecosystems.

God has given us this responsibility. In Surah Al-Anʿām (6:99), it is stated:

> It is He who sends down water from the sky. With it, We produce the shoots of each plant, then bring greenery from it, and from that We bring out grains, one riding on the other in close-packed rows. From the date palm come clusters of low-hanging dates, and there are gardens of vines, olives, and pomegranates, alike yet different. Watch their fruits as they grow and ripen! In all this there are signs for those who would believe.

The world is like a single garden. In fact, the entire universe, as mentioned in the Qur'an, is nothing but a marvelous scene of God's endless manifestations. These signs, whether verbal through the Qur'an or non-verbal through nature, are expressions of God's messages to humanity. We must hear without ears what is symbolically expressed in silence without a tongue by studying and understanding God's communication through His creation.

Briefly put, with the purpose of developing a new framework for environmental ethics, we must recharge nature with meaning. The modern positivist materialist perspective has stripped nature of its intrinsic value and meaning, leading to its exploitation and degradation. The intrinsic meaning of nature comes from its intrinsic value. We must return to a mindset of stewardship, recognizing the inherent worth of the natural world and our responsibility to protect it as a divine trust. We are readers and stewards of the book of nature. This relationship with the book of nature is similar to a Muslim's relationship with the Qur'an.

The dominance of the positivist view in scientific culture and academia has led to the rejection of the traditional perspective on nature as a meaningful entity. This shift in perception has resulted in humans viewing nature as something to be controlled and exploited rather than stewarded. Consequently, the planet faces a multitude of environmental issues. To address this, we must restructure our relationship with nature and return to a mindset of stewardship. This requires a systemic change because simply trying to protect nature without changing the underlying system is insufficient.

Recharging nature with meaning, or more correctly rediscovering its already existing meaning, is necessary to establish a meaningful relationship with it, which can lay the foundation for a new environmental ethics based on readership, stewardship and respect for the natural world.

The Need for a New Ethical Framework

The central question this book seeks to answer is: how can we revitalize our approach to nature by integrating its pragmatic utility with its semiotic meaning? More importantly, how can this dual understanding inform our environmental ethics and practices, guiding us from a mindset of exploitation to one of stewardship? This book explores how religion offers a more effective framework for environmental sustainability than any reductionist materialist perspective. Semiotics, or ʿilm *al-dalālah* in Arabic, provides a unique lens through

which we can understand nature—not just as a network of causal relations but also as a meaningful book. By examining the semantic dimension of nature, we can move beyond the limitations of a purely reductionist scientific perspective and develop a more holistic approach to nature and environmental ethics.

The environmental degradation we see today cannot be addressed solely through piecemeal technological fixes or regulatory policies. At its core, the crisis stems from humanity's denial of connection to higher realities and, thus, loss of meaning and a loss of ethical grounding that has led to exploitation and unsustainable practices. At the heart of this disconnection is a crisis of meaning: modern societies have increasingly separated themselves from the ethical, spiritual, and moral dimensions that once guided humanity's relationship with nature. This crisis is exacerbated by the dominance of reductionist scientific and capitalist economic thinking, which focuses solely on the material aspects of the world, ignoring the deeper spiritual and ethical connections humans have with the environment.

To resolve this, we need a new ethical framework for environmental sustainability, one that redefines who we are and what our role is in the world, as well as our relationship with the natural world by integrating moral, epistemic, and spiritual dimensions. This new ethical framework places moral sustainability at the heart of environmental sustainability. At the core of this moral foundation is the idea that "I am,

therefore, I have rights and duties." Our existence as ethical beings brings with it the responsibility to act justly toward the environment. This responsibility extends to stewardship (*riʿāyah* and *khilāfah*)—caring for and protecting the environment, guardianship (*qawāmah*)—ensuring justice and balance in human interaction with nature, and constructive leadership (*siyādah*)—shaping and nurturing the natural world with foresight and compassion (*ʿimārah*). These roles are deeply intertwined with the concept of responsibility (*taklīf*), which guides human actions at both the personal and societal levels. This duty is not simply a legal or social obligation; it is a profound recognition that our well-being is intrinsically tied to the health of the earth. When we understand that our actions have long-term consequences, both for nature and our future generations, we develop a deeper respect for our role as stewards of the planet. From this perspective, our responsibilities as human beings are not confined to the physical or societal realm. They are empowered by a vertical connection to the divine, a relationship that imbues even the most mundane actions with sacredness. This vertical dimension strengthens horizontal connections with fellow beings and the environment, elevating acts of kindness, sustainability, and societal betterment into spiritual offerings to the Creator. Every action, whether it is preserving a forest or being empathetic to a neighbor, becomes more than just an act—it becomes part of fulfilling a divinely appointed role as stewards of creation.

The concept of stewardship is central to this new ethical framework. It suggests that we need to change ourselves to change our view of nature and our relationship with it. In the Islamic tradition, humans are considered *khalīfah* on Earth and entrusted with its care. This role is not about domination but about guardianship and responsibility. We are called to engage with nature through compassion, dialogue, and respect—qualities that are essential for ensuring a sustainable future—rather than dominance or exploitation. Thus, this new ethical framework recognizes that human actions toward the environment are deeply rooted in moral, social, and spiritual responsibilities. As vicegerents of Allah, humans are not only tasked with living ethically but are also charged with ensuring the sustainability and well-being of the world. The concept of stewardship reflects an intrinsic understanding that to change our relationship with nature, we must first change ourselves. We must embody the roles of guardians and leaders, carrying out our responsibilities with love, compassion, justice, and wisdom.

Moreover, this ethical framework for environmental sustainability is informed by *epistemic sustainability*, where divine revelations and wisdom from world religions serve as a guiding source of knowledge. Religious teachings remind us of the interconnectedness of all life and the sacred trust we hold as caretakers of the earth. For example, in Islam, nature is presented as a creation of God entrusted to humanity—*amānah* that must be cared for with humility

and respect. This spiritual understanding enriches our moral obligation to protect the environment and frames it as a sacred duty. From this perspective, ownership of a property means assuming the role of guardianship of a divine trust for a temporary period.

By integrating this understanding into our ethical framework, we move beyond a utilitarian view of nature and its commodification toward one where every action is imbued with a sense of universal responsibility and accountability in front of the Creator. This perspective fosters not only environmental sustainability but also holistic societal well-being at all levels, where the health of Earth and the flourishing of human communities are intertwined.

This book calls for recharging nature with meaning, re-enchanting it through a multiplex perspective that involves both science and semiotics. Semiotics provides a framework for understanding nature not just as a network of causal relations but as a meaningful book authored by God. Each element of the natural world is both a sign pointing towards its Creator and a resource that fulfills specific roles in the ecosystem.

In the chapters that follow, we will delve deeper into this transformative vision. We will critically explore the existing conceptual foundations of our relationship with nature, examine the scientific and semiotic approaches to nature, and outline practical steps toward a new environmental ethics grounded in faith and responsibility. We aim to inspire

a renewed commitment to stewardship that honors both the seen and unseen dimensions of the natural world. With this foundation in mind, we now turn to the conceptual exploration of nature in the first chapter.

فَخَرَاجُ رَبِّكَ خَيْرٌ وَهُوَ خَيْرُ الرَّازِقِينَ

"The provision of your Lord is better, and He is the best of providers."

(The Qur'an 23:72)

CHAPTER ONE

What is Nature?

Listen without ears to what is spoken without tongues.
(Proverb)

In the bustling streets of New York, I once met a saintly old man whose age exceeded 100 years. Each day, he walked the city, immersed in his daily *dhikr* (litany). Curious, I asked him why he didn't do the *dhikr* at home. He replied: "*I want to increase my witnesses before God as every tree and stone that sees me will testify for me in the Hereafter*." I had always understood that every creature is a witness to its Creator, but it never occurred to me that they are also witnesses to our actions. This brief conversation forever changed the way I perceive nature and reconfigured my attitude toward it.

A story about a student and his teacher echoes this view. One day, the teacher instructed his disciples to bring him a flower. When they returned, his room was filled with colorful blooms, except for a student, who came back empty-handed. When the teacher asked why, the student replied with reverence: "Every flower I reached out was glorifying Allah. I could not bring myself to silence their praise by picking

them." In such anecdotes, we find a perspective that challenges our conventional understanding of nature and compels us to rethink what nature is and how we relate to it.

What is Nature?

What is nature? Is it merely a collection of objects to be studied, resources to be exploited, or scenery to be admired? Or is it something more? What is our relationship with nature, and how do our perceptions of both nature and ourselves influence that relationship? These are some of the questions that we will address in this chapter. It argues that nature is more than its physical aspect, much like a rose which is more than its botanical composition. Nature is alive; nature speaks with its own language; nature is a book; nature is our mother; nature is our teacher; nature is a school with a hidden curriculum. Nature as a whole is a Sign, pointing to a reality beyond and above itself. Nature is a manifestation of the all-hidden Creator, His eloquent speech in silence. This spiritual significance does not exclude the fact that nature is a network of causal relations to be discovered by scientific inquiry, and every natural object has some kind of function to serve.

It is within this interplay of meaning and functionality that the ethical dimension of our engagement with nature emerges. Understanding nature as both a sign and a system of relations compels us to consider how we interact with

it—not just scientifically, but morally. Our engagement with nature is fundamentally an ethical issue, not just a matter of natural scientific inquiry. While zoology can provide insights into the biological characteristics of animals, it cannot dictate how we should treat them morally. Similarly, botany may explain the physiology of plants, but it cannot prescribe the ethical principles that should govern our engagement with the natural world.

This distinction demonstrates the necessity of developing robust ethical frameworks that guide our interactions with nature. Such frameworks must address issues of responsibility, stewardship, and the moral implications of our actions. They should ensure that our treatment of the natural world is not solely informed by scientific knowledge but also aligned with principles of justice, care, and sustainability. Without this ethical foundation, our interactions with nature risk being guided by exploitation rather than stewardship.

Reclaiming nature's meaning again—meaning that reductionist scientific perspectives have stripped away—is essential for addressing the ethical and environmental challenges that we face today. Given the deteriorating condition of our planet, a caravan in the sky in which we were placed to travel, this action is not only a necessity out what Hans Jonas (1984) calls "responsible fear"—a type of fear that compels individuals to act to prevent environmental catastrophe—but also a moral imperative. Such an effort is

both timely and crucial, especially today as our world teeters on the brink of environmental collapse, largely due to narrow, reductionist and *uniplex* understandings of the human self, nature, and their interrelationship.

To reclaim this meaning, however, we must begin by knowing ourselves. Our self-perception—how we define who we are, our place in the cosmos, and our role on Earth—profoundly influences our view of nature and our relationship with it. Our engagement with the natural world rests upon three fundamental elements: the individual, nature itself, and the relationship between them. This chapter seeks to redefine these three elements through a *multiplex* lens that goes beyond reductionist perspectives and embraces a holistic understanding of our place within the web of life.

Who Are We?

The way we understand our identity as human beings has a significant impact on how we relate to the natural world. Modern disciplines such as natural sciences, social sciences, and humanities often "contextualize the human being within the material environment of the biosphere," albeit with divergent interpretations (Sullivan, 2014, p. 83). These frameworks tend to reduce human existence to its physical presence on Earth, depriving it of any meaning beyond biological survival and economic utility within the material world while neglecting the spiritual and transcendent

dimensions of existence. Within this view, humans are portrayed as ontologically and psychologically disconnected from God and alienated from other levels of existence. Syed Naquib Al-Attas succinctly termed this phenomenon the "terrestrialization of man:"

> In the development of Western science, rationalism and the secularization of nature culminated in the Copernican revolution, which decentralized Earth in the cosmos and, in turn, diminished the perceived significance of humanity. It finally led to man being deprived of cosmic significance; he became terrestrialized and his transcendence was denied him. [...] The disenchantment of nature and the terrestrialization of man have had profound consequences. Nature has been reduced to a mere object of utility, valued only for its functional significance in scientific and technical management. At the same time, man has been stripped of his transcendent nature as spirit, with emphasis placed instead on his humanity, physical being, secular knowledge, power, and freedom. This shift has led to his deification and a reliance on his own rational inquiry into his origins and final destiny. The knowledge he acquires now serves as the ultimate criterion for judging the truth or falsehood of his own assertions. (Al-Attas, 1993, pp. 36–38)

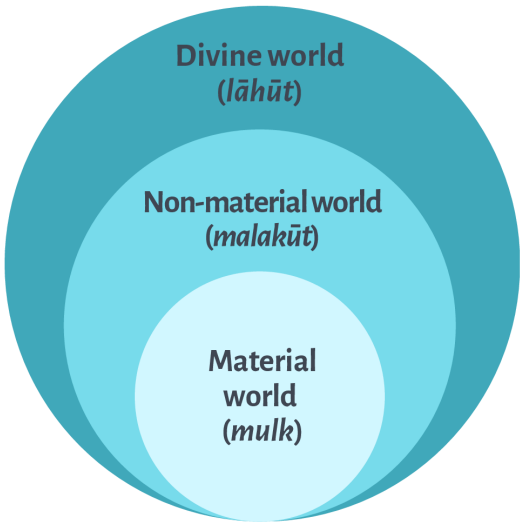


Figure 1. *Multiplex ontology (marātib al-wujūd)*

This terrestrialized view leads to two profound consequences: the reduction of nature to a mere object of utility and the denial of humanity's transcendent nature. As a matter of fact, humans come to see themselves as independent from their Creator and rely solely on their sensory perceptions and reason to guide their existence. This outlook not only limits the scope of knowledge to material concerns but also erodes the sacred connection between humanity, the natural world, and the divine. Severing this connection further disrupts the balance between them and leads to moral disorientation, one manifestation of which is ecological devastation.

In contrast, the Islamic worldview offers a **multiplex view of human beings**. From this perspective, the human

being is an interconnected being, whose existence unfolds on both physical and metaphysical levels. This holistic view emphasizes that human beings are not merely biological entities; they inhabit a broader ontic context that shapes their relationship with God and the universe at large.

As a multiplex ontological entity, the human being is self-reflective and relational, existing within an interconnected reality that encompasses multiple levels of existence. This leads us to the idea of multiple ways of knowing, what we might call **multiplex epistemology**. It recognizes diverse sources of knowledge such as the senses, reason, revelation, and intuition. It affirms that reality is not confined to what can be observed and measured but includes metaphysical dimensions that require other modes of apprehension.

In this holistic framework, knowledge is not fragmented but unified, as all truths originate from the same Creator. There is no contradiction between different sources of knowledge—empirical, rational, or revealed. Nature, the self, and the sacred book, all convey the same fundamental truths, each in its unique language, pointing toward the same divine reality. Thus, our quest for knowledge is harmonious, whether we reflect inwardly on ourselves or outwardly on the universe, as diverse sources of knowledge correspond to different levels of reality yet converge upon a unified truth designed by one God.

This broader onto-epistemological framework, which reveals the interconnections between humanity, the natural world, and

the divine, provides a comprehensive view of our place and role in the universe. Such a perspective has far-reaching implications for how we engage with the environment. In this interconnected reality, human beings, conscious of their createdness, engage in what may be understood as *psycho-epistemic communication* with nature. Just as divine revelation enriches our understanding of existence, this constant interaction with the natural world further reinforces our awareness of our role within a unified reality shaped by divine intention. This perspective emphasizes that humans, rather than being the ultimate end, are integral participants in a vast, interconnected system that spans both the physical and metaphysical realms.

Human identity cannot be fully understood solely through biological or even spiritual levels of human existence. Central to this identity are the universal rights and duties endowed upon every human being by virtue of their creation. As created beings, humans are defined by their purpose of creation, which shapes their identity and place in the cosmos. God, in His wisdom and mercy, created humanity, endowed them with intellect, and granted them the honor of being addressed through divine revelation. This divine communication makes humans moral agents who bear universal rights and responsibilities. These rights and responsibilities are inseparably linked to their relationship with God, the natural world, and their fellow beings.

This relationship positions humans as stewards (*khalīfah*) of the earth, tasked with preserving balance and justice in

creation. By addressing humanity, God entrusts them with the responsibility to act in accordance with divine guidance. This stewardship is an essential feature of human identity that affirms the sacred trust (*amānah*) placed upon them. To fulfill this purpose, humans must consider the spiritual and moral dimensions of their lives alongside their material realities. It is through this lens that human life acquires its full meaning—not as an isolated existence, but as part of a grand, divinely-ordained narrative.

Thus, human beings, endowed with free will, bear accountability and responsibility for their actions. This responsibility requires guidance in knowing what the right thing to do is in all domains of life, including ecological responsibilities. *Fiqh*, the societal science of Islamic civilization, serves as that guiding framework, establishing norms of human conduct to maintain balance, fulfill obligations, and align human life with divine intent—whether in relationships with God, other humans, nature, or the broader world.

Ultimately, our intellectual and spiritual awareness of the divine intent and the meaning of life guides us to see ourselves as stewards rather than masters, with a responsibility to care for the natural world and align our actions with the divine will. This sense of stewardship flows directly from the broader epistemological framework that integrates various ways of knowing, reminding us that our place in the universe is defined not by domination but by service—to creation and the Creator.

What is Nature to Us?

Now that we've explored who we are, it's time to ask: what is nature, and what does it mean to us? Consider the rose. When asked what a rose is, botany answers that it is a plant. This answer is correct, but it is incomplete. A rose is more than just a plant—it carries rich symbolism in cultures worldwide. A rose presented to a beloved symbolizes love, while a child giving a rose to their mother expresses gratitude. In various contexts, a rose becomes a gesture of thanks, an apology, or affection, transcending its physical existence to carry rich symbolism that speaks directly to human emotions and relationships.

But is this all a rose can signify? Our relationship with the natural world extends far beyond cultural or symbolic interpretations. In the Islamic worldview, the meaning of natural objects like a rose is not confined to their material function or symbolic significance in human culture. Beyond these socially constructed meanings, the rose stands as a sign of its Creator —a symbol that is both natural and universal.

Nature possesses a semiotic function and holds layers of meaning, much like the rose. Nature, as a purposeful creation, is like a constantly unfolding book of signs (*āyāt,* plural of *āyah*)—perpetually in states of creation, decay, and recreation—all pointing toward its Creator. It communicates with humanity not only through its physical properties, but

also through its symbolic and spiritual significance, mirroring the divine attributes of the Creator and unveiling glimpses of the unseen and the eternal.

Nevertheless, the spiritual dimension of nature is overlooked in contemporary discourse. The anthropologist Mary Douglas, in her influential book *Natural Symbols: Explorations in Cosmology*, highlights the symbolic role of natural objects within social and cultural frameworks. Yet, her framework misses this metaphysical dimension of the multiplex reality, where natural objects signify their divine origin.

Nature as a Wall or a Window?

In Islamic tradition, there is a profound concept known as *adab al-naẓar*, the etiquette of gazing. The act of gazing is categorized into two distinct types: the "gaze of desire" (*naẓar al-shahwah*) and the "gaze of reflection" (*naẓar al-ʿibrah*). The gaze of desire looks at nature with a desire to own, exploit, and control. In contrast, the gaze of reflection looks at nature with the purpose of learning from it. The gaze of desire looks *at* nature and stops at the surface, while the gaze of reflection looks *through* nature and goes beyond what is immediately visible. To merely look *at* things is to treat them as a wall, obscuring what lies above and beyond. But to look *through* things is to treat them as a window, revealing what exists above and beyond.

The etiquette of gazing teaches us to apply ethics in how we use our eyes, looking at the world not with lust or greed, but with reflection, curiosity, and reverence. Instead of "looking at" nature as an object to be controlled, we should "look through" it as a sign pointing to something far greater. This shift in perception transforms our relationship with the natural world from one of domination to one of respect and stewardship.

Modern consumer culture often encourages us to view the world with a sense of entitlement—what can nature give me? Instead, we should cultivate a sense of curiosity about the deeper meanings embedded in the world around us. When we gaze upon a tree, a river, or a mountain, we are not just seeing material objects; we are witnessing signs of the Divine. Nature becomes a window through which we can see God's creative power rather than a wall that hides Him.

