

The Nature of Morality

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Empty is the argument of the philosopher which does not relieve any human suffering.

– Epicurus

If you are like most people, your interpretations of events in your life and in the world depend to a substantial degree on your own personal understanding of *how the world works*. Is the world a jungle, or is it, on balance, a reasonably sane place? Are people more selfish than altruistic—or vice versa? Can most people be trusted—and with what? Are most men [fill in your choice]? Are most women [fill in your choice]? Can governments play constructive economic and social roles, or should they be kept as small as possible? Will free markets, left to themselves, naturally lead to a healthy, fair, and sustainable world? Do humans have a responsibility to care for the environment—or will it somehow take care of itself? Is life more happy than sad, or more sad than happy?

Your understanding of how the world works—i.e., your worldview and key paradigms—also influences your feelings, your responses to the actions of others, and your own goals and actions. The way you *perceive* the world, along with your personal *understanding* of the world, combine with human nature, your temperament and biochemical balances, your surroundings, culture, and proximate events to influence—often strongly—how you feel, think, choose, and act.

Typically, much of this process occurs subconsciously, beyond awareness. People don't usually sit around and ask themselves, "How are my worldviews and paradigms influencing what I think about so and so, how I'm feeling, or what I'm about to do?" More often than not, it just happens, and we go with the flow. In many ways, our worldviews and paradigms act like *automatic* lenses through which we see and interpret the world.

It is curious that, as important as our worldviews and paradigms are, we usually don't spend much time (if any) identifying them, questioning them, and improving them. They act as hidden frameworks to help us prioritize, organize, and make sense of the vast volumes of experience and information that life bombards us with. They are simplifying mechanisms. They are shortcuts. They are habit-forming. They are comforting. They are self-reinforcing. And we are usually very reluctant to change them. After all, replacing an old paradigm with a new one requires us to acknowledge, if only to ourselves, that our old paradigm was incorrect in some way. Doing so also requires that

we see in a new light the tall pile of old evidence we had *selectively* accumulated in support of the old paradigm.

Consider this example: Throughout most of history, the prevailing paradigm of the structure of the universe was Earth-centric, involving a stationary Earth at its center, circled by a multitude of celestial bodies. This model of the universe is known as the Ptolemaic system, after the 2nd century Greek astronomer Ptolemy. It is easy to imagine why this Earth-centric view was believable and *believed* by most people until late in the 17th century: It's what their parents and communities taught them as children; It seemed to fit quite well with everyday experience; It was appealing to think of Earth as the center of all existence; And there seemed to be no other understandable or attractive view to seriously consider.

What is revealing (as well as instructive) is the degree to which people held on to the Ptolemaic Earth-centric paradigm even in the face of increasing evidence that contradicted it. As centuries passed, and as astronomers' observations of the stars, planets, sun, and moon became more precise, the Ptolemaic model was merely adjusted—in rather elaborate and contrived ways—to *try* to accommodate the new observations, which it was never quite able to do. Despite this, belief in the Earth-centric paradigm persisted well *after* the Polish astronomer Copernicus proposed his sun-centric view of the solar system in the first half of the 16th century. Indeed, the Copernican view did not begin to gain many adherents until much later, when Galileo made observations (of Jupiter's moons) which were supportive of the new paradigm and Johannes Kepler described the corresponding laws of planetary motion in mathematical form. The Copernican view was still highly doubted and highly controversial at the time of Galileo's death, *nearly one hundred years after Copernicus published it*. Alas, history shows that human societies are very wary, and usually very slow, to discard old paradigms and adopt new ones—and will often perform amazing feats of mental gymnastics to avoid doing so.

Our worldviews and paradigms are much more important to our lives than many of us might think. They play central roles in how we perceive the world, how we think, how we feel, and what we do. “Is there something wrong with my fiancé, or is he no different from most men?” “Should I marry Sally?” “Should I divorce John?” “Should I be a teacher, a musician, a lawyer, or an investment banker?” “Should I start my own company?” “Is it fine for me to dedicate my energies to selling product X—a product without any redeeming value—to as many people as I possibly can, following the philosophy *caveat emptor*: let the *buyer* beware?” “Who should I vote for in the next election?” “How can I find meaning?” “How can I enhance the happiness of my life?” When we ask such questions, our answers depend to a great degree on our worldviews and paradigms—often in ways beyond our awareness. Not all answers are equal. Some worldviews and paradigms are more accurate in the way they reflect the world, more practical, and more conducive to happiness than others.