Nature as a Sign

When viewed through the lens of reflection, nature transforms from a collection of physical phenomena into a living text. Each tree, river, and mountain become a verse. In Islam, revelation is not confined to recited scripture but extends to the observed world around us. The extinction of a species, for example, is not just the loss of biological diversity; it is also the extinction of an *āyah*, a divine sign. This is because every animal and every plant are a divine sign. When the species of

an animal or a plant becomes extinct, a divine sign disappears from the Book of Nature. Therefore, if the signs of God are equally important in the book of nature (the observed divine book) and the Book of Revelation (the recited divine book), the extinction of a species in nature may amount to omitting an *āyah* from the Qur'an.

The term *āyah* refers not only to the verses of the Qur'an but also to the signs within creation itself, which are replete with divine meanings (*maʿnā*). The Islamic worldview holds that natural signs—whether they be the rolling of thunder, the falling of rain, or the blossoming of plants—are direct manifestations of Allah's wisdom and power. These phenomena carry meanings fully intended by Allah, revealing His omnipotence and sovereignty over all creation. "The world is not merely a totality of phenomena whose enigma must be removed by means of discovering its laws; rather, it is a totality that is ranked as signs (*āyāt*) that bear subtle and delicate meanings indicative of the existence of a creator who resembles nothing else" (Abdurrahman, as cited in Hallaq, 2019, p. 108).

The notion of signs and meaning further elucidates the human relationship with nature. Signs (*āyāt*) are meant to be interpreted, with meaning being either intended by the Creator or by the human maker. Natural signs—be they phenomena like thunder, rain, or the growth of plants—carry divine meanings intended by Allah, while human artifacts and actions might carry meanings that are both

intended and unintended. This points to the limitations of human agency in contrast to divine omniscience, reminding us that the ultimate interpretation of nature belongs to Allah, while humans must engage with creation with humility and purpose. In contrast, human beings, as makers, introduce meanings into their products, but these meanings may not always align with divine intent. Human artifacts and actions, while purposeful, can carry both intended and unintended consequences and meanings.

The modern worldview has hollowed out nature, reducing it to a machine devoid of spiritual significance or moral worth. The Newtonian view of nature, rooted in Enlightenment thought, perceives the universe as a closed, mechanical system governed by fixed laws. According to this perspective, nature is stripped of meaning beyond its functional and material properties. This disconnection has dire consequences, both for the environment and for humanity.

In contrast, the Islamic worldview rejects this mechanistic reductionism. Nature is not merely a collection of objects self-governed by physical laws; it is a living, dynamic, and purposeful creation that is infused with meaning and intent. Every element of nature—be it animate or inanimate—serves a divine purpose, continuously glorifying Allah in ways that may elude human understanding.

The Islamic worldview sees nature as more than just a creation; it is also a book, a reflection of divine wisdom

to be read (*iqra*) with curiosity, and a mirror of Allah's attributes (*mirʾāt ilāhī*). These signs are layered with meanings that extend beyond mere material existence, pointing toward higher truths about Allah's attributes—His wisdom, mercy, power, and creativity. In this sense, nature is both a symbol and a reality that transcends materialism, resisting the reductionist interpretations often found in the mechanistic, Newtonian worldview. Nature, in this sense, serves as a *maẓhar ilāhī* (the locus of the manifestation of Allah's divine presence, actions, and attributes), revealing the truth to those who contemplate it. At the same time, it is an *amānah* placed in human hands. Humanity's role as stewards demands both respect and ethical responsibility toward the environment, aligning human actions with divine intention. In *Surah Al-Baqarah* (2:30), when Allah informed the angels of His decision to create humans, He referred to them as His vicegerents on earth. Humans are thus entrusted with the responsibility (*amānah*) to care for and cultivate the natural world, serving as a cause and maker within the limits ordained by Allah, who is the ultimate Prime Cause. While Allah is the Creator, humans, as secondary agents ordained by God, shape and regulate the material world within the framework of their divinely assigned stewardship.

Central to understanding this message is the recognition of Allah as the ultimate Creator and Prime Cause (*Al-Khāliq* and *Al-Sabab Al-Awwal*) of everything in existence. Allah creates from nothing, initiating life, matter, and existence

itself. In contrast, human beings are makers (*ṣāniʿ*) but only in a secondary, contingent sense. While humans manipulate and transform the material world, their actions take place within the bounds of the natural laws established by Allah. This hierarchy of causality is critical: whereas Allah's act of creation is *ex nihilo* (from nothing), humans operate as secondary agents, limited by both the material they work with and the divine framework within which they act.

The qualities of nature offer profound lessons in moral and ethical conduct. Just as the signs within creation reflect divine attributes, nature itself embodies virtues that we are encouraged to emulate. This connection is beautifully expressed in Rumi's poem, which uses natural elements to illustrate key moral qualities:

Be like a river in generosity and help.
Be like the sun in compassion and mercy.
Be like the night in covering others' faults.
Be like the dead in anger and ferocity.
Be like the earth in humility and modesty.
Be like the sea in tolerance.
Either be as you appear or appear as you are.

Nature, for Rumi (d. 1273), is a school for those who examine it with the gaze of reflection. There are things for us to learn from nature. Just as a river continually flows and nourishes all it encounters, embodying endless generosity,

we should strive to give and support others selflessly. The sun provides light and warmth to all without discrimination. Similarly, we should show compassion and mercy to everyone, brightening their lives with kindness. The night conceals imperfections and offers privacy. We should learn to protect the dignity of others by covering their faults and shortcomings. As death ends life's conflicts and passions, we should control our anger and maintain calm, avoiding fierceness and aggression. The earth remains steadfast and nurturing, supporting all forms of life while remaining humble under the feet. We should embody humility and modesty in our actions and demeanor. The sea accepts all that enters it, embracing diversity. We should similarly practice tolerance and understanding towards different perspectives and experiences.

In the study of signs, we recognize that meanings are multiplex rather than uniplex. This multiplexity reflects the diverse layers of meaning that can be assigned to natural signs, whether they are intended by a creator or constructed by human interpretation. A sign can function as a symbol, an icon, or an index, each providing different modes of representation and understanding.

In examining the nature of signs and their meanings, it is crucial to understand that the meanings to which the signs refer are encapsulated within *wujūd dhihnī* (mental existence). This concept underscores that meanings are not merely abstract or physical entities but exist within the realm of mental and cognitive processes. Every sign functions as an *ism* (name),

serving as a linguistic or symbolic representation that connects the external world with internal mental concepts. Signs act as bridges between perceptual experiences and conceptual understanding.

Nature as a Book

Another striking metaphor for understanding nature is the idea of it as a **book**—a source of divine wisdom and revelation that invites us to read and interpret its signs. This metaphor has long historical roots, dating back to ancient Greek philosophy, Christianity, and Islamic thought. The concept of the *Book of Nature* suggests that nature, much like a sacred text, is imbued with meaning that offers insights not only into the physical world but also into metaphysical truths. It serves as a medium through which the Creator communicates with humanity, revealing His wisdom, power, and unity.

This metaphor has evolved over time, finding expression in various traditions. In the Christian worldview, for instance, the *Book of Nature* was seen as a companion to the Bible, working in tandem to illuminate divine truths. Just as a companion guide complements a textbook that offers appendices and extra resources that all drill home the same concepts, the *Book of Nature* was understood as a parallel source of divine signs that enriched and deepened the understanding of revelation. In other words, nature is not merely the physical environment but also the metaphysical reality that exists alongside humankind.

Regrettably, the decoupling of the two books (divine revelation and nature) has contributed to an environmental crisis of an unprecedented magnitude. This shift, originating in Western thought, was later imposed on and adopted by other cultures, further exacerbating the global disconnect between humanity and the natural world. I will now briefly outline how nature transitioned from a divine symbol that was interpreted within a theological framework for much of human history, to a cipher waiting to be decoded using mathematical laws. Beginning with Ancient Greece, I will trace this trajectory through the Medieval Christian era and the Scientific Revolution, concluding with Pope Francis' 2015 encyclical, *Laudato Sì*.

Ancient Greek and Roman polytheistic traditions are filled with symbolism as evidenced by their focus on biocentric and ecocentric approaches, where moral rights were accorded to all natural entities, including nonhuman animals and various ecosystems. While the concept of nature as a "book" doesn't find its expression in their texts, Plato's and Aristotle's philosophical traditions were central in making humans part of an interconnected whole with the natural world. In Ancient Greek philosophy, we can witness the symbolism in their assignment of divine status to natural phenomena, such as clouds or thunder, and attribution of specific animals, and even entire geographic regions to deities. Plato's theory of Forms meant that the world, including all its entities, was dependent on the Forms, an ideal world beyond the

senses—an unchanging entity. This dependence meant that nature "participated" in the realm of Forms and hence, shared a soul with Forms, demonstrating an interconnectedness of the cosmos and all that it contains. In other words, for Plato, the world is one unitary being—a connected whole. While humans share in it, it carries an intrinsic value independent of what humans assign to it. Later Neoplatonists, like Plotinus, proposed that the sharing of souls implied a shared connection to intellect and reason, which, as the source of consciousness, was not exclusive to humans but extended to all entities. Plotinus argued that all entities possess a share in the divine intellect to varying degrees, suggesting a universal consciousness present throughout nature. This belief reflects his view of an interconnected cosmos where even non-human entities share in reason and consciousness (Plotinus, *The Enneads*, 1917). Saint Francis of Assisi (d. 1226) exemplified this philosophy in his sermon to birds (Fioretti di San Francesco, *The Little Flowers of St. Francis*, 1905). In fact, Neoplatonists even practiced theurgy, which, in a way, involved the worship of nature to make contact with divine entities premised on the belief that they permeated everything. Platonist philosophers, in other words, provided a framework wherein all beings were ontologically connected with each other as well as the divine.

The Medieval era carried forward the Greek tradition of giving primacy to nature, which was apparent in the way life was lived. For instance, even encyclopedia entries

were organized based on their ontological importance, reflecting the awe and wonder medieval writers ascribed to nature. Beginning with the most perfect and transcendent entity, namely, God, it traveled down the Great Chain of Being through angels, humans, animals, plants and finally, minerals, as opposed to the current alphabetized system that we employ. In fact, because of mankind's situatedness within nature, medieval writers personified nature, attributing human qualities to it, to better understand its role and relationship with humans, as well as to understand how nature governed mankind as an active entity. This medieval personification of nature was associated with the 12th-century cathedral school at Chartres, which inspired by Neoplatonic traditions, actively sought to explain how knowledge present in nature and that of the Bible worked in tandem.

However, conflicts began to arise in the 13th century with the translation of Aristotle's works. Theologians and natural philosophers had preferred Platonic philosophy because it emphasized the role of God in nature., In contrast, Aristotelian philosophy emphasized a deterministic element inherent within each natural entity that guided its growth, thereby diminishing the direct role of divine creative powers to some extent. It was at this point that the mystical reading of nature became detached from the scriptural and theological frameworks that had previously scaffolded it. Following these developments, Bishop of Paris condemned the heretical propositions of Aristotelianism, leading theologians and natural philosophers to a compromise:

they accepted that nature's secrets could be discovered without necessarily challenging God's creative powers.

Another crucial figure of the Medieval era is the aforementioned 13th-century saint Francis of Assisi, often associated with nature, specifically animals. Francis was known to be not only a preacher to humans but also to birds, for he reminded them of their obligation to praise the Creator, who clothed them in feathers and gave them food. He spoke to them as if they could reason. Francis saw himself as a brother to the whole cosmos, not superior to it. Every Christmas, he exhorted fellow citizens to scatter grains along the roads so birds, too, could join humans in the celebrations. Near the end of his life, he composed the now-famous poem *The Canticle of the Creatures*, inviting all of creation—animals, plants, the sun, and the moon—to praise their Creator. In the poem, he referred to all of creation as his siblings—sister Earth, brother Sun, and so on—reinforcing his view of the cosmos as one big family called Creation. It is no surprise, then, that in 1979, Francis was declared the Patron Saint of Ecologists, given his close connection to nature and his sense of belonging to it. However, it would be wrong to assume that Francis was merely concerned for creation as an environmentalist on a material level, rather, his love and concern for the natural world stemmed from his profound love for the One who created it.

The Medieval understanding of nature metamorphosed into something more perilous by the time we reached

early modernity. The 17th-century Scientific Revolution, spearheaded by Francis Bacon, ushered in a new understanding of nature across all domains of knowledge. This shift opened the door for nature to be exploited by mankind, stripping it of the meaning that had previously made it an active force. Eventually, this led to the mechanization of nature, followed by the rise of experimental philosophy. These two forces gave birth to a reductionist, uniplex approach, breaking nature down to its smallest particle, with no underlying ontological reality threading through the entire cosmos. The mechanization of nature meant that it was to be seen as a machine with cogs, with its movement driven by a combinatory movement of minute particles. It did not take long before this perception of nature led to a full-blown scientific revolution where nature was primarily interacted with experimentally. In this context, an experiment came to mean manipulating nature with external human-designed tools to uncover its underlying mechanics.

The Book of Nature, once interpreted symbolically and allegorically through contemplation and framed within a rigorous theological framework, was now waiting to be 'worked out' through a set of underlying mechanical laws organized in an orderly fashion. Nature had, at last, become an experimental project, a scientific plaything subjugated to human intervention, to be fully understood and thus controlled.

Reeling from the aftereffects of this scientific revolution, which has led to one environmental crisis after another, there

have been many calls to change our approach towards nature. However, we are coming to realize that this is not merely an environmental problem but a multiplex crisis —spiritual, ethical, social and ecological all at once. This change in perspective in evident in Pope Francis' 2015 encyclical *Laudato Sì* (literally: "Praise be to You," an invocation borrowed from *The Canticle* of Francis of Assisi), which serves as the Church's official plea to address this crisis. In it, he calls for humans to join hands to save our common home, mother and sister Earth. He invites the reader to contemplate the world as a magnificent book through which God speaks to us, rather than an environmental problem waiting to be solved.

This brief historical review of the concept of the Book of Nature in Western civilization clearly demonstrates the significance of nature in contemplating divine signs and understanding divine revelation. I am personally pleased to see that the Pope has been making efforts to revive the traditional concept of nature as a meaningful book pointing toward its Creature. This perspective is in line with the Islamic view that nature is a book of nonverbal signs of God.

From an Islamic perspective, nature and the Qur'an are considered to be the two complementary divine books of signs. They complement each other in the sense that neither can be understood without the other. Furthermore, each one directs the reader's attention to the other. The Qur'an is full of verses about nature, animals, plants, mountains and

natural events. Thus, the Qur'an is not a self-contained book drawing the reader inward; on the contrary, it directs the reader's gaze outward, toward the world as a manifestation of the endless glory of the divine power, knowledge, love, compassion and generosity.

Nature Has Life and Consciousness

From the multiplex significance of nature, an essential question arises: Is nature sentient? Do the entities within it possess awareness and emotions? Such questions have sparked extensive debate in modern scholarship. The Qur'anic perspective, however, challenges conventional assumptions by attributing agency, speech, emotions, and even memory to elements of the natural world. The Qur'an ascribes life and consciousness to all elements of creation, declaring that they glorify their Creator in ways beyond human perception. Allah states, *"There is not a thing but that it glorifies His praise, but you do not understand their glorification"* (Qur'an 17:44) and *"Whatever is in the heavens and the earth glorifies Allah"* (Qur'an 57:1).

Muslim scholars interpret these verses not as metaphorical, but as affirmations of a literal reality—one in which every entity, whether animate or inanimate, actively participates in the universal act of worship and glorification. Based on logical deduction from such verses, they conclude that acts of glorification (*tasbīḥ*) inherently require life and consciousness.

Scholars like ʿAbd al-Wahhāb al-Shaʿrānī (d. 1565) highlighted the Qur'anic verse, "*And He inspired in each heaven its command*" (Qur'an 41:12), as evidence that all beings have roles and purposes beyond human comprehension (al-Shaʿrānī, 2016, Vol. 2, p. 176). They emphasize that while humans may not perceive the glorification of inanimate objects or plants, this glorification is a real and conscious act. For example, when the Qur'an mentions the heavens and earth responding to Allah's call by saying, "*We come willingly*" (Qur'an 41:11), it affirms their consciousness and active participation in fulfilling divine commands.

Al-Amīr ʿAbd al-Qādir al-Jazāʾirī (d. 1883) offers a particularly compelling interpretation of the verse "*There is not a thing but that it glorifies His praise, but you do not understand their glorification*." He draws attention to the linguistic significance of the term *shayʾ* (thing) that comes in the verse and describes it as the most indefinite of all indefinite nouns, thereby encompassing all of creation without exception. According to him, every being who engages in glorification must possess both knowledge and the ability to articulate. Building on this premise, he provides an analysis based on the concept of the levels of existence (*marātib al-wujūd*), stating:

> Everything that is referred to as "existent" in any rank of existence—whether it be external concrete existence, mental or imaginary existence, verbal existence, or written existence, encompassing all tangible and abstract entities—is characterized by attributes such as life, knowledge, power, will, hearing, sight, speech, and others. This is because these attributes and states are inherently tied to the reality of existence (al-Jazāʾirī, 1911, p. 120; al-Rāzī, 1987, Vol. 7, pp. 335–336).

From this perspective, even entities perceived as inanimate or lifeless possess a form of consciousness that enables them to glorify Allah. Scholars have constructed logical reasoning to support this understanding. For instance, they propose a syllogism based on the Qur'anic verse (17:44):

Premise 1

Everything in the universe glorifies and praises Allah.

Premise 2

Glorification and praise require life and consciousness.

Conclusion

Therefore, everything in the universe is alive and conscious in some form.

This reasoning substantiates the idea that existence as a whole is endowed with the qualities of life and consciousness, reflecting the divine attributes imprinted upon all creation. The perception of inanimate objects as "lifeless" is, through this lens, a limitation of human understanding rather than an ontological truth.

This view is supported by cosmological perspectives that describe the sun and planets as conscious entities with

divine stewardship over the natural world. Such hierarchical structures of existence illustrate the interconnectedness and unity of creation, where every being—whether celestial or terrestrial—is a manifestation of divine wisdom and fulfills its ordained function.

Nature Has Agency

Can a rock remember? Can a tree cry? Is nature capable of action? The Qur'an presents a fascinating vision of the natural world that challenges the conventional assumption of materialism that agency is an exclusive attribute of sentient beings. From the Qur'anic perspective, all that exists has agency (*fāʿiliyyah*), a capacity to act. It is mentioned that everything on Earth and in the Heavens praises God with gratitude. Rocks, trees, stars, thunder, mountains, and even the skies and the Earth are described as having the ability to act, communicate, speak, witness, and remember.

For example, the verse *"That Day, it will report its news"* (Qur'an 99:4) portrays the Earth as a witness on the Day of Judgment, testifying to human actions. Another verse vividly illustrates this agency: *"Do you not see that to Allah prostrates whoever is in the heavens and whoever is on the earth—the sun, the moon, the stars, the mountains, the trees, the moving creatures, and many of the people?"* (Qur'an 22:18). In fact, not only do humans and non-human objects prostrate before Allah, but even their shadows engage in this act of submission as stated: "*And to Allah prostrates whoever is within the heavens and the earth, willingly or by compulsion, and their*

shadows [as well], in the mornings and the afternoons." (Qur'an 13:15). Shadows are described as participating in the cosmic order of worship. This suggests that everything in creation, down to the most ephemeral aspects like shadows, is involved in glorifying and submitting to Allah's will.

In addition to the verses of the Qur'an that acknowledge nature's agency, there are also numerous sayings of the Prophet Muhammad ﷺ that further emphasize this reality. One well-known incident involves a tree stump that cried for the Prophet Muhammad ﷺ (al-Nawawī, 1998, p. 507). The Prophet ﷺ used to deliver his Friday sermon while standing beside a tree trunk. When the companions constructed a pulpit for him, he began using it instead, leaving the tree trunk behind. Upon its separation from the Prophet ﷺ, the trunk began to cry like a camel until the Prophet ﷺ descended from the pulpit, placed his hand on the trunk, and consoled it. This incident, witnessed by many companions, shows that even inanimate objects, like the tree, can have a form of awareness and express emotions in response to the absence of the Prophet ﷺ.

Thus, according to the perspective we derive from the Qur'an and the hadith literature, material objects have agency, emotions, memory, and a language for communication. We conclude from these verses and sayings of the Prophet ﷺ that:

1. There is constant communication between God and all His creatures.
2. Entities in nature have the knowledge of God.

3. Entities in nature have a language through which they communicate their praise and gratitude to God.
4. Entities in nature have memory.
5. Entities in nature have emotions, such as love and sorrow.
6. All these qualities demonstrate that entities in nature exhibit signs of life.
7. Nature is sentient.

Jakob von Uexküll's biosemiotics perspective further enriches our understanding of how all organisms interact with their environments as active agents. He introduces the concept of the "self-world" and the "perceptual world" to explain how organisms interact with their environments. According to Uexküll, each living organism exists within a "self-world"—a subjective realm shaped by its own sensory experiences and internal states. This self-world is inherently personal and unique to each organism, reflecting how it perceives and processes sensory data. The "perceptual world," on the other hand, represents the external environment as it is experienced through the organism's senses. It is a landscape of sensory stimuli that the organism interprets as signs. Uexküll posits that all living organisms perceive and react to sensory data as signs. These signs are not merely passive inputs but active elements that influence behavior and interactions with the environment (von Uexküll, 1957, pp. 5–13).

In this framework, signs serve as the fundamental means by which organisms engage with their perceptual worlds.

Each organism's response to these signs is shaped by its own self-world, resulting in a unique interaction pattern that reflects its internal state and sensory capabilities. For example, a bee's perception of flowers is not just a passive observation but an active interpretation of colors and scents as signs of nectar sources.

Nature as a Mother

Nature, alive, conscious, and active, is a nurturing force akin to a mother, rather than a resource to be dominated or exploited for selfish ends. This perspective contrasts with materialist worldviews that reduce nature to an object of utility, valued primarily for its economic and practical benefits. Such reductive approaches overlook nature's intrinsic value beyond its functional aspect. Seeing nature as a mother offers a transformative lens through which an ethical and spiritual connection as well as a reciprocal and caring relationship emerges.

The metaphor of nature as a mother is beautifully captured in the hadith: "Safeguard the earth, for it is your mother who will report (to God) the good or evil anyone does on it" (al-Suyūṭī, 2014, p. 199). This analogy not only highlights the sacred bond between humanity and the Earth but also stresses our moral responsibility to protect and preserve it. Like a mother, the Earth nurtures and sustains life, yet it also bears witness to human actions, reminding us of the accountability tied to our stewardship.

The idea of nature as a mother invites us to reconsider our approach to the natural world. A mother's care is not transactional; it is unconditional, driven by love and a sense of responsibility. Similarly, our relationship with nature should not be exploitative or based solely on what we can extract. Instead, it should reflect a sense of gratitude, reverence, and a commitment to protect and nurture the environment, just as it nurtures us.

This perspective also challenges the anthropocentric mindset that positions humanity as the ultimate master of nature. By seeing the Earth as a living entity with its own rights and inherent value, we are called to act as stewards, entrusted with the care of creation. Just as a child has a duty to honor and care for their mother, humanity has a moral obligation to protect and preserve the Earth. This responsibility extends to ensuring that natural resources are used wisely, ecosystems are protected, and future generations inherit a world capable of sustaining life. Stewardship requires more than sustainable practices; it demands an attitude of humility and a recognition of the interconnectedness of all life forms.

This perspective calls for a fundamental shift in how we relate to the environment. It urges us to move from exploitation to reverence, and to treat the Earth as a living trust that demands care, respect, and gratitude—not only for our benefit but for the benefit of all creation and as an act of devotion to the Creator.

Nature as a Trust

In the Islamic tradition, the concept of *amānah* (trust) highlights the idea that the natural world has been entrusted to us. We are caretakers, not owners, of the Earth, and we will be held accountable for how we treat it. The concept of trust implicitly includes accountability in front of the Creator in the Hereafter. From this perspective, nature holds rights that are entrusted to us. Animals whose rights are violated in this world will be resurrected in the Hereafter to seek justice on the Day of Judgment. One of the greatest sins in Islam is to torture animals or be a cause of their death. Therefore, hunting for entertainment or sport is considered unlawful (*ḥarām*). The same applies to cutting trees for no reason. There are detailed rules about how a Muslim should interact with nature, including detailed rules for using water, animals, and plants in *fiqh* and the Sunnah of Prophet Muhammad ﷺ.

Reclaiming Nature's Meaning

Our current environmental crises are not only physical or economic but stem from a deeper moral and spiritual disconnection. In reducing nature to a resource for exploitation, humanity has not only endangered the environment but also lost sight of its deeper truths. This disconnection has left us with a world stripped of its sacredness, and a human experience that feels increasingly alienated from the very creation we are a part of. Yet, as explored in this chapter,

nature is far more than a collection of physical objects or a means to satisfy material needs. It is a profound system of signs, rich with spiritual significance, purpose, and meaning, inviting us to recognize and engage with the divine.

This deeper understanding of nature is not new. Throughout history, many civilizations have perceived nature as a book, a sign, and a trust. In this light, nature is not just something we observe—it is something we engage with ethically and spiritually. It is a trust that has been given to us by Allah, and as stewards, we are called to protect and nurture it. This responsibility extends beyond conservation or sustainability; it requires us to reframe how we see the world around us. Nature is a book—a divine text written in the language of signs. It invites us to look not just at it, but through it, to the One who created it.

Through the multiplex perspective presented in this chapter, a perspective that integrates its utilitarian, semiotic, and spiritual dimensions, we can begin to heal not only the environmental crises around us but also the spiritual disconnection within us. Addressing environmental crises requires more than technical solutions; it demands a reframing of our understanding of nature, seeing it not as a mere resource but as a sacred entity with which we share a relationship built on respect and care.

Reclaiming nature's meaning begins with reclaiming our role within it. We are not outsiders to nature, nor are we

its masters. Instead, we are stewards, entrusted to nurture and protect it. This stewardship requires a fundamental reorientation of how we view the world. This is a call to listen more carefully, to see more clearly, and to live more meaningfully within the ecosystem of existence.

Ya Wadud (يا ودود) – *The Most Loving*

CHAPTER TWO

A Multiplex Approach to Nature
Coupling Science and Semiotics

"His command, when He wills a thing, is simply to say to it, "Be!" and it is!"
—Qur'an 36:82

The world is built with two letters: "kāf" and "nūn".
—Chief Architect Sinan (d. 1588), *Tadhkirat al-Bunyān*

Our present approach to nature presents a false dilemma: utility versus meaning. The conventional scientific perspective views nature as a resource for human utility devoid of any deeper significance. In contrast, the semiotic perspective sees nature as a system of signs pointing to the Creator. This project, briefly outlined here, aims to transcend this dichotomy by adopting a multiplex approach.

Can the efforts to discover causal relationships in nature be combined with the search for its meaning, or are these two pursuits fundamentally at odds? While some affirm their compatibility, others insist that only the exploration of causal relations can provide a legitimate understanding of nature. Positivism, which dominates much of contemporary

academia, maintains that nature lacks inherent meaning and that any attempt to ascribe significance to it constitutes heresy in science. I challenge this view and argue instead that uncovering causal mechanisms and deciphering the meaning inherent in nature are not opposing endeavors but complementary ones. After all, the very distinction between "nature" and "creation" is, at its core, fluid—despite their differing connotations in scholarly discourse, they ultimately overlap in essence. The main argument of this chapter is that nature must be redefined by integrating the scientific view with a semiotic perspective, thereby establishing a robust philosophical foundation for a new environmental ethic. While the scientific view of nature focuses on causal relationships, it must be complemented by a semiotic perspective that highlights its symbolic and relational dimensions. These approaches are not, as some claim, mutually exclusive. Instead, they complement and enrich each other—which is one of the central arguments of this book.

I will use the works of Ibrahim Hakki (d. 1780), Said Nursi (d. 1960), Taha Abdurrahman, Dalai Lama, and Pope Francis to demonstrate that causal and interpretive study of nature should be carried out together. Their works reflect the clash between the positivist and the traditional view of nature and science. It would be misleading to view them as opponents of empirical approaches or science itself. Rather, they opposed the positivist explanation and the reductionist interpretation of nature.

Since then, the positivist view has dominated scientific culture and academia, leading to the rejection of the traditional view of nature as a meaningful book. As a result, the relationship between humankind and the natural world has shifted from one of stewardship to one defined by the desire to subjugate and exploit nature. The outcome has been catastrophic, with mankind now facing environmental crises.

Humankind must now restructure its relationship with nature, returning to the role of stewardship. This requires a reconfiguration of both our view of science and our understanding of nature. This book argues that in order to establish new environmental ethics, we must re-infuse nature with meaning, fostering a meaningful relationship with the natural world. Hakki and Nursi are key figures in this context, demonstrating how this can be achieved without compromising rigorous scientific inquiry for causal explanations of natural phenomena.

What is a Rose?

What is a rose? A purely scientific definition classifies it botanically, detailing its species, structure, and biological processes. Yet, this description fails to capture its symbolic significance. Across cultures, the rose represents beauty and love; it is the undisputed queen of flowers, celebrated in poetry, art, and spiritual traditions. Its visual appeal and fragrance evoke emotions that transcend a biological

explanation. Hakki (year) articulates this sentiment, likening humanity to the scent of a rose garden called the universe. This metaphor raises an essential question: What does it mean to be human?

Just as a botanical definition of a rose omits its symbolic essence, a strictly scientific explanation of humanity risks overlooking its deeper existential dimensions. Charles Sanders Peirce, a logician who redefined human thought through semiotics, argued that meaning arises not from objects themselves but from their interpretation. He wrote: "A sign is an object which stands for another to some mind" (Hoopes, 1991, p. 141). Peirce's perspective suggests that symbols, including the rose, derive their significance through the human capacity to interpret and assign meaning. His concept of the "demonstrative application" of objects underscores that nothing possesses inherent meaning unless it is mediated by the mind. Even sensory experiences—such as the sight of a red or blue hue—are not mere physical stimuli but part of a cognitive process where perception transforms sensation into understanding (Hoopes, 1991, p. 143).

By this logic, our perception of a rose is not limited to its biological attributes but extends to the meanings we ascribe to it. Similarly, defining humanity requires more than scientific classification; it demands an exploration of the deeper, symbolic, and existential aspects that shape our self-understanding.

This raises a broader question: Do ordinary humans perceive things differently than objective scientists? If so, why is this the case? How did a gap emerge between the ordinary and scientific views of things? More specifically, how did modern science strip nature of its symbolic meaning? This shift is a relatively recent development in human history, and one that has occurred as scientific methodologies gradually replaced traditional ways of understanding nature.

Ibrahim Hakki, a well-known Muslim poet and philosopher, wrote numerous works on a variety of subjects, including *Divān*, *Mârifetnâme*, *Irfāniyyah: Majmuʿat al-irfāniyyah fi Maʿrifat al-Nafs al-Rabbāniyyah*, *Insāniyyah: Majmuʿat al-insāniyyah fi Maʿrifat al-Wahdāniyyah*, and others (Çağrıcı, 2000). Hakki dedicated his magnum opus, *Mârifetnâme*, to persuade his readers that the world is a text, symbolically authored by God, and addressed exclusively to humanity. What motivated Hakki to undertake such a task at this particular time? It is plausible that his endeavor was prompted by the arrival of modern scientific perspectives in the Ottoman world. After the first encounter with modern science, Hakki sought to defend and revitalize the traditional Islamic semiotics of nature. He argued that the traditional view of nature as a divine text was not mutually exclusive with scientific inquiry, as each perspective operates at a different level of existence. Hakki advocated for interpreting nature as a book through the comprehensive theory of "indication" (*dalālah*), asserting that such an interpretation

would not contradict the scientific analysis of nature. He further maintained that competing scientific paradigms should not be judged through a religious lens but rather evaluated on their own merit (Çağrıcı, 2000; Hakki, 1911–12).

Before engaging with Hakki's arguments to support this view, one must first ask how he defined a 'text.' Unless one is familiar with the concept of text that Hakki shared with his readers in the Islamic cultural milieu during his lifetime, one will not be able to make full sense of his concept of nature. Yet he makes no effort to explain his understanding of 'text' since he assumes that it is already familiar to his audience. Given the historical distance from his time, we must make an extra effort to understand the concept of text as it was perceived by the Ottoman public of his time.

Therefore, first, a brief comparison between semiotics in the West and Islam will be given to clarify how 'text', 'reading' and 'meaning' are understood in the *Mârifetnâme*. I will then present the multiplex structure of the world and, in accordance with it, the multiplex structure of sciences from Hakki's perspective. Given the limited space, I will provide a broad overview and acknowledge that many important details will remain unaddressed in this discussion.

Semiotics: Science of Signification

Semiotics is, briefly put, the study of signs. A global community of scholars have contributed to this field. I was

inspired, in particular, by the works of Charles Sanders Peirce, Ferdinand de Saussure (d. 1913), Mikhail Bakhtin (d. 1975), Roland Barthes (d. 1980), Umberto Eco (d. 2016), and Michael Silverstein (d. 2020). Their focus is on man-made signs and symbols that we use in our explicit or implicit communication, verbal or otherwise.

A sign or a cultural symbol is an object used to convey a meaning without speech. When shared meaning is assigned to an object through consensus in a culture or society, it turns into a sign or symbol. Every culture and society has its own signs and symbols which are commonly read and understood by its members. Peirce refers to these as "hard words."

Anthropologists usually study the symbols of different cultures. They emphasize that a "thick description" is needed to be able to truly understand a culture by deciphering its symbols. Clifford Geertz (d. 2006) is one of the pioneering figures in employing the method of thick description, which poses a great challenge for an outsider attempting to understand a culture Mary Douglas, in her book *Natural Symbols*, questioned whether any symbols are universally shared by all cultures and societies. She reached the conclusion that there are no natural symbols. It may be true that there are no man-made symbols that are globally shared, but nature itself is a symbol. This is the argument of the semiotics of nature.

I expand the semiotic perspective beyond man-made signs to include all objects in nature. I argue that every object stands

for its maker. In other words, every object is a natural sign universally accepted as evidence of its maker. This is true for every man-made object, and there is no debate about it. Even if the maker does not intend it, or attempts to conceal it, his work inevitably points back to him.

We may call this the "unintended meaning" of one's work conveyed by the object itself. But the same object may simultaneously carry other "intended" meaning(s). For instance, a traffic light naturally and logically signifies that there is an engineer or factory that produced it. At the same time, as intended by its makers, it conveys specific meanings through its colors.

Natural Semiotics: Everything Stands for Its Maker

Semiotics of nature is the study of the meanings of the existing beings in the world, of which the natural realm of our planet Earth forms only a small part. The foundation of this discipline rests on a fundamental principle: **everything stands for its maker**. This principle applies universally, whether to man-made signs, such as language, symbols, and artifacts, or to natural beings that are not culturally constructed, such as plants, animals, mountains, and celestial bodies. Natural semiotics, a sub-discipline of semiotics, specifically focuses on the latter—examining the meanings embedded in natural entities and phenomena that exist independently of human design. It investigates how these beings and their intricate

systems point to their origin and purpose, offering insights into the interconnectedness of all creation.

There is no dispute that man-made signs signify their makers; this is a fundamental logical truth that cannot be denied. We accept, without requiring further proof, that the existence of any object implies the existence of its maker. However, a curious inconsistency arises when this principle is applied selectively. Atheists who readily acknowledge that man-made objects must have creators often reject the idea of a maker for natural objects or the world as a whole.

This inconsistency underpins the atheistic worldview, leading to a conception of nature devoid of meaning. This perspective, prevalent in positivist scientific circles and much of academia, reduces nature to a mere collection of physical phenomena. While critiquing this inconsistency is vital, it is not the primary focus of this discussion.

I want to highlight that disregarding this principle, that everything stands for its maker, has significant consequences for our relationship with nature. In particular, it separates nature from its Creator, reducing the relationship to a horizontal one. In contrast, acknowledging the Creator transforms this relationship into a three-dimensional one, full of depth and meaning.

This concept can be illustrated through a triangle. At the top of the triangle, the Creator is connected to both humans and objects through vertical relationships, while humans and

objects are interconnected through a horizontal relationship. When the Creator is removed, the third dimension—the vertical connection—is lost, leaving only a two-dimensional horizontal relationship between humans and nature.

Traditionally, the theistic understanding of nature fostered a triadic relationship, where the Creator played a central role in defining the terms of the relationship between humans and nature. In this framework, humans acted as stewards, entrusted with responsibilities and guided by divine principles in their interactions with the natural world. However, the modern atheistic perspective reduces this relationship to a dyadic one: humans versus nature. In the absence of the Creator, the terms of this relationship are no longer divinely determined but are instead left entirely to human discretion. This shift, which occurred during the period of secularization, carries profound ethical and practical consequences, fundamentally altering how we perceive and engage with the natural world. The loss of divine guidance results in exploitation and domination, rather than a balanced and respectful stewardship of nature.

When we apply the foundational principle that everything stands for its maker to nature, we arrive at the conclusion that nature itself stands for the Creator. This perspective transforms all existing beings into signs pointing to their Maker—the Creator, who chooses to bring things into existence and defines the terms of their relationships with one another. It provides a profound answer to the ontological question raised by Heidegger: *Why is there something rather than nothing?*

The answer lies in recognizing the Creator as the ultimate source and sustainer of all that exists, who, out of His infinite grace, chose to bring creation into being.

This foundational principle becomes evident when we infer the existence of an artist from a piece of art. If there is art, there must be an artist; if there is food, there must be a cook; if there is a garden, there must be a gardener. Historically, most philosophers have broadly agreed with this reasoning. This understanding brought with it a triadic relationship with nature, involving humanity, nature, and God. As the Creator of both humanity and nature, God defined the terms of the horizontal relationship between humans and the natural world.

The Qur'anic view aligns with the rational and logical first principle I mentioned earlier, which underpins the triadic relationship. This connection is evident in the Arabic term for "world," *ʿālam*, which also means "sign." The Qur'an opens with the statement, "*All praise belongs to Allah, the Lord of the universes*" (1:1). Here, "universes" is derived from the Arabic word *ʿālamīn*, the plural form of *ʿālam*, the "sign." Consequently, the universe in its entirety can be referred to as the Sign with a capital S. Thus, the first verse can also be rendered as, "All praise belongs to Allah, the Lord of the Signs."

Allah is the Creator and Sustainer of the signs. These signs make worlds and the universe. Thus, the semiotic function of the world(s) serves as a manifestation of the hidden God. By referring to the world as *ʿālam*, the Qur'an draws our attention

to the semiotic function and the meaning of nature. The world, as the non-verbal book of God, complements the verbal book of God, the Qur'an.

This view helps us better understand the first command given by God to the unlettered Prophet Muhammad ﷺ: "*Read*!" At that moment, there was no physical scripture to read, leaving only the book of nature as the object of reflection. The command, however, continued: *"Read in the name of your Lord who created."* The Qur'an thus begins its revelation with an invitation to reflect upon one's own existence: *"Read in the name of your Lord who created. Created humans from a clot. Read, and your Lord is the Most Generous, who taught by the pen, taught man that which he knew not"* (96:1-5). In other words, read the book of nature to observe the generosity of your Lord. One of the greatest signs of divine generosity is the fact that He teaches humans what they don't know.

The unlettered Prophet Muhammad ﷺ atop a barren mountain in the heart of the Arabian desert was commanded to read the book of nature, beginning with the reflection of his own creation and the generous guidance of the Creator in helping people learn about the world. This first divine command is important because it shapes the relationship between humans and nature, establishing its foundational terms.

In the framework of divine communication, a sign is a fundamental element that requires an interpreter. The Creator, Allah, is the ultimate source of all signs, imbuing creation with

symbols and messages that convey divine will. Humans function as interpreters of these divine signs, engaging with and making sense of the natural world and its phenomena. In fact, humans themselves are signs in their own right. By interpreting the non-verbal speech of God embedded in natural signs, humans engage in a continuous process of meaning-making, aligning themselves with divine intent and reflecting on the ethical dimensions of their own existence. Through this interaction, nature becomes not just a creation to be observed, but a teacher of ethical conduct that informs humanity's life on earth.

At the core of this interaction is the sign system, which provides a framework for understanding how meaning is constructed. Pragmatism, a philosophical approach to meaning, asserts that the significance of a concept lies in its practical implications. In this view, beliefs are assessed based on their ability to guide action. What one is willing to act upon reveals the practical essence of their beliefs and the meanings they assign to signs.