So, worldviews and paradigms are important. Point granted. But we are not here, today, to consider all of the various types of worldviews and paradigms, of course. We already

know, now, that Earth is not the center of the universe. We already know, now, that the physical world, including ourselves, consists of extremely large numbers of very small particles or perhaps wave-particles, “strings,” packets of energy, or some combination. We already know, now, that life on Earth involves many important balances—although in many cases we don’t clearly understand all the relationships or just how fragile these balances are. These insights have made their way into the worldviews and paradigms of many, and perhaps most, modern humans.

That said, there are several vitally important dimensions of life in which our worldviews and paradigms are widely varying and subject to much confusion and conflict. One of these is best represented by the questions, How *do* people act with respect to each other, and how *should* people act with respect to each other? More broadly, because we share a planet not only with each other but also with other species, these questions become: How *do*—and how *should*—humans act with respect to each other, with respect to other species, and with respect to the natural environment? These are, of course, questions of human morality.

Current Moral Paradigms

Our worldviews and paradigms associated with morality are vitally important to our lives. They influence how we perceive, understand, react to, and live with *each other*. They influence how we relate to other species and how well we take care of the natural environment. They influence how we treat our families, our neighbors, and people of other countries. They influence the ways in which we find meaning in life. They influence our quest for happiness as well as the levels of happiness we may ultimately enjoy. They will influence the future and nature of the United States. And they will influence our effectiveness in addressing the pressing problems of the modern world.

What, then, are the main worldviews and paradigms that shape and reflect how most people today think about human morality?

- Many people believe that moral principles are direct creations of God. Many also believe that God’s wishes, along with the rewards of an afterlife, are the most powerful incentives for humans to act morally. If God did not exist, many argue, there would be no real basis for moral principles or, in any case, most people would not be motivated to act morally. Some believe that moral anarchy would result.
- Many people believe that moral principles do not exist in any real or objective sense. They believe that morality is a mere invention of human imaginations—a cultural construct. Many believe that moral principles are matters of opinion and largely “relative”—that no person’s moral principles are any more or less valid than any other person’s principles. This view holds that morality has little or no relationship to, and is not rooted in, the natural world.

- Some people (many worldwide) believe that fundamental moral principles exist as part of the universe in a way that is beyond reach of conventional scientific understanding. While many of these people do not believe in a god, they believe in karma—and perhaps successive reincarnations—influenced by a person’s actions relative to universal spiritual-moral principles.
- Some people believe that moral principles, while not rooted in the natural world, can nevertheless be discovered and defined by pure human reason. They assume that reason alone—divorced from natural principles and from the realities of human nature—can lead us to universal moral principles.
- Some people believe that the “Darwinian” world in which we evolved is overwhelmingly “red in tooth and claw” and is only capable of producing beings who are predominantly selfish and immoral—or at best amoral—by nature. Many believe that the world is a *jungle* and that people who want to get ahead, or even survive, must act accordingly. Some believe that morality is merely a construct of naïve idealists.
- A modest but growing number of people, including many scientists, believe that human social-moral capacities and sentiments are products of evolution and that other animals have rudimentary, less evolved forms of many of these same capacities and sentiments. People with this view differ in the degrees to which they ascribe human moral capacities to genetic factors, to environmental factors, or to intimate interrelationships between the two. People with this view also differ in the degrees to which they believe that other advanced animals—especially chimpanzees and bonobos (our closest primate relatives), but also elephants and dolphins—share many of our emotional and cognitive capacities, in kind if not in degree.

Quite a few people seem to have their feet in two or more of these views, combining or balancing among them, not quite sure which footing is the most solid, sound, and practical. For example, surveys show that many people who believe in evolution also believe in God. Many of these people feel that evolution was apparently God’s mechanism for creating life after He/She formed the universe and got the first form of life started. Of course, depending on each person’s version of each of the worldviews listed, they are not necessarily all mutually exclusive: It is possible that some aspects of some of these worldviews can co-exist in an accurate description of the universe—which we may never know.¹

How much do these diverse moral worldviews and paradigms influence our lives? How do they influence how we perceive others, react to the actions of others, make major life decisions, and try to solve shared problems? The answers to these questions can be summed up in two words—*significantly* and *profoundly*.