How to Interpret Signs

The process through which signs are interpreted by the minds to which they are addressed is called signification in English and *dalālah* in Arabic. The concept of signification emerged quite recently in contrast to *dalālah*, which originated during the first century of *hijrah* (7th century AD). Initially, this theory was applied by jurists to the text of the Qur'an and

hadith, from which they deduced norms, and later extended to nature and human actions. In the *Mârifetnâme*, Hakki also explores the *dalālah* (symbolic indication) of the external nature and the body.

In the West, the theory of the relationship between sign and object can be traced back to the work of Charles Sanders Peirce (d. 1914). William James (d. 1910) revered him as the inventor of the word 'pragmatism.' Peirce defined pragmatism as "a method of ascertaining the meaning of hard words and abstract conceptions" (Gallie, 1952, p. 11). The doctrine of thought signs first originated from his works. He wrote, "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then our conception of these effects is the whole of our conception of the object" (Peirce, as cited in Gallie, 1952, p. 12). Structuralism applied a relational approach to both text and society in the 20th century. It first emerged in the work of linguist Ferdinand de Saussure, who argued that the relationship between the sign and the object is arbitrary (Saussure, 1994, pp. 110–120). This idea later inspired a significant shift in anthropology through the work of Claude Lévi-Strauss (d. 2009), who applied the relational model to the concept of society, marking a revolutionary transition from essentialist views to relational approaches in linguistic, literary, and social theory. Semiotics, as Roland Barthes (1994) demonstrated, took on the task of interpreting social phenomena with the same methods used to interpret texts.

Barthes expanded the view that texts are not just vehicles for meaning but dynamic structures that shape and reflect the social world. In a similar vein, Hayden White (1990) contended in *The Content of the Form* that the form or genre itself carries content. He argued that the performance model of discourse reveals the multilayered nature of communication, demonstrating its ability to yield multiple interpretations. White wrote, "It is this complex multilayeredness of discourse and its consequent capacity to bear a wide variety of interpretations of its meaning that the performance model of discourse seeks to illuminate" (p. 42).

The parallelism between the concept of society and text is evident in the works of Sībawayh (d. 798) and Abū Ḥanīfah (d. 767) during the second century of *hijrah*. Both scholars adopted a relational approach to their respective fields—Sībawayh in language and Abū Ḥanīfah in society. Sībawayh's work laid the foundations of Arabic linguistics, emphasizing the interdependence of language and its social context (Bohas, Guillaume, & Kouloughli, 1990, pp. 31–48; Versteegh, 1997, pp. 36–51). Meanwhile, Abū Ḥanīfah's approach to *fiqh*, the study of Islamic jurisprudence, centered on the rights and duties of individuals within a society, underscoring the relational nature of these concepts. The *fuqahāʾ*, or jurists of Islamic law, later incorporated linguistic study and interpretive analysis into their discipline. However, the primary focus of the *fuqahāʾ* has always been "action" (*ʿamal*), which directly impacts social relations.

Based on these two observations, we can safely conclude that our concept of text is connected to our concept of society, even if we are not aware of it. In Europe, the study of isolated words using philological methods marked the pre-structural period in Linguistics. Similarly, the study of individual action characterized the examination of society during the same period. With the rise of structuralism and systems theory during the 20th century, the pieces began to be understood as parts of a larger system, first in language, and then in society. The great linguist Sībawayh postulated that text must be studied as an interrelated system with multiple relations. Abu Hanīfah also perceived social actors as being part of a social system rather than isolated individuals.

Yet, the issue to be explored is the relationship between our concept of text and nature. Does one project their concept of text onto nature as they do for society as a whole? Does the evolving concept of text also shift our understanding of nature as it does for society? Was there a period during which nature was perceived as a text? If so, why did this perception not persist into the modern era?

Muslim thinkers, as mentioned earlier, perceived the world as a *ʿālam*, which literally means "sign."[1] *ʿĀlam* is defined as everything other than God and thus stands as a sign of His

1 On the concept of *ʿālam* (world) and the way it is used in Islamic theology as a sign for the existence of the Creator, see, Abū al-Barakāt ʿAbdullah al-Nasafī, *Tafsīr al-Nasafī: Madārik al-Tanzīl wa Ḥaqāʾiq al-Taʾwīl*, ed. Yūsuf ʿAlī Badīwī (Damascus and Beirut: Dār al-Kalim al-Ṭayyib, 1426 AH), 30.

existence, providence, knowledge, and power. From this perspective, there is no distinction between nature and society. Even the word *ʿālam* is used to denote both nature and society, while the word *jumlah* is used to refer to both a sentence and a society. Just as each verse in the Qur'an is considered a sign (*āyah*), so too are things in nature. This view of nature inevitably conflicts with the modern scientific understanding, which assumes that scientific and semiotic study of nature are implicitly mutually exclusive.

I will argue that while society, in general, has been linguistified or textualized by semiotics, modern science has continued to de-linguistify or de-textualize nature. The early modern scientific view of the world as hard facts was, thus, at least partially surpassed in relation to society as a whole, but not with regard to nature. The shift in mankind's concept of nature can be summarized as de-textualization or de-linguistification of nature. In other words, the rise and spread of modern science silenced what Rūmī called the "mute eloquence" of nature by stripping it of the symbolic meanings that traditional cultures all over the world have, to a greater or lesser extent, historically attributed to it.[2]

Early in the 20th century, Max Weber observed a process, unfolding alongside modernization: the disenchantment

2 See the works of Eliade and Campbell, in particular, Mircea Eliade, *A History of Religious Ideas*, vols. I–III, trans. Willard R. Trask (Chicago: University of Chicago Press, 1978); Joseph Campbell, *The Masks of God*, vols. I–IV (London: Penguin Books, 1969).

of humanity with the world. Weber proposed no solution to the destruction and elimination of the meaning inherent in structures by the modern rational scientific worldview. However, Jürgen Habermas, who also observed a similar process in social life as systems colonized the "life world" (*Lebenswelt*), undertook a project which he calls "linguistification" of social theory. Other sociologists, such as Robert Hodge and Gunther Kress (1988), have increasingly recognized that hard facts alone are insufficient for a deeper, more authentic understanding of social processes.Hakki provides us with an interesting example of the encounter between two concepts of nature: one charged with meaning, the other devoid of meaning, one that speaks, while the other is mute. He attempted to integrate the new approach into the older one thereby rebuiling the world for the Muslim public of the 18h century. This can be seen as an attempt to re-textualize nature, which was at risk of losing its textuality—or more simply, its meaning. Hakki sought to recharge nature with meaning, demonstrating how nature's speech could be understood in this new, more turbulent period. He did not see modern science as a threat to the traditional concept of nature, but rather a new unfolding of nature's meaning, which had previously been hidden from view in the Book of Nature.

The influence of modern science on the concept of nature was also felt among Indian Muslims in the

eastern part of the Islamic world. An 18th-century Indian Muslim scholar, Shāh Waliullāh al-Dihlawī (d. 1762), in his magnum opus *Ḥujjat Allāh al-Bālighah (al-Dihlawī 1990)*, attempted in a similar effort to revive the traditional view of the world. While he does not explicitly reference modern science, his life's work—particularly his attempt to restore traditional Islamic cosmology—can be seen as a response to the new worldview promoted by modern science. Other works on Islamic ontology, such as those exploring *marātib al-wujūd*, emerged during the 18th century and may also have been prompted by the arrival of modern science (Ceyhan 1998).

Semiotics of Nature in Ibrahim Hakki's Thought

Ibrahim Hakki mainly uses the image of a book to represent nature, which is intentionally written by God to manifest His existence, providence, omnipotence, and omniscience. For Him, creating is akin to writing. He interprets the Qur'anic verse, *"By the letter Nūn! And by the Pen and that which they write (therewith)!"* (Qur'an 68:1–2), as a reference to the angels recording both the concrete objects of the World of Objects and the abstract objects of the World of the Heavenly Kingdom (Hakki 221). The letter *Nūn* (ن) in Arabic resembles an ink pot, which may symbolically indicate the act of writing (Hakki 221). God created the world through the divine breath, and the breath serves as the medium for producing speech. Just as human speech conveys meaning

through words and symbols, the natural world—being a product of the divine breath—operates as a semiotic system: a collection of signs (*āyāt*) that reflect the attributes and will of the Creator.

Every creature is a letter in the grand book of creation. The universe has multiple layers, and each layer represents a letter in this cosmic text. Natural entities generate meaning in a manner analogous to letters, deriving their significance through their relationships and combinations with one another. Just as solitary (*mufrad*) letters acquire greater depth and complexity when they form words and sentences, the meanings in nature become intricate (*murakkab*) through their interconnectedness and harmonious arrangements. This interrelation unites individual elements into a coherent narrative, thereby revealing the profound wisdom embedded within creation.

We must remember what the word 'text' meant during Hakki's time. Briefly put, Muslim scholars regarded the text as a multiple network of shifting relations. The text was seen as both singular and plural, constructed interactively through two levels: the utterances (*lafẓ*) and the meaning (*maʿnā*). The level of utterances consists of both, visible (*ẓāhir*) and non-visible or assumed (*muqaddar*,) elements. Causal relations characterize it. In contrast, the level of meaning is layered and defined by non-causal or interpretive (hermeneutic) relations. To analyze utterances, scholars used the causal explanation (*ʿilliyyah*) provided by syntax (*naḥw*), while meaning was

explored through the interpretive methods of rhetorical sciences (*ʿilm al-balāghah*).[3]

God, the author of the book of nature, has charged it with the meaning He intends to convey to humanity. The role of humans, as its readers, is not to impose or invent meaning, but to uncover and describe it. In other words, the meaning of the universe is something to be discovered, not created; it is found, not founded. The book of nature already contains the meaning inscribed by its Creator, reflecting His original intent. However, a sign carries multiple layers of meaning, and the understanding a reader derives from it depends on their spiritual and intellectual state. The depth of insight gained from the signs of nature corresponds to the reader's readiness and capacity to perceive the divine wisdom embedded within them.

The theory of meaning must be briefly taken into consideration here. 'Meaning' encompasses two layers that are not mutually exclusive: the apparent (*ẓāhir*) and the latent (*bāṭin*). There is also the "meaning of the meaning," as argued by Abdulqāhir al-Jurjānī (d. 1078), where meaning sometimes serves as an object to indicate yet another meaning (al-Jurjānī, *Dalāʾil al-ʾIʿjāz*, 263).

3 For further details, please refer to my paper "Toward Open Science and Society: Multiplex Relations in Language, Religion and Society - Revisiting Ottoman Culture," *Turkish Journal for Islamic Studies* (İSAM), no. 6 (2001): 93–129; "Towards an Open Science: Learning from the Ottoman Humanities," in *New Millennium Perspectives in the Humanities* (Istanbul: Fatih University Press and New York: Binghamton University, 2002).

The imagery of the text is applied to both nature and humans. Similar to the text, the world is both one and many. Existence is like a string—the more it is stretched, the more layers become visible. This concept applies equally to texts, the external world, and human nature.

Hakki seeks symmetries among different domains, each composed of multiple layers. These domains include God, humanity, the external world, and text. As the ultimate author of all existence, God crafts every element of creation with purpose and precision. He has designed reality so that its fundamental structures exhibit symmetry, or, put another way, mirror one another. Each domain belongs to a distinct level of existence: the external world exists in the objects (*wujūd fi al-aʿyān*), human society exists in the minds (*wujūd fi al-adhhān*), text exits in writing (*wujūd fi al-kitābah*), and speech exists in utterances (*wujūd fi al-alfāẓ*).[4]

The study of nature has long held a central place in Islamic thought. It was traditionally regarded as part of philosophy (*ḥikmah*). During the times when debates often revolved around its compatibility with Islamic teachings, Al-Ghazālī (d. 1111) offered a balanced perspective between opposing views on purely rational philosophy. His primary objection was to rationalist metaphysics, arguing that philosophers,

4 For a detailed discussion of these levels of existence, see Abd al-Malik al-Saʿdī, *Sharḥ al-Nasafiyyah fī al-ʿAqīdah al-Islāmiyyah* (Salsabīl, 2009), 84–85; Abū Ḥāmid Muḥammad al-Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād*, ed. Mustafā ʿUmrān (Dār al-Baṣāʾir, 2009), 363–64.

relying solely on reason, could not accurately deduce the workings of the world in a way that corresponded to reality. In Al-Ghazālī's view, revelation was indispensable for addressing metaphysical questions.

At the same time, Al-Ghazālī argued that theories about nature should be evaluated on their own merit through rational and empirical analysis, guided by his multiplex epistemology. This approach allowed for the use of appropriate means of knowledge or methods within their respective ontological domains, including the recognition of the semiotic nature of the natural world.[5]

Later, orthodox scholars also followed the lead of Al-Ghazālī on this issue. Ibn Khaldūn (d. 1406), Kātib Çelebī (d. 1657), al-Birgiwī (d. 1573) and his commentators—including Tashkubrizāda (d. 1561), Abdulghanī al-Nablūsī (d. 1731), and Muḥammad al-Khādimī (d. 1762)—shared this perspective. Zainuddīn Muḥammad al-Birgiwī distinguishes between aspects of the natural sciences (*tabīʿiyyāt*), stating that only those derived from metaphysics contradict religion, while the rest are not rejected (*al-Ṭarīqah al-Muḥammadiyyah wa al-Sīrah al-Aḥmadiyyah*, 28). His commentators, such as Abū

5 For his views on these issues see his most relevant books, Abū Ḥāmid Muḥammad al-Ghazālī, *The Incoherence of the Philosophers*, A Parallel English-Arabic Text, trans., intro., and annotated by Michael E. Marmura, ed. Parviz Morewedge (Provo, UT: Brigham Young University Press, 1997); Al-Ghazālī, *al-Munqidh min al-Ḍalāl* (Beirut: Muʾassasat al-Kutub al-Thaqāfiyyah, 1987); Al-Ghazālī, *Iḥyāʾ ʿUlūm al-Dīn*, Book of Contemplation (*Kitāb al-Tafakkur*).

Saʿīd al-Khādimī and Abdulghanī al-Nablūsī, further elaborate on this distinction.[6]

By this, he emphasized that elements of natural science grounded in empirical observation and rational inquiry were acceptable, as long as they did not conflict with Islamic doctrine. However, he firmly rejected metaphysical interpretations that undermined or contradicted core religious principles.

One of the key concerns of orthodox theologians, including Al-Birgiwī, was the belief in causal relationships between celestial phenomena—such as the movements of stars—and events on Earth. They regarded such beliefs as contradictory to the Islamic understanding of divine omnipotence. This reinforced the orthodox theological position that natural phenomena should be studied within the framework of divine causality, where God is recognized as the ultimate cause of all events, rather than attributing causation to natural entities or celestial bodies.

6 For al-Birgiwī's original statement, see Zainuddīn Muḥammad b. Muḥammad b. ʿAlī Muhyiddīn al-Birgiwī, *al-Ṭarīqah* a*l-Muḥammadiyyah wa al-Sīrah al-Aḥmadiyyah* (Cairo: al-Halabī, 1379 AH/1960 CE), 28. On his commentators, see Abū Saʿīd Muḥammad al-Khādimī, *Barīqah Maḥmūdiyyah fī Sharḥ Ṭarīqah Muḥammadiyyah wa Sharīʿah Nabawiyyah fī Sīrah Aḥmadiyyah*, vol. 1 (Istanbul: Maṭbaʿat Dār al-Hilāfatu l-ʿĀliya, 1326 AH), 336. Khādimī notes that the contradiction arises when natural beings (*ṭabāyiʿ*) are believed to influence one another, whereas orthodox theology maintains that all changes in nature are acts of God rather than the result of celestial bodies. See also Abdulghanī al-Nablūsī, *al-Ḥadīqah al-Nādiyyah Sharḥ al-Ṭarīqah al-Muḥammadiyyah wa al-Sīrah al-Aḥmadiyyah*, vol. 1 (Istanbul: Maṭbaʿa-ı ʿĀmire, 1290 AH), 335–340.

Unlike some of his orthodox predecessors, Hakki argues that even if one accepts that stars influence natural events, this does not contradict Islamic faith because God is the ultimate bestower of such powers. the extended this reasoning to the concept of "nature" (*ṭabʿ* or *ṭabāʾiʿ*), which theologians have often viewed as conflicting with Islamic doctrine. He argues that "nature" itself receives its power from God and as long as one acknowledges that God has endowed nature with the ability to influence events, such causal relationships do not contradict religion and religious teaching.

Hakki illustrates this conflict with an analogy of two ants observing someone writing on a sheet of paper. One ant claims that writing does not occur by itself and that the pen is the agent. The other, watching from a distance, objects, arguing that the fingers command the pen and that they are the cause of the writing. Similarly, he also draws on the well-known parable of blind people describing an elephant—each perceives only a part and erroneously generalizes it to the whole (Hakki, *Mârifetnâme*, 85). Each explanation is true but confined to the respective level at which it operates.[7]

7 This brings to mind two principles commonly applied in Arabic humanities. One is "إعمال الكلام أولى من اهماله". The principle states that it is preferable to activate or make use of a word, if possible, instead of ignoring or refusing it. The second is "الأصل في الكلام حمله إلى محمله الصحيح". This principle suggests that, as a rule in discourse, speech should be attributed to the correct subject and should not be generalized in an arbitrary fashion. Due to their crucial place in Islamic culture, these principles eventually became the general rules of *fiqh* - these are cited in the introductory chapter of *Mecelle*, see Ahmed Cevdet Paşa, *Açıklamalı Mecelle: Mecelle-i Ahkam-ı Adliye*, ed. Ali Himmet

During Hakki's time, astrology and astronomy were not entirely distinct fields in the Islamic world. By examining different theories about nature, he finds a peaceful resolution to the conflict between theologians and *munajjimūn* (astronomers and astrologers).

Hakki sees nature as a compassionate teacher and mother, writing, "This world is educating us like a compassionate mother" (Hakki, *Mârifetnâme*, 163). He takes this idea further likening nature to a womb for humanity: "We are still in the womb of a mother" (Hakki, *Mârifetnâme*, 163). From this perspective, death is not an end but a true birth—an entry into the eternal world.

For Hakki, nature is a rose garden where humanity delights in its beauty. In the introduction to *Mârifetnâme*, he uses the same imagery, describing nature as a "rose garden" in which humanity is the source of its fragrance (Hakki, *Mârifetnâme*, 1.) The demise of humanity leaves the world without scent.

Yet, nature (*ṭabʿ*) can also become a prison for human beings. Occasionally, Hakki refers to it as a cage of nature (*sijjīn al-ṭabʿ*) (Hakki, *Mârifetnâme*, 500). Liberation from this confinement, he argues, comes through the cultivation of good qualities (*ṣifāt al-kamāl*). In this context, he writes, "the cage of nature is the example of Hellfire" (Hakki, *Mârifetnâme*, 222.)

Berki (İstanbul: Hikmet Yayınları, 1982), 1–20. These principles can be seen as important strategies for reducing intellectual and thus social conflict, as they grant different possible voices a place in discourse, instead of refusing to hear these voices and therefore suppressing them.

The first three images of nature reflect God's providence over the external world, emphasizing the need for harmony between harmony with nature. However, the relationship between human beings and their animal nature is characterized by conflict. Notably, while the first three images depict nature in a positive light, the final image—the cage of nature—shifts the focus to human nature itself. Here, nature is viewed negatively, as something to be overcome and transcended.

Semiotics of Nature in Said Nursi's Thought

There are notable similarities between the concept of nature in Hakki's work and that of Nursi. Both scholars were educated in traditional seminaries and inherited a comparable understanding of nature and science grounded in the Islamic intellectual tradition. However, Hakki lived earlier than Nursi, and the confrontation with modern positivist science, and its reductive concept of nature, is more prominently reflected in Nursi's works.

Nursi's intellectual biography reflects the characteristics of a transitional figure navigating the shift from the Ottoman state to modern secular Turkey. His life was marked by profound political and cultural ruptures, which significantly influenced his mission and thought. Over time, Nursi increasingly focused on the challenges posed by the conflict between religion and science, particularly as framed by modern positivist views of nature.

It is evident why Nursi rejected the concept of nature adopted by positivist science. He viewed nature as a composition of objects, each possessing a unique intelligence, and that these objects speak for their Creator through signification—which I call the 'Semiotics of Nature.' Nursi repeatedly reminds his readers that the world or *ʿālam*, literally means a sign for its Creator. This view of a living, speaking nature, shared by Nursi and other Muslim thinkers of that time, stood in stark contrast to the new positivist conception of nature. The latter was officially adopted by Turkish educational institutions as part of the broader process of modernization, secularization, and westernization in science at the turn of the last century.

Another significant difference exists between the traditional Islamic and the positivist understanding of nature. Nursi's semiotics of nature, like Hakki's, involves multiple layers of analysis and interpretation. Every small object in nature is a world in itself (Nursi, 1959, p. 18). For Nursi, the world as a whole at the macro level and the small objects at the micro level are signs of God. In other words, both the macrocosm and the microcosm serve as manifestations of their Creator. This view aligns with Hakki's and other Muslim thinkers and scholars' perspectives. This 'multiplexity' in the concept of nature allows scholars to simultaneously explore causes and meanings across different levels.

For Nursi, the world is both a network of causal relations and a book containing endless booklets, sentences, words,

and letters, which produce a network and meta-network of meanings together. From his perspective, the world is a book consisting of words, with each word contains many books within it. A tree is akin to a word, a fruit akin to a letter, and a seed can be interpreted as a letter containing the blueprint of an entire tree.

God is not part of nature because He is its Creator. Moreover, there exists a semiotic relationship between the created world and the Creator: the creature serves as a sign of the Creator. In the view of Nursi and many other Muslim thinkers, not only is God's existence manifested in nature, but His divine attributes are as well. From this perspective, natural events should be interpreted as the unveiling of God's attributes through His actions, which usually take place within the framework of causality. However, God's power transcends the realm of causality and natural laws, as demonstrated by the miracles He granted to the Prophets.[8]

For Nursi, the "witnesses" (*ahl al-shuhūd*) observe God's signs in the world. They see God behind every living entity. In other words, this group reflects a constant awareness of the semiotic functions of nature. However, these witnesses are highly educated and pious individuals with a deep belief in God. Therefore, ordinary people, including common Muslims,

8 This is another major difference between the traditional Islamic and positivist approaches to nature. While positivists regard natural laws as permanent and unchangeable, Muslim scholars believe that God's power is not bound by the laws He himself gave nature.

who do not have trained eyes and minds, may not possess the same level of awareness of the semiotics of nature.

Nursi's concept of nature stands in stark contrast to that of naturalists and modern positivists. For Nursi, nature is not a self-operating machine but is instead actively operated and governed by God. The relationship between God and nature has been a subject of significant debate among Muslim philosophers and scientists.

Nursi references the views of prominent Muslim philosophers such as Ibn Sīnā (d. 1037) and al-Fārābī (d. 950), who argued that God endowed objects with their inherent "nature," enabling them to influence other objects and act as causes of natural phenomena. From this perspective, God is ultimately the Creator, giving entities their nature and setting them into motion. In contrast, al-Ghazālī (d. 1111) rejected this notion of mediated causality, asserting that every causal relationship is directly created by God. According to this view, God is constantly active in nature, and every natural phenomenon is a direct manifestation of His will.

In any case, both perspectives regard God as being the *prima causa*, i.e., the cause of causes. Nursi does not explicitly take a side in this debate, although his educational background suggests he likely leaned toward al-Ghazālī's perspective. What he makes explicitly clear, however, is his opposition to the materialist and positivist conception of nature as an autonomous system operating independently of divine will.

For Nursi, such a view is incompatible with Islamic belief, as it denies God's role in creation and governance. He argues that a Muslim cannot accept that natural phenomena are caused by nature itself because nature is not a rational agent and cannot determine its own actions. Nature, according to Nursi, is a creation of God and all constituents of the natural world are manifestations of His will. This view not only challenges the self-sufficient, mechanistic worldview of positivism but also reaffirms the theological foundation that places God at the center of all existence and natural processes.

Nursi's concept of nature fundamentally diverges from the materialist framework of modern positivist science, both in its underlying philosophy and purpose. While modern positivist science limits itself to observing and explaining causal relationships between natural phenomena, it deliberately avoids addressing questions of meaning or purpose. For Nursi, however, nature is not merely a collection of causally linked phenomena but a divinely authored book, rich with signs (*āyāt*) that point to the Creator.

Here we can easily conclude that Nursi has inherited from the Islamic tradition the multiplex concept of nature, which regards causality and meaning as two interconnected layers. These two layers—causality and meaning—form inseparable dimensions of analysis and research, each complementing the other.

There is another striking dimension to the semiotics of nature in Nursi's understanding. The Qur'an and nature are

interlocked: they mirror each other. The Qur'an is the eternal translation of the book of nature, the everlasting interpreter of its tongues, which recites the verses of creation. It unveils the hidden treasures of the Divine Names inscribed upon the pages of the heavens and the earth. Nursi draws many parallels between the Qur'an and the Book of Nature. Nevertheless, for Nursi, primacy lies in the book of nature as the foundational text through which the Divine is revealed and understood (Nursi, 1990, p. 339; Nursi, 1959, p. 98).

The positivist approach to science strictly separated causal analysis from studying the meaning of nature and exclusively focused on the former, based on the conviction that the two are incompatible. This approach was completely new for Nursi and other Muslim thinkers of that time. Consequently, they had to devise an intelligent strategy of resistance to the positivist view of nature without rejecting the causal explanations modern science provided. They tried to demonstrate that causal explanations afforded by modern science do not logically require a materialist view of nature. Instead, they believed that modern scientific discoveries highlighted God's greatness, and the profound meaning contained in nature.

While positivists tried to introduce a materialist concept of nature that is devoid of meaning, Turkish academia and youth during Nursi's lifetime understood that the main aim of Nursi's project was to resist this trend by re-infusing nature with meaning. He argued that causality and meaning should be analyzed together, just as they had been throughout Islamic

history. This view contradicted the positivist understanding of science and nature, which was officially adopted by the newly established Turkish Republic.[9]

Semiotics of Nature in Taha Abdurrahman

Taha Abdurrahman, one of the foremost contemporary Islamic philosophers, has developed a unique perspective on the relationship between ethics, metaphysics, and human action in his extensive body of work. In his book *Rūḥ al-Ḥadāthah* (The Spirit of Modernity), Abdurrahman critiques the limitations of Western modernity, particularly its materialistic and utilitarian approaches to nature. He advocates for an ethical reform rooted in Islamic principles, which recognize the semiotic nature of the universe—where every element in nature carries both material and spiritual meaning (Abdurrahman, 1999; Hallaq, 1995). According to Abdurrahman, humans and nature share a relationship of compassion rather than domination. He emphasizes that nature should be treated as the "mother" of humankind, not its "mistress," reflecting a deep respect for nature that transcends its instrumental value.

In Taha's framework, humans do not own nature, nor do they have sovereignty over it. This notion of stewardship, which is closely tied to the Islamic principle of *khilāfah*

9 For a more comprehensive discussion on this issue, refer to Şerif Mardin, *Religion and Social Change in Modern Turkey: The Case of Bediüzzaman Said Nursi* (Albany, NY: State University of New York Press, 1989).

(stewardship), emphasizes the ethical obligation to care for and sustain nature. Abdurrahman further critiques the modern belief in a so-called "contract with nature," where humans, after realizing their failure to control nature, imagine they can enter into a contractual relationship with it. For Abdurrahman, such notions are both fanciful and deeply flawed because they stem from a misunderstanding of the true nature of the human-nature relationship.

Moreover, Abdurrahman advocates for a "cosmic covenant" that goes beyond the mechanistic and contractual view of human-nature relations prevalent in Western modernity. This covenant is not merely a legal or transactional agreement but a spiritual and ethical bond that embraces both the seen and unseen dimensions of existence. It emphasizes humanity's responsibility as stewards of the Earth, acknowledging the interconnectedness of all creation and the divine trust (*amānah*) placed upon humanity to care for and protect it.

Abdurrahman's philosophy also engages with epistemology, arguing that the Western reliance on critique as the sole means of accessing truth is limited. He suggests that alternative paths to knowledge, such as divine revelation, offer deeper insights into the world and humanity's responsibility toward nature. This ethical and spiritual perspective provides a holistic view that incorporates both the material and transcendental aspects of the universe, challenging the modernist approach to nature that has contributed to its degradation.

Semiotics of Nature in Christianity: From St. Francis to Pope Francis

Like Islam, Christians also regard nature as a book replete with signs of God, inviting reflection and revealing divine wisdom. The concept of the "book of nature" is deeply rooted in Christian theology, often used by theologians and thinkers to emphasize the spiritual significance of the natural world. This perspective highlights the belief that nature is not merely a physical reality but a divine text that reveals God's glory, wisdom, and presence.

One of the most vivid expressions of this concept is found in the teachings and sermons of St. Francis of Assisi. He viewed all aspects of creation—animals, plants, the elements—as siblings in a shared existence under God. To him, nature was a sacred gift and a living testament to the Creator's love and care. His theology of nature emphasized humility, gratitude, and a sense of stewardship, calling for humanity to live in harmony with creation.

The current Pope, a namesake of St. Francis, seeks to revive the tradition associated with him. In his encyclical *Laudato Sì*, subtitled *On Care for Our Common Home*, the Pope reflects on St. Francis's theology while addressing the urgent environmental challenges of our time. He critiques the culture of excessive consumption, greed, and exploitation that has led to the degradation of the planet. Lamenting the worsening state of the environment, Pope Francis calls for

"swift and unified global action" to combat pressing issues such as irresponsible economic systems, global warming, and other ecological crises that threaten humanity and the natural world.

In *Laudato Sì*, the Pope urges people of all faiths and none, to embrace an integral ecology that connects environmental, social, and spiritual dimensions. He frames this as a moral and ethical obligation grounded in the Christian tradition of care for creation and justice for the poor, who are the most affected by environmental degradation. By reviving the legacy of St. Francis, the Pope not only reaffirms the theological significance of nature but also calls for a collective, compassionate, and responsible approach to safeguarding the Earth for future generations. This historical progression has been discussed earlier in greater detail under the section *Nature as a Book*.

Semiotics of Nature in Asia: Dalai Lama

Dalai Lama XIV, in his illustrated book titled *Heart to Heart: A Conversation of Love and Hope for Our Precious Planet,* calls for a "compassionate revolution" in our relationship with nature. He writes: "Compassion, loving-kindness, and altruism are the keys not only to human development but also to planetary survival. Real change in the world will only come from a change of heart" Dalai Lama & McDonnell, 2023). The Dalai Lama thinks the root cause of the environmental

crises is human selfishness and egoism. He cites Shantideva to support his argument:

> "Whatever joy there is in this world
> All comes from desiring others to be happy,
> And whatever suffering there is in this world
> All comes from desiring myself to be happy"
> (Dalai Lama & McDonnell, 2023, p. 75)

What the Dalai Lama proposes as a solution to the current environmental problem overlaps strikingly with what I propose in this book: cultivating self-improvement while fostering an altruistic relationship with nature which is called the *futuwwah* ethics.

In the context of Eastern religions spanning the Indo-China region, nature is seen as intrinsically connected to humanity, both governed by a divine force—a theme echoed in Hinduism, Taoism, Confucianism, and Buddhism. Confucianism, regarded as the school of nature and principle, views the universe as a unified whole where both nature and humans are subject to an overarching order that connects Heaven and Earth. Similarly, Taoism emphasizes the unchanging principle of the Tao, which regulates all harmony and order. Hinduism and Buddhism focus on dharma, the fundamental nature of existence, highlighting a natural order that governs both the cosmos and human life. In essence, these traditional Eastern religions share a profound understanding of the interconnectedness between humanity and nature, recognizing the sacred as the sole governing force.

Coupling Science and Semiotics

The modern scientific paradigm has largely shaped humanity's relationship with nature as one of domination and control. By framing nature as an adversary to be subjugated by human reason and intelligence, it has disconnected humanity from the deeper meanings and ethical responsibilities. Instead of imposing constraints on human behavior, modern thought prioritizes the fulfillment and satisfaction of human demands. This approach has elevated human desires as the ultimate norm, disregarding the spiritual and moral dimensions of existence. As a result, nature is no longer seen as a compassionate mother or a divine sign but is reduced to a resource for exploitation.

Modern ontology further exacerbates this issue by collapsing the spiritual and physical realms into a single dimension, leaving no space for transcendence or contemplation of nature's meaning. This perspective renders it ontologically impossible to study nature as anything more than a collection of material phenomena, stripping it of its symbolic and spiritual significance.

For modern science, humankind sets the norms; it is seen not as the cage from which people should be liberated, but as the paradise and. "The nature or essence of man was now identified *tout court* with the possession of reason, and natural law was held to be whatever is found acceptable by *recta ratio* or *santa ratio*" (Edwards, 1972, p. 542). This identification of human essence solely with reason marks a decisive break

from earlier traditions that viewed humanity as a composite of physical, spiritual, and intellectual dimensions. By elevating reason as the sole arbiter of truth and morality, modern science and philosophy diminish the role of revelation, intuition, and metaphysical understanding. In this framework, natural law is no longer perceived as a divine or intrinsic order embedded in creation but as a construct of human intellect, shaped and validated by rational consensus.

This shift has profound implications. The notion of natural law, once tied to divine will or cosmic order, becomes fluid and subjective, reliant on what human reason deems acceptable or expedient. The metaphysical foundations of ethics and nature's inherent meaning are replaced by utilitarian calculations and mechanistic interpretations. This reorientation detaches humanity from a sense of accountability to a higher power, positioning human reason as both the judge and creator of meaning.

The flattening of human nature to reason and the reduction of natural law to rational constructs leave humanity in a precarious position. Without a connection to the metaphysical or the divine, modernity struggles to address questions of ultimate purpose and meaning. This disconnect underscores the urgent need to revisit traditional frameworks that integrate reason with revelation, humanity with nature, and creation with its Creator. A reorientation in this direction can restore the balance lost in the modern redefinition of humanity's essence and its relationship with the world.

Thinkers like Hakki, Nursi, and Taha Abdurrahman offer an alternative framework, demonstrating that causality and meaning can coexist harmoniously. Their multiplex approach to nature allows for simultaneous exploration of its physical and semiotic dimensions, creating a richer understanding of the natural world. This perspective not only enables the study of nature's material causes but also imbues it with meaning, reestablishing humanity's connection to the signs embedded in creation.

The coupling of science and semiotics offers a transformative solution to the challenges posed by the modern scientific paradigm. By integrating the empirical rigor of science with the interpretive depth of semiotics, this approach reclaims the symbolic and spiritual dimensions of nature that modernity has stripped away. This framework bridges the gap between reason and revelation, causality and meaning providing a holistic understanding of the natural world. Only by appreciating these interconnected levels can we reestablish a harmonious relationship with nature, grounded in respect, stewardship, and accountability to its Creator. In doing so, this approach restores the balance necessary to address the existential and ecological crises of our time, paving the way for a more ethical and spiritual engagement with the world.

Allah Jalla Jalaluh – Muhammad Habibullah ﷺ
(الله جل جلاله – محمد حبيب الله ﷺ)
Allah, Glorious is His Majesty; Muhammad, the Beloved of Allah ﷺ

CHAPTER THREE

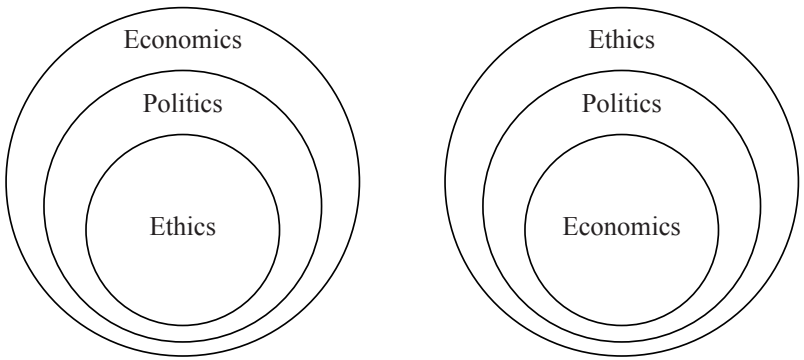
Towards a New Altruistic Environmental Ethics

Indeed, Allah, His angels, and those in the heavens and earth,
even the ant in its hole and the fish in the sea,
pray for the one who teaches people goodness.
إن الله وملائكته وأهل السموات والأرضين، حتى النملة في جحرها، وحتى الحوت؛
ليصلون على معلم الناس الخير.
—Prophet Muhammad ﷺ

Ethics is fundamentally concerned with knowing and practicing what is morally right. Today, much of the environmental crisis we face is a direct result of human activity. If human actions have led to this crisis, the resolution must likewise arise from human behavior. However, addressing this issue requires more than simply changing individual or institutional behavior. We need to reframe how we think about nature, our relationship with it, and what it means to act ethically in this context. Political and economic changes alone will be insufficient without an ethical framework that guides them. Therefore, this book advocates for a paradigm shift that redefines the relationship between ethics, economics, and politics.[10]

10 I thank Mohamed Hammour for our discussions on the interrelationships and reconfigurations between ethics, economics, and politics, which have significantly informed the ideas presented below.

In the dominant paradigm, economics reigns supreme, subjugating both politics and ethics. Political decisions are shaped primarily by the imperative of economic growth, leaving moral concerns as secondary considerations. In this system, politics functions as a facilitator of economic agendas—whether through regulatory frameworks, resource allocation, or policies that prioritize market efficiency. Ethics, in turn, becomes an afterthought, confined to areas where it does not impede economic interests.



The Dominant Paradigm
that caused environmental problems

The Expected Paradigm Shift
to heal the environment

Paradigms of the ethics, economics, politics relationship

For example, environmental policies or social justice initiatives are frequently sidelined if they are perceived as threats to economic gain. This model prioritizes short-term economic gains, at the expense of long-term ethical or environmental repercussions. Politics, within this framework, operates to sustain this economy-first mindset, ensuring that ethical considerations remain subordinate

and are implemented only when they align with market-driven goals.

Reversing this hierarchy requires a shift in perspective: ethics must regain its foundational role, guiding economic and political decisions rather than being dictated by them. In this model, ethics becomes the guiding principle that informs both political decisions and economic activities. Politics, in turn, takes on a regulatory role, ensuring that economic actions align with broader ethical goals, such as justice, sustainability, and societal well-being. Thus, rather than serving economic interests, politics becomes the mechanism through which ethical principles are actualized.

In this model, economic activities are guided by ethical standards, ensuring that markets operate in ways that serve the common good, rather than pursuing profit at any cost. Economic decisions are reoriented to support political goals grounded in ethics—focusing on equitable resource distribution, long-term environmental stewardship, and societal flourishing. Thus, the relationship shifts from one in which economics drives both politics and ethics to a model where ethics shapes political governance, which then directs economic behavior in alignment with moral imperatives.

This reorientation is essential to developing a sustainable and altruistic environmental ethics—one that respects nature not merely as a resource but as a meaningful and interconnected system requiring care and stewardship. While

individual behavior is crucial, it is insufficient to address the scale and complexity of the environmental crisis. Policies, regulations, and collective action at governmental and corporate levels are critical to ensuring that ethical principles permeate society and shape the larger systems that impact the environment. Institutional behavior must also undergo a transformation, as institutions wield the power to implement systemic changes that individuals alone cannot achieve. Yet institutions themselves are products of human agency; they are created, shaped, and guided by the values of those who govern them. Therefore, the ethical frameworks that guide individual behavior directly influence the principles and practices of institutions. Both individual agency and institutional actions must be steered by this ethical vision for a sustainable relationship with the environment.

Multiplex Sustainability Framework

To address the environmental crisis holistically, sustainability practices must be conceptualized within a multi-dimensional framework that integrates various interconnected dimensions. The multiplex sustainability framework begins with the sustainability of knowledge and extends to encompass ethical behavior, environmental stewardship, and the flourishing of human civilization. Central to this framework is the understanding that **human sustainability as moral beings must precede environmental sustainability**.