A separate question is, What types of problems result when moral paradigms clash and when the people or nations involved cannot find *common ground*? Although I won’t

address this question here, many aspects of the answer are readily apparent in world events, and some are summarized in *The Obligations Of Reason*.²

Understanding Morality

In *The Obligations Of Reason*, I present a way of understanding morality—a theory of morality, a moral paradigm—based on principles of the natural world, the dynamics of evolution, our own evolutionary development, and human nature. The resulting understanding of morality falls into the sixth category listed above and involves, among other things, a *natural moral system*. It is based on an understanding of aspects of the world that are within the scope of the sciences and on scientifically-informed answers to philosophical questions, and is readily open to advances in scientific understanding. My purpose in this essay is to touch on some aspects of this understanding that are most relevant to the requirements a reader might have (consciously or subconsciously) when considering a potential paradigm shift. Put another way, in this essay I attempt to address the subject of morality in terms of fundamental aspects of any new paradigm that people often must “see” and understand before being able to adopt it.

Naturally, as readers of *The Obligations Of Reason* will see, the book itself provides more context and, most importantly, explains the existence, nature, dynamics, principles, and implications of the natural moral system (NMS) in more detail than contained below. In particular, the book explains and describes the NMS in terms of evolutionary principles and related aspects of human behavior. It also addresses the important topic of happiness and, as the title suggests, the obligations we have to use our human gift of reason, as well as our gift of imagination, to address the challenges of our modern world.

The understanding of morality described in *The Obligations Of Reason* rests on the following foundation:

- The human species—including our human nature—is a product of evolution. Because we are a social species, and because we *developed as* a social species, many aspects of human design and human nature exist to help us manage the demands of life in a social species successfully. These aspects of our design and nature constitute human social-moral nature.
- Human social-moral nature involves biological, emotional, and cognitive components, capacities, dynamics, predispositions, and tendencies. Of course, our biological, emotional, and cognitive domains are inextricably linked to each other—with our underlying biological mechanisms enabling and influencing our emotional and cognitive lives, *and* our emotional and cognitive lives influencing aspects of our biology as well as each other. By definition, if understood correctly, human social-moral nature is *universal* to the human species.³

- Human social-moral nature did not arise suddenly out of “thin air”, without context. It is rooted and grounded in the natural-physical world and in our evolutionary development.
- Human social-moral nature defines, gives rise to, and corresponds to a human *natural moral system*. Put another way, the human natural moral system (NMS) reflects the social-moral capacities, dynamics, predispositions, and tendencies inherent in human nature. Furthermore, the NMS does *not* exist without context or effective purpose; as I will describe, it has both.⁴
- The natural world and its properties provide—and serve as—a *valid basis* for a moral system.⁵ Nature satisfies the basic criteria that we can reasonably expect or require of any moral system *basis* from a scientific standpoint:
 - Nature is real.⁶
 - Nature acknowledges and rewards an *end*. The end (as in *state, outcome, or effective goal*) that nature acknowledges and rewards is *existence*. For forms of life, we call existence *survival*. Ultimately, nature acknowledges and rewards the survival of genes from generation to generation and, through genes, of species.⁷
 - Nature discerns and differentiates.⁸
 - Nature’s fundamental dynamics are directional, not random.⁹
 - Nature’s principles and dynamics work through action and reaction (interaction), cause and effect, input and output. Nature manifests consequences. In these senses also, nature is not random.¹⁰
 - Some actions and events are more productive in contributing to the *end* of existence and (for life) survival than other actions. In other words, some actions *contribute to* this end, in different degrees, while others *detract from* it, while others are inconsequential. Not all actions and events are equal when viewed in terms of their immediate and ultimate impact on this end—that is, on existence and survival.¹¹

It is very helpful to consider these characteristics of the natural universe when considering moral paradigms. For example, some people fear that there might not be any *basis* for the existence of morality if not for God. They wonder, How could morality have come about unless it was the conscious creation of some wise being? They may feel this way in part because they think of nature’s properties as relatively random, directionless, and without order. At the same time, some people who are not religious are influenced by a similar assumption: They assume that, because they don’t believe in a god, they can find no *real* basis for morality—no *real* source for moral principles that are anything more than cultural

opinions, none of which seem any more valid than others. In contrast, seeing that nature's fundamental principles do in fact have basic characteristics that *can* give rise to moral principles is an important step in understanding the new paradigm.