The essence of a civilization lies in its identity, which is predominantly shaped by its worldview. At the heart of this worldview is a civilization's epistemic framework—the principles, values, and methods through which it seeks knowledge and makes sense of the world. Therefore, **epistemic sustainability**, the preservation of the knowledge system, becomes essential for the sustainability of any civilization. Epistemic sustainability involves ensuring that the processes of knowledge generation, transmission, and application remain aligned with the civilization worldview. It requires not only the continuity of knowledge but also its ability to adapt and respond to new challenges and issues without compromising its foundational principles. It involves preserving the integrity of its intellectual traditions while allowing for critical engagement and renewal. When a civilization loses its epistemic sustainability, it risks fragmentation, loss of identity, and disconnection from its roots.

The Qur'an, as divine revelation, offers guidance on understanding the universe, our role as stewards of creation, and the moral responsibilities that underpin this stewardship. Its teachings are not merely spiritual directives; they form the epistemic basis for ethical behavior and societal governance. This epistemic foundation serves as a framework for determining the right thing to do across all aspects of life. enabling the formulation of principles that guide human behavior in alignment with the divine will.

Thus, epistemic sustainability forms the foundation upon which moral, environmental, and ultimately civilizational sustainability are built. By grounding human existence in a framework of rights and responsibilities, epistemic sustainability provides the basis for **moral sustainability**. The preservation of humans as moral beings hinges on a fundamental principle: "*I am, therefore I have rights and duties*." In *fiqh*, the concept of *taklīf*, the imposition of responsibility, lies at the heart of all human relationships. As *mukallaf* beings entrusted with responsibility, humans are accountable not only for their actions toward fellow human beings but also for their treatment of nature, including animals, plants, and all other elements of creation. This legal responsibility is tied to ethics, demanding that human actions align with moral principles in fulfilling their duties toward the Creator and all of creation.

Ethics, by its nature, is relational—it governs the interactions between two or more entities, defining the responsibilities and obligations within those relationships. In the context of environmental ethics, this relational framework expands beyond human-centered concerns to include the entire ecosystem. By extending moral responsibility to all of creation, humans recognize the intrinsic value of non-human entities such as animals, plants, and ecosystems, which are essential to the balance and continuity of life. This expanded ethical framework challenges exploitative practices and reframes humanity's role as stewards, rather than masters, of the environment.

When guided by such relational ethics, humans, along with the institutions they build, can reshape social, economic, and political systems. This transformation necessitates that their interactions with the natural world are guided by ethical principles rather than being driven solely by selfish interests or exploitative practices.

A framework for moral sustainability must ensure that ethical principles inform human behavior and decision-making at every level. When moral sustainability is compromised, human actions become guided by short-term gains, self-interest, and a disregard for the long-term consequences on society and the natural world. For a society to achieve moral sustainability, it must uphold values like stewardship, love, and respect for all creation, guided by epistemic sustainability rooted in divine revelation. This requires rethinking consumption and resource use to protect the rights of all beings, including future generations. Institutions, as extensions of human agency, play a critical role in translating these values into policies and systems that prioritize long-term ecological health and societal well-being over short-term economic gains. Ultimately, the integration of epistemic and moral sustainability is vital, as it lays the foundation for thriving civilizations and a healthy environment.

When epistemic and moral sustainability are upheld, they lay the groundwork for **environmental sustainability**—a commitment to preserving the natural world through ethical stewardship and sustainable practices. The environmental

crisis is linked to moral decay, as the root causes of ecological degradation stem from human actions and choices. Addressing these moral dimensions is key to tackling the drivers of environmental harm and constructing a robust framework for sustainability. This entails recognizing the interconnectedness of all life and the urgent need to protect the ecological systems that sustain it. Environmental sustainability, therefore, cannot be pursued in isolation; it is inherently tied to the ethical actions and responsibilities of individuals and institutions.

Ultimately, environmental sustainability leads to **civilizational sustainability,** as the survival and flourishing of societies depend on a stable and healthy habitat. Without a liveable and healthy environment, civilizations cannot endure. The ongoing environmental crisis poses significant threats to human health and societal stability, demonstrating the deep interdependence between ecological well-being and civilizational survival. A degraded environment directly impacts human health, with polluted air and water contributing to respiratory illnesses, waterborne diseases, and other life-threatening conditions. Deforestation and loss of biodiversity not only disrupt ecosystems but also undermine food security, leading to malnutrition and increased vulnerability to climate shocks. Rising sea levels and extreme weather events displace communities, create climate refugees, and exacerbate social and economic inequalities. The scarcity of resources such as clean water and arable land intensifies conflicts and strains political systems, ultimately threatening global stability.

Thus, civilizational sustainability is fundamentally tied to the preservation of ecological systems. Human beings cannot exist outside of societies, and societies cannot thrive if their habitats deteriorate. A civilization that aligns epistemic wisdom, moral responsibility, and environmental stewardship creates the conditions for lasting societal flourishing.

Ultimately, by integrating epistemic, moral, environmental, and civilizational dimensions of sustainability, the multiplex sustainability framework offers a comprehensive approach to addressing the existential challenges of our time. It acknowledges the interdependence of these layers: the preservation of divine revelation and the practice of ethical behavior toward all creation are essential for the survival and flourishing of humanity.

Revisiting Maqāṣid al-Sharīʿah: Preserving Environment is a Purpose of Religion

In Islamic civilization, the essential aspects of life necessary for sustaining human existence on Earth are articulated through the *maqāṣid al-sharīʿah* (objectives of Islamic law). These objectives provide a framework for safeguarding the key components of human well-being, without which human life and social organization would be impossible. Traditionally, they are identified as faith (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-*ʿaql), family (*ḥifẓ al-nasl*), and property (*ḥifẓ al-māl*).

However, the escalating environmental crises of today necessitate broadening this framework to explicitly include the preservation of the environment (*ḥifẓ al-ṭabīʿah)* as a prerequisite for sustaining all forms of life and the continuation of human civilization. All the objectives of Islamic law ultimately serve a higher, overarching purpose: *ḥifẓ al-ʿumrān*—the preservation of human civilization. Human life is only viable within the framework of a functioning society. Logically, the preservation of nature (*ḥifẓ al-ṭabīʿah*) precedes the preservation of civilization (*ḥifẓ al-ʿumrān*), as the environment provides the essential conditions—air, water, food, and ecosystems—that sustain life and enable social structures to thrive. Only once these foundational elements are ensured can the traditional objectives of faith, life, intellect, family, and property be properly preserved. Thus, environmental sustainability is not merely a contemporary concern but a prerequisite for sustaining all forms of life and achieving the other *maqāṣid*.

In *fiqh*, the concept of *taklīf*—meaning the imposition of responsibility—is central to understanding human life. Human beings are seen as *mukallaf*, meaning they are entrusted with both God-given rights and responsibilities. *Taklīf* refers to the ethical and legal duties that humans are expected to fulfill in accordance with divine law. This framework emphasizes that the universe and humanity were created for a purposeful existence, where harmony and happiness are achieved through adherence to divine guidance and the use of intellect (*ʿaql*).

As recipients of divine commands, humans are granted the freedom to adhere to or deviate from this guidance. Personal interests and passions can act as obstacles to fulfilling their responsibilities and align their actions with the divine will. This alignment is guided by a structured ethical framework within Islamic jurisprudence (*fiqh*), which categorizes all human actions into five legal and moral groups: mandatory (*farḍ*), required (*wājib*), praiseworthy (*mandūb*), permitted (*mubāḥ*), disliked (*makrūh*), and forbidden (*ḥarām*). These categories, which encompass the spectrum of human conduct (*afʿāl al-mukallafīn*), extend across four key areas: responsibilities toward God, oneself, society, and nature.

As stewards, human beings are expected to engage with the natural world responsibly. Their actions, whether in agriculture, architecture, or industry, should reflect an understanding of the interconnectedness of all creation and the divine signs present within it. This demands not only technical expertise but also an ethical consciousness that recognizes nature as a sacred trust, a reflection of divine beauty and purpose. The path forward calls for more than ethical action; it demands the revival of a sacred science of nature, one that sees the world not merely as a resource but as a reflection of divine order. Hence, environmental ethics must be grounded in *ʿilm* (knowledge) and *ʿamal* (action), as emphasized in the Islamic tradition, where knowledge without action is barren, and action without knowledge leads to chaos. The solution to the environmental crisis lies in the reintegration of knowledge

and action within a framework that honors the sacredness of life and the natural world.

Principles of the Multiplex Environmental Ethics

The multiplex environmental ethics, grounded in the multiplex conception of the human being and nature, establishes a comprehensive framework for reimagining our relationship with the natural world. It integrates theological, ethical, and legal dimensions, offering guidance for sustainable and responsible environmental engagement. Based on eight interconnected principles, this ethical approach seeks to transform humanity's relationship with the environment from exploitation to stewardship, recognizing nature's sacredness and humanity's accountability as vicegerents (*khulafāʾ*) of Allah.

1. *Nature as a Sign*

   Nature is filled with signs (*āyāt*) that point to the existence, attributes, and will of Allah. Every element of the natural world carries a semiotic function, acting as a reminder of the Creator. Reflecting on these signs calls humans to see nature not as a mere resource but as a sacred text to be read, understood, and revered. This principle elevates the environment from material utility to spiritual significance, encouraging ethical behavior in its interaction.

2. *Balance and Unity*

   The principle of *mīzān* emphasizes the interconnectedness of all creation and the balance established by Allah. The natural world operates as a harmonious system where every element contributes to a greater whole. Any harm inflicted on one part of the ecosystem disrupts this balance with cascading consequences for the entire system. Recognizing this unity and divine balance further reinforces the necessity for ethical stewardship and sustainable practices to maintain the equilibrium of life.

3. *Preservation of Nature*

   Inspired by the traditional Islamic legal objective of preserving life (*ḥifẓ al-nafs*) and family (*ḥifẓ al-nasl*), this principle expands the scope of preservation to include nature (*ḥifẓ al-ṭabīʿah)*. The environment is not only a backdrop for human activity but a foundational element for sustaining life, well-being, and ecological balance. Without safeguarding the natural world, human civilization cannot continue to exist, and the other objectives of Islamic law (*maqāṣid al-sharīʿah*) cannot be achieved.

4. *Prohibition of Excess*

   Wastefulness (*isrāf*) is unequivocally condemned in Islam as it violates the divine balance (*mīzān*)

established by Allah in creation. This prohibition is not limited to a single sphere but extends across all forms of resource use, including water, food, energy, and material goods. Wastefulness reflects ingratitude toward the blessings of Allah and a disregard for the needs of others. At its core, the principle of prohibiting *isrāf* promotes a lifestyle of mindful consumption. This involves recognizing the inherent value of resources as divine blessings and using them with care and intentionality. It also calls for moderation and urges individuals to strike a balance between meeting their needs and preserving resources for others and future generations. Overconsumption and extravagance are forms of moral failure, as they not only harm the environment but also perpetuate social inequalities by depriving others of access to essential resources. In practical terms, this principle calls for measures such as reducing food waste, conserving water, using energy efficiently, and minimizing the consumption of single-use plastics and other non-biodegradable materials. It also entails shifting to a culture of repair, reuse, and recycling, rather than succumbing to the consumerist tendency to discard and replace.

5. *Stewardship (Khilāfah)*

   Humans are *khulafā'* (stewards or vicegerents) of Allah on Earth with a unique position of trust and responsibility toward the natural world. This

stewardship encompasses both rights and responsibilities which require humans to protect, preserve, and judiciously use the resources of the natural world. Stewardship is a divinely mandated trust (*amānah*) for which humanity will be held accountable. It grants humans certain rights over the Earth's resources, such as the right to use them for sustenance and development. However, these rights are conditional upon fulfilling the corresponding responsibilities, such as ensuring that resource use is sustainable, equitable, and does not harm other forms of life. Stewardship demands ensuring that the needs of all—human and non-human—are met without exploitation or injustice.

This principle extends to future generations, emphasizing intergenerational justice. Stewardship also involves maintaining the balance established by Allah in creation. Disrupting this balance through overexploitation, pollution, or habitat destruction is a violation of the divine trust. Whether in agriculture, urban development, or industrial production, human activities should aim to enhance the well-being of all creation while minimizing harm. This includes adopting sustainable technologies, reducing waste, and restoring degraded ecosystems. This principle demonstrates that preserving the environment is not only a pragmatic concern but a divine mandate integral to human purpose and existence.

6. *Environmental Jurisprudence: Ecofiqh*

To operationalize the principles of environmental ethics within the framework of Islamic law, *fiqh* must adapt and evolve to address the pressing ecological concerns of our time. This specialized domain which may be referred to as *ecofiqh* offers a systematic approach to integrating environmental principles into Islamic jurisprudence. It provides guidelines for individual, communal, and institutional behavior to ensure that their actions align with both divine will and ecological sustainability. One of the unique contributions of *ecofiqh* is its capacity to evaluate the cumulative environmental impact of actions that may be individually permissible (*mubāḥ*) under *fiqh*. For instance, while activities like fishing, farming, or urban development are typically lawful, their large-scale execution can have significant negative effects on ecosystems, such as overfishing and soil degradation. *Ecofiqh* places such behaviors within a broader matrix of *fiqh* rulings and integrates environmental considerations to assess their overall impact. This matrix evaluates actions not only based on their permissibility under Islamic law but also through an environmental lens to ensure that lawful behaviors remain aligned with sustainability as well as divine will. *Ecofiqh* offers a path to reorient human behavior, securing a sustainable future for generations to come.

7. *Constructing the World*

The Qur'an charges humans with the responsibility of constructing the Earth (*ʿimārat al-arḍ*) and doing good to enhance and facilitate life. This principle emphasizes the constructive role of human activity in ensuring the flourishing of ecosystems and communities. Constructing the world involves not only material development but also spiritual and ethical growth that aligns with divine guidance.

The Qur'anic principles of *islāḥ* and *fasād* provide a moral framework for constructing the world. *Islāḥ* signifies actions that enhance the well-being of individuals, societies, and ecosystems, aligning them with divine guidance and purpose. It is proactive and constructive, focusing on repair, renewal, and positive transformation. *Fasād*, on the other hand, means corruption, degradation, or the disruption of moral, social, and natural order. It encompasses actions that harm societies and nature. In the Qur'an, *fasād* is associated with arrogance, exploitation, and disregard for divine commands, representing a failure of stewardship. This principle demonstrates that preserving the environment is not only a pragmatic concern but a divine mandate integral to human purpose and existence.

The vision of *ʿimārat al-arḍ* challenges modern approaches that prioritize short-term gains over

long-term sustainability. It critiques the tendency to view economic and technological advancements as ends in themselves. It advocates for a paradigm shift where advancements are pursued without compromising ethical values or environmental preservation. Human progress should not come at the expense of the natural world but should serve its flourishing. Constructing a world is not only about sustaining life but also actively enhancing the moral, social, and ecological harmony envisioned in divine guidance. It promotes a model of development where human activity complements rather than competes with the natural order. This vision redefines the human relationship with nature, extending beyond the standard minimum of sustainability to a proactive and constructive engagement.

8. Altruism (*Futuwwah*)

Moving beyond the letter of the law to its spirit and transitioning from moral leniency to ethical rigor, the principle of altruism seeks to reorient human intentions and behavior in a way that they transcend immediate personal or material gain. The altruistic framework for environmental ethics is founded on the principle of altruism, drawing inspiration from the Islamic concept of *futuwwah* (noble character). *Futuwwah* is a moral ideal that embodies excellence in character, selfless care for others, and prioritizing their well-being over one's own interests. Rooted in the values of humility and

service, altruism prioritizes the collective good over personal desires based on feelings of love, care, and compassion for humanity as well as the broader ecosystem. Altruism, in the context of environmental ethics, means prioritizing the well-being of the natural world, not as an afterthought but as a central concern of ethical conduct. This altruistic environmental ethics calls for the integration of technical expertise with spiritual awareness. It is not enough to have the tools to manage the environment; we must also have the wisdom to understand nature's place in the divine order. Islamic ethics offers a framework that can guide environmental practices and institutions, encouraging a shift from exploitation to stewardship. The principles of this new environmental ethics combine theological, ethical, and legal elements that recognize the sacredness of nature, human responsibility, and the need for sustainable living.

The ethical framework presented here has four major pillars, each of which plays a critical role in redefining how we engage with the natural world: our conception of ourselves, our understanding of nature, the relationship between the two, and our mechanism for regulation and decision-making. At the heart of this framework is the understanding that human beings are *mukallaf*—entrusted with both rights and responsibilities that extend to the natural world. This awareness of ourselves as moral agents shifts how we interact with the environment. Secondly, nature is not merely a resource to be exploited, but a living, meaningful entity imbued with divine signs (*āyāt*),

thus, worthy of respect and care. Our relationship with nature, is therefore based on stewardship (*khilāfah*), where we act as responsible guardians rather than exploiters, as explained in the eight principles mentioned above.

But, how can these universal principles be effectively applied to address particular environmental challenges? To operationalize this ethical framework, a regulatory mechanism is necessary to guide decision-making and human activities in accordance with divine will. *Ecofiqh*—an environmentally-focused Islamic jurisprudence—can provide such a mechanism. It offers a comprehensive legal and ethical framework for ensuring that environmental actions are aligned with sustainability, justice, and the protection of life. Through *ecofiqh*, principles of preservation, prohibition of excess (*isrāf*), and environmental justice are translated into actionable guidelines that regulate personal, communal, and institutional behaviors. This foundation calls for a paradigm shift that reorients human activity toward greater responsibility, reverence, and care for the natural world, embedding these values into our political, social, and economic systems.

Toward an Altruistic Environmental Ethics

The framework we have outlined culminates in the principle of altruism, which serves as the ideal guiding principle for all human activities. In the context of environmental ethics, altruism calls for a shift from a self-centered, exploitative

relationship with nature to one characterized by selflessness, responsibility, and reverence. It is not merely an abstract ideal but a practical guide that compels us to prioritize the well-being of the natural world alongside, and sometimes above, our immediate interests.

Preserving nature is both an end in itself and a means to ensure the sustainability of human civilization and the well-being of future generations. The environment forms the foundation upon which all human activities—economic, social, and cultural—are built. Its degradation threatens not only the delicate balance of ecosystems but also the survival and flourishing of human communities. Altruism, in this context, recognizes that caring for the environment is intrinsically linked to caring for humanity's collective future.

Altruism also challenges the dominant worldview that treats nature as a mere resource to be exploited. It replaces this perspective with one of stewardship, wherein humans act as caretakers of creation. Stewardship is a sacred trust for which humanity is accountable. This sacred responsibility demands that we not only sustain nature but actively enhance it. Humans are not owners of the Earth but caretakers, charged with its preservation, restoration, and flourishing. This responsibility is comprehensive, encompassing both material and spiritual dimensions, and extends to every aspect of creation—land, water, air, and all living beings. Stewardship demands that we go beyond sustaining the environment in its current state.

The crisis of the environment is, at its core, a spiritual crisis—a crisis that arises from humanity's disconnection and alienation from its Creator and, by extension, from nature itself. When humans sever their relationship with the divine, they lose the moral compass that guides their interactions with creation. Without this spiritual vision, the natural world is stripped of its intrinsic value and reduced to a mere resource for economic gain and technological advancement. This desacralization of nature is at the root of unsustainable practices such as deforestation, pollution, overconsumption, and biodiversity loss, all of which undermine the delicate balance that sustains life on Earth.

Moreover, alienation from the Creator leads to a deeper existential void. Disconnected from the spiritual purpose of life, humans often turn to material pursuits in a futile attempt to fill the emptiness. This cycle of consumption and exploitation not only harms the environment but also exacerbates social inequalities and mental health crises, further distancing individuals and societies from the divine.

Ultimately, addressing the environmental crisis requires healing the fractured relationship between humanity, the Creator, and nature. It is through this holistic reconnection grounded in faith and ethical action that we can begin to address the root causes of ecological degradation and build a sustainable future. The time to embrace altruistic environmental ethics is now, for in saving nature, we save ourselves.

Adab Ya Hu (أدب يا هو)

"Observe etiquette in the presence of the Divine"

CHAPTER FOUR

Sustainability Policy and Ecological Practices A Faith-Based Framework

After building a conceptual and ethical framework for understanding nature through a multiplex approach and proposing new environmental ethics, in the next step is to explore their practical application, specifically in policymaking, community engagement, and both institutional as well as individual action. To this end, contemporary practices can be derived from primordial global religious legacy, fostering innovate green practices based on an ethical and spiritual relationship with nature.

In this context, it is crucial to activate religious values to guide consumption patterns, rather than allowing modern consumer culture and advertising to dictate them. A key Islamic value of sustainability that requires revival and public education is that ownership does not equate to unrestricted consumption. Instead, individuals are entitled to consume from their property only as much as is necessary to meet their needs. Simply put, the right to own is not the same as the right to consume. For instance, while one may eat to sustain

themselves—excessive consumption, such as overeating, is considered impermissible. The same principle applies to all aspects of daily consumption including water electricity, clothing and housing. Reviving this value as a shared social ethic is important to maintain responsible consumption and curbing excess (*isrāf*) and extravagance (*riyā'*).

This principle should be applied not only at the individual level but also within institutions, corporations and organizations. Green institutional practices require ethical organizational behavior with nature. Today, the environmental impact of corporate entities far exceeds that of individuals. Therefore, establishing a "corporate environmental ethic" is essential for companies and larger organizations.

Thus, the multiplex ethical framework outlined above should inform decision-making at the individual, corporate, national, and global levels. This requires integrating scientific, economic, social, political and semiotic considerations into policy and practice. Ethical principles for decision-makers must balance sustainability with both meaning and utility. Such an integrated and balanced approach should guide practical applications in production, distribution, and consumption. Promoting best practices of successful policies and practices that account for both the utility and semiotic significance of nature should be promoted globally to concretely demonstrate how communities and individuals can adopt this integrated approach in their everyday interactions with the environment.

When discussing the environment, we refer to the entire natural world that surrounds and sustains human life. This includes the spaces we directly interact with, such as our homes and gardens as well as the common spaces we share with others, such as seas, forests, and the sky. Therefore, it is important to cultivate or rediscover globally shared public values that promote multiplex environmental ethics and sustainable practices, integrating religious, ethical, spiritual, and economic incentives.

Current approaches to sustainability, largely shaped by secular, economically driven policies, have made strides but have not been sufficient to create the lasting change we need. What is lacking, however, is a holistic framework that integrates spiritual and ethical dimensions, fostering a deeper, more meaningful relationship between humanity and the natural world. This chapter briefly explores how a faith-based framework rooted in Islamic principles, as presented in the previous chapters, can enrich sustainability policies and ecological practices, making them more effective and comprehensive.

Secular sustainability policies often rely on economic incentives, market-based solutions, and regulatory measures to encourage pro-environmental behaviors. While these strategies are important, they are frequently inadequate in addressing the deeper moral and spiritual roots of environmental degradation. Economic incentives, for instance, are often ineffective in affluent societies, where financial

gain is not a significant motivator for changing consumption patterns. In such contexts, religious and spiritual imperatives that promote ethical living and moral accountability to the Creator can serve as powerful motivators for behavior change.

A faith-based approach integrates these spiritual dimensions into environmental policies and practices, offering not just incentives for sustainability but moral imperatives rooted in religious teachings. By framing the natural world as a reflection of divine order, faith-based ethics elevate the practice of sustainability from a mere economic or regulatory requirement to a moral and spiritual obligation.

Addressing Environmental Issues: At Individual, Local, National, and Global Levels

The faith-based framework for sustainability offers practical guidelines for ecological practices at individual, local, national, and global levels. At the individual level, overconsumption is driven by personal choices, habits, and lifestyles. While incentives such as eco-friendly products or government rebates for energy-efficient appliances encourage ethical behavior, these measures alone are not sufficient. There needs to be a deeper ethical and spiritual transformation that motivates individuals to act responsibly beyond the incentives offered.

Communities and schools can play a pivotal role in environmental education by integrating Islamic teachings on nature, inspiring a new generation of environmental stewards.

This can involve incorporating eco-conscious sermons, study circles, and youth programs focused on sustainability through the lens of Islamic ethics. Central to this endeavor is the need to reform the current science curriculum in schools, replacing the dominant materialist approach to nature with a multiplex framework grounded in the Islamic worldview. The prevailing materialist paradigm reduces nature to a mechanistic system, devoid of meaning or purpose. In contrast, the Islamic multiplex worldview regards nature as meaningful, purposeful, and semiotic, reflecting divine wisdom. Curriculum reform is therefore a prerequisite for fostering new environmental ethics and sustainable practices. The new curriculum must integrate Islamic perspectives on the environment into both science and humanities education. Furthermore, environmental education should go beyond knowledge acquisition to inspire ethical action.

At the national level, governments typically rely on incentives such as tax breaks, subsidies, or regulations to promote sustainable behavior. However, these strategies can be strengthened by integrating a national ethos of ethical responsibility, drawn from religious and cultural values. Muslim scholars and policymakers can develop an *ecofiqh*, or environmental jurisprudence, that provides legal and ethical guidelines for national policies on resource management, waste reduction, and conservation. This body of law would address pressing issues such as water scarcity, pollution, and climate change from an Islamic ethical perspective. The development

of *ecofiqh* should align with an environmental reinterpretation of the *maqāṣid al-sharīʿah* (objectives of Islamic law), as previously outlined. This expanded framework would prioritize the preservation of nature (*ḥifẓ al-ṭabīʿah*) alongside traditional objectives such as faith, life, intellect, family, and property. By emphasizing that environmental preservation is a prerequisite for sustaining all aspects of human life and well-being, this approach integrates ecological concerns into the very purpose of religious law. This synergy between religious principles and legislative frameworks can inspire citizens to adopt sustainable practices.

At the global level, Islamic organizations can collaborate with other faith-based groups to promote multifaith initiatives aimed at environmental sustainability. By drawing on shared values of stewardship and respect for creation, religious communities can work together to influence international environmental agreements and policies.

Addressing overconsumption at all levels—individual, local, national, and global—requires more than just economic incentives or policy changes. A deeper, values-driven approach is needed to counteract the culture of excess. In this regard, contentment (*qanāʿah*), a central concept in Islamic ethics, offers a powerful antidote to the rampant consumerism driven by advertisements, fashion trends, and the constant pursuit of more. *Qanāʿah* encourages individuals to find satisfaction in what they have. This concept challenges the prevailing norms that equate success and happiness with

material possessions—a mindset that lies at the heart of excessive consumption. This insatiable drive, motivated by vanity and unchecked desires, transgresses the limits (*hudūd*) set by Allah and disrupts the balance (*mīzān*) of creation. This principle not only cultivates personal discipline but also promotes a collective ethical vision for sustainable living. By adopting *qanāʿah*, individuals are empowered to make conscious choices that prioritize needs over wants, reduce waste, and align consumption habits with spiritual and ecological responsibility.

The Case for a Plurality of Incentives

In this chapter, we explore the need for a sustainability framework that is not just based on economic and political motives but also integrates religious, spiritual, and ethical dimensions. Current sustainability efforts often focus on economic incentives, such as carbon taxes or subsidies for green energy, while overlooking the cultural and spiritual values that deeply influence human behavior. Here I call for **a multiplex framework** that combines practical strategies with a faith-based approach to enhance the effectiveness and reach of sustainability initiatives.

Many existing sustainability frameworks rely heavily on economic incentives designed to alter individual and institutional behavior. These approaches are rooted in market-based mechanisms, where the promise of financial

benefits—such as cost savings, tax breaks, or efficiency gains—serves as the primary motivator for adopting environmentally friendly practices. While these strategies have their merits, they often overlook the underlying attitudes, values, and motivations that drive unsustainable behaviors. The absence of religious and ethical dimensions in these frameworks represents a significant shortcoming, as they treat ethical behavior as secondary to economic objectives. This results in a superficial engagement with sustainability, addressing immediate issues while leaving the root causes of environmental degradation untouched.

A society comprises diverse individuals with differing motivations. For some, economic incentives may suffice to encourage pro-environmental behaviors, while for others, religious principles or ethical guidelines hold greater influence. For instance, strategies such as lowering utility bills might successfully motivate lower-income households to reduce energy consumption but have a limited impact on wealthier individuals who are less sensitive to small financial savings. This diversity illustrates the need for a range of incentives that can engage different segments of society effectively.

A multiplex incentive system, which combines economic, ethical, and religious incentives, is better suited to this task. By addressing diverse motivations, such a system broadens the reach of sustainability initiatives, contributing to a more comprehensive and robust strategy for fostering sustainable behaviors. For instance, framing overconsumption as both

an ethical failure and a violation of divine trust may create a stronger moral imperative for some individuals to adjust their behavior. This integration ensures that sustainability efforts resonate with the spiritual and ethical lives of believers while remaining economically practical. This underscores the necessity for a faith-based sustainability framework.

One key strength of such a framework is its integration of economic, ethical, and religious incentives. Secular sustainability models often rely solely on economic incentives such as tax credits, subsidies, or penalties, and overlook the influence of religious or ethical incentives in shaping human behavior. In contract, a multiplex incentive system combines economic incentives with religious teachings that frame sustainable behaviors as acts of worship and obedience to Allah.

For many, economic benefits are the primary driver for adopting environmentally friendly practices. However, financial incentives may be less effective in affluent societies. The spiritual obligation to protect creation and fulfill their role as stewards becomes a more compelling motivator. When economic incentives are combined with religious incentives, their binding power is greater. This system appeals to a broader range of motivations across different segments of society. By combining diverse incentives, the multiplex incentive framework ensures that sustainability efforts are effective at all societal levels, from individuals to institutions.

Nudging Pro-Environmental Behavior: A Multiplex Approach

As environmental issues such as climate change, pollution, and resource depletion continue to escalate globally, a growing body of research has focused on the role of human behavior in contributing to these problems. In particular, unsustainable habits like excessive waste generation, energy overuse, and improper disposal of recyclable materials have significantly worsened environmental degradation. Addressing these challenges requires a shift in daily behaviors toward more sustainable and eco-conscious choices. One innovative approach that has gained traction is "nudging," a concept from behavioral economics that subtly guides people's decisions without restricting their freedom of choice.

Nudging has emerged as a promising strategy for encouraging pro-environmental behavior. By designing the "choice architecture," or the environment in which people make decisions, nudging influences individuals to adopt sustainable practices without the need for restrictive policies or coercive measures. Recent studies have shown that nudging can significantly impact pro-environmental behavior in areas such as waste reduction, energy conservation, and sustainable consumption. For example, prompting techniques—using non-personalized information or reminders—raise awareness of environmental issues and influence behavior by making eco-friendly options more visible or socially acceptable (Cappa,

Rosso, Giustiniano, & Porfiri, 2020; Bhanot, 2021). Sizing interventions, such as increasing the size of recycling bins or reducing plate sizes, have been shown to encourage waste separation and reduce food waste, respectively (Kosīte et al., 2019; Vermote et al., 2018). Additionally, proximity strategies, such as setting default eco-friendly options (e.g., double-sided printing) or positioning sustainable products to eye level in stores, make it easier for individuals to engage in desired behaviors (Weßel et al., 2019; Kurz, 2018). Priming, which involves using environmental cues to influence spontaneous decisions, has also proven effective, such as painting footprints to guide people to recycling bins or stairs (Wu & Paluck, 2020).

However, the nudging frameworks that dominate today's sustainability practices are often grounded in secular, market-driven worldviews. These frameworks rely primarily on economic motivations, such as financial savings or convenience, to encourage pro-environmental behavior. To create a more holistic and effective approach to sustainability, however, these strategies must be accompanied by deeper ethical and religious motivations.

We propose what can be called "multiplex nudging"—a method that incorporates ethical and religious motivations into existing nudging strategies. By combining nudges with religious principles, such as the Islamic prohibition against excess and wastefulness (*isrāf*) and the ethical obligation of stewardship (*khilāfah*), we can create a stronger, more binding influence on individual and institutional behavior.

Effective nudging requires a careful consideration of both the target group and environmental context. Research shows that combining multiple nudging techniques can further enhance behavioral change, particularly in complex environments or diverse demographic settings (Chapman, Helmrath, & Derakshan, 2019). For instance, in an affluent society where economic incentives to reduce consumption might fail to resonate, the inclusion of religious motivations can fill the gap. In a faith-based community, for instance, nudges can be framed within the context of religious teachings on stewardship and care for creation. This not only strengthens the moral appeal of sustainable actions but also aligns these behaviors with the community's core values, and thus potentially increases engagement.

Similarly, some individuals are driven by utilitarian motivations, where their decisions hinge on personal or economic benefits—seeking the most favorable outcomes for themselves or society at large. From this perspective, environmental actions are rationalized based on their utility, such as saving money through energy conservation or reducing one's carbon footprint for long-term financial gain.

In a nutshell, we can categorize the diverse motives for people to engage in pro-environmental behavior into three major categories:

- Utilitarian motivations focus on personal or economic benefits. Individuals driven by utility seek outcomes that benefit them directly, such as prestige, saving money through energy conservation, or reducing their carbon footprint for future financial gains.
- Deontological motivations are rooted in moral duty. From this perspective, individuals act because they believe it is the right thing to do, regardless of any personal benefit or external rewards.
- Religious, spiritual, and ethical motivations stem from beliefs and convictions. These individuals are guided by religious teachings, such as the Islamic concept of *khilāfah* (stewardship) or the Christian idea of *creation care*.

To successfully nudge individuals toward sustainable practices, it is essential to recognize and harness these diverse motivations. The multiplex nudging approach provides a broader and more inclusive strategy that combines utilitarian benefits, ethical imperatives, and spiritual values. Policymakers can design more effective nudging interventions that appeal to a wider audience by acknowledging the various factors that drive behavior—be it financial incentives, a sense of duty, or religious beliefs. This holistic approach not only strengthens the immediate impact of nudges but also leads to a long-term behavioral change making pro-environmental actions more sustainable.

Practical Strategies and Mechanisms for Change

Building upon the previous discussion, I propose the following practical strategies to foster an environmentally conscious and ethical society:

1. Reframe the concept of nature to *āyah* and *amānah,* as outlined earlier.
2. Redefine the human role in the world as stewards of creation.
3. Revive the Qur'anic concepts of *istikhlāf* and *istiʿmār* as opposites to nature exploitation.
4. Revive the altruistic *futuwwah* ethics in our relationship with animals and plants.
5. Reaffirm that *isrāf*, excessive consumption, is both unlawful and unethical.
6. Challenge the prevailing notion that "you are what you consume and own."
7. Integrate religious and economic incentives in nudging strategies to promote pro-environmental behavior.
8. Encourage urban food production to foster a deeper connection with nature.
9. Support the innovation and adoption of alternative energy sources.

10. Promote the establishment of environmental *awqāf* (endowments) to raise awareness and fund sustainable initiatives.
11. Integrate these values into the K-12 curriculum, instilling environmental stewardship and ethical consumption in younger generations.

From Ḥalāl to Ṭayyib: From Letter of Law to Spirit of Law

The Islamic normative system is inherently multiplex; meaning it encompasses multiple levels of ethical and legal norms. This multiplexity is evident in foundational distinctions such as *fatwā* (legal opinion) and *taqwā* (piety), as well as *rukhṣah* (ethical leniency) and *ʿazīmah* (ethical rigor). Most notably, this multiplex nature of norms is reflected in the difference between *ḥalāl* (permitted) and *ṭayyib* (wholesome) as expressed in the Qur'an: "*So consume from the spoils of war that you have gained, that which is lawful and wholesome, and be conscious of Allah. Indeed, Allah is Forgiving and Merciful*" (Qur'an 8:69).

The verse highlights two levels of permissibility (*ḥalāl*). The first pertains to *ḥalāl* as what is legally permissible according to the letter of the law. In contrast, *ṭayyib* signifies excellence, embodying the spirit of Islamic law. Within the framework of *ḥalāl, ṭayyib* represents a higher standard: while not all that is *ḥalāl* is *ṭayyib*, all that is *ṭayyib* is inherently

ḥalāl. Ibn Daqīq al-ʿĪd (d. 1302) asserts that *ṭayyib* denotes that which is entirely *ḥalāl* and free from any legal uncertainty (*shubhah*) (Ibn Daqīq al-ʿĪd, 2012).

Ṭayyib, as a standard, demands that all interactions with nature—whether in production, consumption, or waste management—adhere to principles of environmental friendliness, sustainability, and harmony with the divine will. It extends beyond food to encompass all aspects of life including governance, human relations, speech, and ethical conduct. The term "*ḥalāl ṭayyib*," for instance, signifies that food must not only be inherently permissible (*ḥalāl*) but also wholesome (*ṭayyib*) in its source and manner of acquisition. This means it must align with the principles of the Sunnah and piety, ensuring that it is free from unlawful means or personal caprice (Zādah, 1875). This paradigm shift raises our perspective on environmental ethics from the baseline compliance of *ḥalāl* to the elevated, ethically mindful standard of *ṭayyib*. It aligns with the Qur'anic promise: "*Whoever does righteous deeds, whether male or female, while being a believer, We will surely grant them a good and wholesome life*" (Qur'an 16:97).

The term *fatwā* refers to a legal opinion issued in response to a specific question or situation. It represents the minimum legal standard as opposed to the *taqwā* which represents the highest ethical and spiritual standards, exceeding the basic requirements of Islamic law. The connection between *fatwā* and *taqwā* becomes clear when examined in relation to

rukhṣah and *ʿazīmah*. *Rukhṣah* represents leniency, permitting a departure from the default rule in situations of necessity or hardship, whereas *ʿazīmah* embodies moral rigor, maintaining the original obligation without concessions. The coexistence of these principles within the Islamic legal framework reflects divine mercy, offering believers flexibility in times of difficulty while encouraging them to strive for *taqwā* and *ʿazīmah* when circumstances allow. (Abū Zuhrah, n.d.; al-Juwaynī, 2010).[11]

As this overview of Islamic normativity highlights, the concepts of *ḥalāl* and *ṭayyib* extendto all aspects of life. In the proposed paradigm, I advocate for applying *ṭayyib* principles to our interaction with nature, shifting from mere legal compliance to embracing the ethical and spiritual essence of Islamic law. This means moving from *fatwā* to *taqwā*, from *rukhṣah* to *ʿazīmah* in our treatment of Allah's creation. Currently, a narrow legal perspective dominates our relations with nature, focusing primarily on the prohibition of alcohol and pork. However, this approach must be broadened to encompass all practices within the chain of production and consumption, promoting a higher level of awareness within the Muslim community. A narrow legal focus on prohibiting alcohol and pork corresponds to *fatwā* and *rukhṣah*, addressing the minimum legal requirements and baseline

11 For further elaboration of those terms, see Muḥammad Abū Zuhrah, *Uṣūl al-Fiqh* (Dār al-Fikr al-ʿArabī, n.d.), 50; Abd al-Malik al-Juwaynī, *Nihāyat al-Maṭlab fī Dirāyat al-Madhhab*, vol. 1 (Dār al-Kutub al-ʿilmiyyah, 2010), 460.

leniency. Expanding this approach to encompass ethical and sustainable practices reflects *taqwā* and *ʿazīmah*, embodying a higher spiritual consciousness and striving for excellence in fulfilling the spirit of Islamic law.

In summary, the distinction between *ḥalāl* and *ṭayyib* elevates Islamic ethics from legal permissibility to ethical excellence. While *ḥalāl* defines what is legally permissible, *ṭayyib* signifies what is pure, wholesome, and aligned with higher moral and spiritual objectives. Many products and practices may meet the minimum legal requirements of *ḥalāl* but fail to meet the higher ethical and environmental standards of *ṭayyib*.

For instance, processed foods like soft drinks and snacks, pesticide-laden or genetically modified crops, factory-farmed animals raised in inhumane and environmentally harmful conditions, single-use plastics, harsh chemical detergents, and non-biodegradable packaging, all fall short of *ṭayyib* standards.

To this end, I propose developing a *ṭayyib index* alongside a *ḥalāl index* to inspire the Muslim community to transcend a narrow legal perspective rooted in the letter of the law. Allah calls us to uphold *ṭayyib* standards in our lives, as exemplified by the Qur'anic ideal of *al-ḥayāt al-ṭayyibah* (the good and pure life), which can only be attained through the highest ethical and moral standards.

Interventions in nature, including production, consumption, marketing, and resource distribution, must be re-evaluated

through the lens of the Sunnah of the Prophet, which embodies the highest standards of *ṭayyib*. The Sunnah serves as a definitive reference, establishing the standards of *ṭayyib*, *taqwā*, and *ʿazīmah*.

A well-developed *ṭayyib* index can significantly improve production and consumption practices, making them more environmentally friendly. By aligning these practices with the principles of *ṭayyib*, the index would promote sustainability, ethical responsibility, and greater awareness.

Practices that harm nature, disrupt biological systems, pose health risks, or contribute to pollution—along with unjust methods of production, marketing, and distribution—are I incompatible with the standards of *ṭayyib*. While such practices may be legally permissible (*ḥalāl*), they fall short of the higher ethical and environmental criteria that *ṭayyib* demands. Foods linked to diabetes, cancer, and other health issues, as well as environmentally harmful detergents and non-biodegradable plastics, do not meet *ṭayyib* standards.

Ostentatious consumption of natural resources and overeating are incompatible with the principles of *ṭayyib* as they contradict the ethos of moderation, sustainability, and ethical responsibility emphasized in Islamic teachings. As previously mentioned, *ṭayyib* extends beyond mere permissibility (*ḥalāl*) to align with higher moral and spiritual objectives—preserving balance and preventing harm. Excessive consumption, driven by luxury or display, often

disregards environmental, social, and ethical consequences, violating the Qur'anic command to avoid excess. Moreover, it disrupts the balance (*mīzān*) established by Allah, leading to environmental degradation and unsustainable practices, all of which are fundamentally opposed to the spirit of *ṭayyib*.

The Ṭayyib Index

To guide individuals and communities align with higher ethical and environmental standards, a *Ṭayyib Index* can serve as a benchmark for evaluating products, services, and practices. The index moves beyond the basic compliance of *ḥalāl* (legal permissibility) to embrace *ṭayyib* (wholesomeness), which considers health, environmental sustainability, ethical practices, and social responsibility.

The Ṭayyib Index must evaluate products, services, and practices across at least six main aspects: *ḥalāl* compliance, health impact, environmental sustainability, ethical production, social responsibility, and cultural integrity. Below are two tentative examples to illustrate how the index might evaluate commonly consumed items. These are not definitive assessments but are meant to demonstrate the potential application of the index.

Example 1: Coke

→ *Ḥalāl* Compliance: Generally compliant with Islamic law, as it contains no prohibited ingredients (*pass*).

→ Health Impact: High sugar content is linked to health issues like obesity and diabetes (*fail*).

→ Environmental Sustainability: Plastic packaging contributes to pollution and microplastics (*fail*).

→ Ethical Production: Concerns over water resource exploitation and labor practices (*fail*).

→ Social Responsibility: Limited societal benefit and focus on profit (*fail*).

→ Cultural Integrity: Promotes overconsumption and luxury culture, which conflicts with Islamic values of moderation (*fail*).

Tentative Ṭayyib Rating: While *ḥalāl*, coke does not meet the higher ethical and environmental standards of *ṭayyib*.

Example 2: Organic, Free-Range Meat

→ *Ḥalāl* Compliance: Compliant if slaughtered according to Islamic law (pass).

→ Health Impact: Free from harmful additives, antibiotics, and hormones (pass).

→ Environmental Sustainability: Lower carbon footprint than conventional meat production (pass).

→ Ethical Production: Humane animal treatment and ethical farming practices (pass).

→ Social Responsibility: Supports local farmers and sustainable livelihoods (pass).

→ Cultural Integrity: Aligns with Islamic values of compassion and stewardship (pass).

Tentative Ṭayyib Rating: Meets *ṭayyib* standards, combining legal permissibility with ethical and environmental excellence.

While the *Ṭayyib Index* offers a promising framework, further research and collaborative efforts are essential to substantiate its implementation.

Towards a Multiplex Sustainability Policy

By grounding environmental ethics in the semiotics of nature, we move beyond the limitations of uniplex approaches, offering a multiplex framework that speaks to the heart, mind, and soul. This comprehensive perspective that is more inclusive and deeply resonant contrasts with current sustainability models, which are often disconnected from the spiritual and religious dimensions of human existence. Unlike existing frameworks that often prioritize economic incentives or political mandates, the multiplex sustainability policy addresses the core issue of the environmental crisis: humanity's spiritual disconnection from its Creator and the natural world. This disconnection has fueled unsustainable practices rooted in selfishness and short-term gains. In contrast, the multiplex approach reawakens a

sense of moral responsibility that extends beyond personal interest to embrace the collective good of all creation.

The integration of *ṭayyib* principles into consumption and production practices, the development of *ecofiqh*, and the promotion of altruistic environmental ethics offers a holistic approach to sustainability. *Ecofiqh* provides practical legal guidance that enables individuals, communities, and institutions to align their behaviors with ecological responsibility, ensuring that actions are not only compliant with the law but also serve the greater good of creation. The *ṭayyib* principles raise environmental stewardship beyond mere legal compliance (*ḥalāl*) to a higher standard of ethical excellence. Meanwhile, altruistic ethics emphasize selflessness, highlighting that care for the environment and the natural world is not merely a duty but a path to collective well-being, reinforcing the interconnectedness of all living beings.By adopting this comprehensive approach, we take a significant step toward fulfilling the Qur'anic vision of *al-ḥayāt al-ṭayyibah*, a good life for all creation.

بسم الله الرحمن الرحيم

اللَّهُ نُورُ السَّمَاوَاتِ وَالْأَرْضِ ۚ
مَثَلُ نُورِهِ كَمِشْكَاةٍ فِيهَا مِصْبَاحٌ ۖ الْمِصْبَاحُ فِي زُجَاجَةٍ ۖ
الزُّجَاجَةُ كَأَنَّهَا كَوْكَبٌ دُرِّيٌّ يُوقَدُ مِن شَجَرَةٍ مُّبَارَكَةٍ زَيْتُونَةٍ لَّا شَرْقِيَّةٍ وَلَا غَرْبِيَّةٍ

"God is the Light of the heavens and the earth.
The allegory of His light is that of a pillar on which is a lamp.
The lamp is within a glass. The glass is like a brilliant planet,
fueled by a blessed tree, an olive tree, neither eastern nor western.
Its oil would almost illuminate, even if no fire has touched it.
Light upon Light. God guides to His light whomever He wills."

(The Qur'an 24:35)

CONCLUSION

Stewardship Again
Serving the Creation for the Love of the Creator

This book has journeyed through the conceptual, ethical, and practical dimensions of our relationship with nature, culminating in the rediscovery of stewardship (*khilāfah*) as a foundational principle for environmental ethics. At its heart lies a profound truth: the horizontal relationship between humans and nature cannot be fully understood or ethically configured without considering the vertical relationship with the Creator. It is through this divine connection that the terms of our relationship with creation are defined, imbuing it with purpose, balance, and responsibility.

Excluding the Creator from our relationship with His creation has left a void—one that modern materialist paradigms have filled with notions of exploitation and domination, leading to devastating environmental consequences. The last few centuries have demonstrated that this approach not only harms nature but also alienates humanity from its own existential purpose. It is now clear that reconnecting with the

Creator is essential to restoring harmony in our relationship with the natural world. The vertical relationship with God must once again guide our interactions at the horizontal level, recharging nature with meaning and transforming it from a resource to be consumed into a sacred trust to be cherished.

Our project, then, is to reclaim the ancient legacy, where nature was not stripped of meaning but celebrated as a reflection of divine wisdom. We seek to unearth and revive this global legacy of humanity, lost in the process of uniplex modernization and secularization. This revival of meaning is a necessary step toward creating a new environmental ethics rooted in universal values that transcend utility and exploitation.

Changing the way we view nature is essential to transforming how we treat it and redefining our relationship with it. A paradigm shift in perception—from seeing nature as a mere resource to recognizing it as a meaningful, interconnected, and divine creation—holds the key to fostering more ethical and sustainable interactions with the environment.

To achieve this, integrating the semiotics of nature with scientific inquiry is imperative. The semiotics of nature emphasizes the symbolic and purposeful aspects of the natural world, viewing every element as a sign (*āyah*) pointing to its Creator and carrying deeper meanings about existence, balance, and interconnectedness. On the other hand, scientific

inquiry provides the empirical and analytical tools to understand nature's mechanisms and systems.

The question posed at the outset—can we study both causality and meaning in the universe?—finds its answer in the framework presented in this book. Yes, causality and meaning are not mutually exclusive but complementary. Scientific explanations uncover causal relations in nature while also explaining the deeper and symbolic meaning of nature. Together, they provide the foundation for a renewed environmental ethics, one that transcends materialism to embrace a more purposeful vision of humanity's role as stewards of the Earth. This is the essence of serving creation for the love of the Creator. Thus, the future of environmentalism must rest on a foundation of holistic stewardship that integrates science, ethics, and spirituality. This vision requires a departure from exploitative paradigms and a movement toward systems that honor the interconnectedness of all life.

Traditional cultures spanning from China to Latin America, Africa, Europe, and Asia all held a deep interest in the meaning of nature. Only with the rise of positivism did academics and scholars start thinking that it is not possible to pursue both simultaneously. According to this view, an interest in the meaning of nature might hinder or obstruct scientific inquiry into causal relationships in nature.

The eradication of nature's meaning, observed by many sociologists of science, was notably described by Max

Weber as the "disenchantment of the world." He observed that modern people who adopted the positivist scientific view were no longer interested in the meaning of nature. Their focus had shifted solely to the causal relations of the world between objects or natural phenomena. However, did traditional cultures simply accept this disenchantment of the world, or was there resistance? The answer is that there was some pushback.

Thinkers like Shah Waliullah al-Dihlawī from India and Ibrahim Hakki from the Ottoman world, among others, have consistently defended the meaning of nature. Said Nursi should be considered alongside these thinkers. We should also mention Osman Bakar, Naquib Al-Attas, Seyyid Hossein Nasr and Taha Abdurrahman, among many others. These scholars did not reject science or its causal explanations of the natural world; rather, they opposed the reductionist view that denies or eliminates the interpretive and symbolic meanings embedded in nature. They held the conviction that the scientific study of causal relations and the hermeneutic, interpretive study of nature could and should coexist. By coupling these perspectives, these thinkers have provided a robust framework for engaging with nature in a way that respects both its physical and metaphysical dimensions.

What I call semiotics of nature is the study of nature as signs. These thinkers all share the belief that God gave objects in the world a semiotic function. This semiotic function is the natural meaning assigned by the creator to the objects in

nature, indicating the existence of their creator. All objects in the world are signs indicating a Creator. Thus comes the argument: Everything stands for its maker.

This can be further analyzed by revisiting the previously posed question: What is a rose? To botanists, it is a plant but is that all it is? Why do lovers give each other roses? It's not merely a plant. It carries a deeper meaning, a symbolism that cannot be studied by botany alone. Providing an answer requires the perspective of another discipline. Similarly, consider the question: What is a human being? Biology examines humans at the physical level, analyzing anatomy, physiology, and genetics. While valuable, this perspective is limited; it cannot address the deeper questions of purpose, meaning, or the essence of being human. Traditional perspectives offer a richer understanding, viewing the human being as the image of God, a microcosm of divine attributes, and a small universe (*ʿālam ṣaghīr*) within the larger cosmos. These profound dimensions, central to many religious and philosophical traditions, remain inaccessible to modern science, which focuses primarily on material and causal explanations.

There are many similar questions where science, with its causal explanations, provides valuable insights but falls short of offering a comprehensive understanding. Meaning and symbolism, integral to understanding the human experience and the natural world, require interpretive and multidisciplinary approaches that transcend the limits of

empirical science. Only through such a holistic perspective can we achieve a fuller comprehension of life and existence.

Thus, the semiotics of nature, as a project, can be understood as the linguistification of nature or the linguistification of the world. This idea draws a parallel with Jürgen Habermas's project, articulated in the introduction to his book *The Theory of Communicative Action*, where he describes the linguistification of social theory. Habermas's work focused on interpreting society as a text, embedding human interactions within frameworks of meaning and communication. While contemporary scholars remain invested in the linguistification of society—analyzing social structures and processes as interpretable texts—they have largely overlooked the potential of applying this framework to nature.

The semiotics of nature seeks to fill this gap by proposing that the natural world, much like society, can be read as a text imbued with meaning. Every element in nature, from a tree to a river, carries semiotic significance, serving as a sign (*āyah*) that points beyond itself.

Traditional cultures universally embraced the idea of linguistifying nature and the world, viewing them as a divinely authored book filled with meaning and signs. Scholars who adopt the multiplex approach have actively defended this perspective against the reductionist positivist understanding of nature, which strips it of meaning and confines its study to material and causal explanations. By reaffirming the metaphor

of nature as a book, these thinkers challenge the notion that science and spirituality are incompatible. They argue instead for an integrated approach that respects both the empirical study of natural phenomena and the interpretive exploration of their meanings.

This kind of effort requires a **multiplex ontology**, one that recognizes the world as existing on multiple levels. At its core is the understanding that there is a material level where causal relations exist, but also an interpretive level where meaning and symbolism emerge. These levels coexist, offering a richer and more comprehensive view of existence. Thus, multiplex ontology enables us to perceive the world not just as a physical reality but also as a repository of signs and meanings, pointing to higher truths.

Similarly, this perspective necessitates a **multiplex epistemology**—an acceptance of multiple ways of knowing. Scientific knowledge, grounded in causal relations and empirical analysis, exists alongside interpretive knowledge, which seeks to decode the deeper meanings embedded in nature. These forms of knowledge are not mutually exclusive but complementary, creating a more holistic understanding of the universe. To study and produce these two types of knowledge effectively, we need a **multiplex methodology**, employing diverse methods suited to their respective domains. This layered approach produces a **multiplex concept of truth**, where multiple truths coexist and enrich each other without conflict. In traditional Islamic philosophy, this layered

understanding was captured by the term *marātib al-wujūd* (hierarchies of existence).

While multiplexity may seem similar to postmodernism, which embraces relativism, there is a crucial distinction. The multiplex view does not reject the possibility of absolute truth. Instead, it accommodates absolute truth as one level, alongside relative truth and subjective truth, and acknowledges their coexistence. This approach contrasts sharply with postmodernism's tendency to deny absolutes.

Viewed in this way, the multiplex concept of the world and science builds upon the strengths of positivism. Positivism facilitates the exploration of natural laws and the discovery of causal relations, but it stops there. The multiplex approach extends this framework by adding another dimension: the semiotics of nature. This additional layer enables us to explore not just how things work but also why they exist and what they mean, addressing both causality and purpose.

In contrast, positivism is inherently reductionist, operating within a unilayered ontology that acknowledges only material existence. This singular focus leads to a unilayered epistemology, recognizing only one form of knowledge and necessitating one method that yields one-dimensional truths. The multiplex framework overcomes this limitation, offering a multi-level approach that couples empirical and interpretive perspectives.

Today, I propose exploring the potential applications of this multiplex approach to science and the world. This

perspective, long upheld by Muslim scholars and thinkers from various religious traditions, offers several compelling advantages. First, the multiplex approach to scientific discourse accommodates different views and opinions, thereby preventing conflicts. It prevents intellectual and theological disagreements from turning into social and political conflicts, as well as allows the coexistence of different discourse communities, as was practised throughout the Muslim civilization. Each discourse had a place in their community. In an unilayered system, conflicts arise when we talk about different levels but perceive it to be contradictory due to our lack of acknowledgement of the existence of multiple layers. A multiplex approach accommodates different views with ease, preventing theological and academic disagreements from turning into social and political disagreements.

The second advantage of adopting a semiotic approach to nature is its ability to **recharge nature, the human body, and social relations with meaning**. Modern scientific paradigms, particularly those influenced by positivism, tend to focus exclusively on material and causal explanations, often neglecting the symbolic and interpretive dimensions of existence. This has left a void—a lack of meaning—that is acutely felt in our contemporary world. The multiplex approach addresses this gap by incorporating the semiotic dimension, viewing nature, human existence, and society as interconnected systems rich in purpose and symbolism. By

doing so, it offers a deeper, more holistic understanding that resonates on intellectual, emotional, and spiritual levels.

The third advantage of this approach is that it provides a robust foundation for developing environmental ethics. By conceptualizing nature as a book and every object within it as a sign imbued with meaning, this approach transforms our relationship with the natural world. Rather than viewing nature as a collection of resources to be exploited, the semiotic perspective nurtures a sense of reverence and responsibility. It lays the groundwork for a new environmental ethic that is not only practical but also rooted in ethical principles. This paradigm shift redefines our engagement with the environment, moving from exploitation to stewardship, and encourages sustainable practices aligned with the divine will.

In an age dominated by positivism, often upheld as the official ideology in many nations, the multiplex approach provides a vital counterbalance. Youth today, influenced by materialist perspectives, are searching for meaning. By embracing this holistic view, the younger generation can retain the empirical rigor of positivism while gaining a more meaningful understanding of their role as stewards of the Earth.

The Qur'anic values articulated in this book provide the foundation for a multiplex environmental ethics and sustainability policy. These values move us beyond anthropocentric frameworks to embrace a vision of stewardship

that acknowledges humanity's responsibility to protect and nurture the ecosystems upon which all life depends.

1. *Āyah* (Sign): Nature is a book, and every natural object is a sign pointing to its Creator for us to read and understand.
2. *Niʿmah* (Gift, Provision): Nature is a gift from God to humanity to enjoy.
3. *Amānah* (Trust): Nature is entrusted to humanity as a divine trust, requiring protection and stewardship.
4. *Khidmah* (Service): Nature is a companion meant to be served with care and respect.
5. *Shukr* (Thanksgiving): Nature is a divine blessing for which we should give thanks.
6. *Fikr* (Contemplation): Nature is a source of wisdom, inviting us to contemplate and learn from its lessons.
7. *Dhikr* (Awareness, God-consciousness): Nature is full of reminders for humanity to recall the Creator with praise and gratitude.

These values pave the path forward for the creation of a new multiplex and altruistic environmental ethics. These conceptual foundations and values compel us to a call for action towards sustainable and meaningful stewardship. To bring these ideas into practice, we must incorporate them into environmental policies, educational frameworks, and personal

ethics. In particular, each one of us should think about how every individual can become an agent of change in fostering a meaningful connection to nature.

This journey begins with each of us. Every individual holds the potential to become an agent of change, first establishing a meaningful connection to nature themselves and promoting sustainable practices in their sphere of influence. Together, we can build a world that aligns with the Qur'anic vision of *al-ḥayāt al-ṭayyibah*, a good and wholesome life, for all creation.

We love the creation for the sake of its Creator.

—Yunus Emre

قال الله تعالى في كتابه الكريم: إِنَّكَ لَعَلَىٰ خُلُقٍ عَظِيمٍ

"Allah said in His Noble Book: Indeed, you are upon noble character."

(The Qur'an 68:4)

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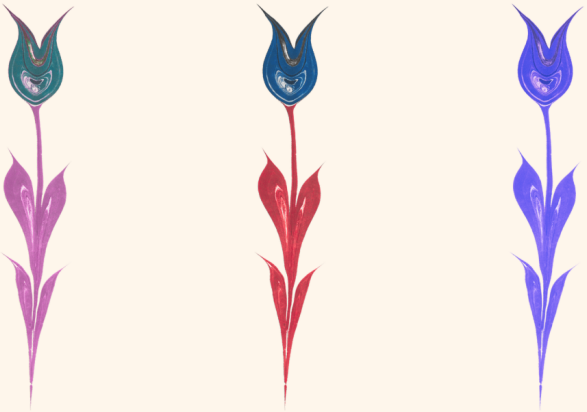

What is nature to us? Is it a resource to exploit or a book to read? This book addresses that question with the aim of restoring an ethical relationship with nature and offering a new multiplex environmental ethics for urgent action. All traditional cultures, both in the East and the West, saw nature as a sacred book full of messages from its Creator. Islamically, every being in existence is a sign (āyah), and the world itself is al-ʿālam—the Sign. Yet, in recent centuries, a paradigm shift in our understanding of nature has led to viewing it only as a resource for exploitation, with detrimental consequences for the environment. The environmental crisis is, therefore, fundamentally a moral crisis in our relationship with nature.

This book employs Semiotics to transform our perception of nature, from a resource to a book, by expanding the study of signs beyond science, culture and language to include signs in nature.

To read the book of nature, we must *hear without ears what is said without a tongue.*

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