Assumptions that lead some people to conclude that nature could not possibly provide a basis for morality or generate moral behavior are misleading. Perhaps the most significant of these is the idea that, since there are so many harsh, painful, and apparently unfair events in nature—and thus nature herself appears to be amoral from our standpoint—she could not possibly give rise to species with naturally-formed moral capabilities, qualities, and tendencies.¹²

- The effective *end*—the effective *function*—of the natural moral system is gene and species survival. Human social-moral nature and the NMS evolved under the pressures of natural selection, acting upon genetic variation, to serve this end. There is an intimate correspondence between the *form* of the NMS (its nature, dynamics, principles, and so forth) and its effective *function*, gene and species survival. Indeed, the best way to comprehend the NMS is by understanding this correspondence, this *fit*, between form and function.¹³
- The dynamics of the NMS are results of the fundamental dynamics of nature, the most basic requirements of life, and the nature of the evolutionary process—in particular, the pressure of natural selection acting upon genetic variation. In effect (though certainly *not* consciously), the pressure of natural selection acting upon genetic variation serves to translate and convert the directionalities and differentiating qualities of nature's fundamental principles into social-moral dynamics that are directional and differentiating in their own right.¹⁴
- The bottom-up, organic, “trial-and-error, what-works-survives” aspect of evolution (and life) in the natural world, *combined with* the top-down, reality-based, “existence-is-what-nature-acknowledges” argument, taken together, provide the superstructure for understanding morality. These bottom-up and top-down perspectives meet, complement, and complete each other. They are like two pieces of bread in a sandwich. They are both necessary to the overall understanding.

For example, an understanding of the bottom-up argument—i.e., the evolutionary process and its fruits—leading to an acknowledgment that human nature includes certain social-moral capacities, sentiments, predispositions, and tendencies, when taken by itself, can still leave several questions open: For what effective ultimate purpose did human social-moral nature develop? Is there a more fundamental, or “higher”, end or purpose (within the scope of science to discern)? Is there a valid and compelling argument that nature and evolution were “wrong” to evolve us in a way that acknowledges and rewards gene survival? Do our evolved social-moral capacities, sentiments, and tendencies—along with the dynamics they define—satisfy the key semantic and logical criteria we humans associate with morality and our traditional moral systems? All things considered, how should

we value our next generation and long-term species survival relative to near-term happiness, relatively speaking?

On the other hand, an understanding of the top-down, “existence-is-what-nature-acknowledges” argument also leaves open questions when taken by itself (i.e., without the answers provided by an understanding of evolution): Even if existence *is* what nature acknowledges, has that fact been reflected in the evolutionary process, and how? Has it played a key role in shaping who we are, including our social-moral nature? Does it have anything to do with what we call *morality*? Has it given rise to *universal* moral capacities, sentiments, predispositions, and tendencies within the human species, or has the fact that nature rewards existence merely resulted in a completely random and unpredictable struggle for existence, devoid of universal patterns? Do the nature and shape of the human natural moral system (i.e., its characteristics, dynamics, and principles) reasonably reflect and fit with the idea that nature acknowledges and rewards existence?

The bottom-up and top-down aspects of the picture complement and complete each other in a way that provides the basis for a whole and holistic understanding of morality from a natural and scientific standpoint.

- The human natural moral system is one of many species-specific natural moral systems and part of—as well as a *result* of—the larger natural moral system of nature itself. Hive bees, vampire bats, naked mole rats, dolphins, chimpanzees, bonobos, and others all have their own natural social-moral systems.

We humans usually think of morality as having only to do with human actions and interactions because we are (or have the ability to be) aware of the impact of our actions and because we have control—choice—over our actions, at least to a degree. Because of our awareness and flexibility of choice, we can consider ourselves the only “moral beings” if these criteria are seen as defining criteria. In a broader sense, however, the science of morality can also be seen as relating to interactions among members of *any* social species. Furthermore, in the broadest sense, morality can be seen as a science of interactions of any sort. The question of semantics—Among which types of beings do we want to restrict our use of the word *morality*?—is important for some purposes: For instance, we shouldn’t place moral blame on a bee when it stings us. Nevertheless, considering matters from a scientific standpoint, there are important continuities and interrelated principles (as well as differences) along the spectrum of different types of interactions as we move from interactions among inanimate objects, to those among living organisms, to those among members of a social species, to interactions among humans. Although it is fine semantically for us to restrict use of the word *morality* to human interactions, we should not let that restriction blind us to the evolved roles of social interactions in other species or to the ultimate relationships of these roles to the underlying physical principles of nature. Said another way, our choice of semantics should not blind us from understanding

nature's mechanisms or preclude us from achieving an accurate understanding of morality, its origins, and its effective role.

- The NMS is rooted and grounded in the properties of nature, the requirements associated with biological life, and our evolutionary history. The NMS's grounded nature, if understood correctly, addresses many questions and offers important insights. For example, it can help us see and weigh the moral difference between a (hypothetical) oil company president who is honest, pays his taxes, treats employees well, and is faithful to his wife, but who adamantly resists changes that could help address global warming and reduce the United States' dependence on oil, and another (hypothetical) oil company president who is gruff, goes to extremes to minimize his taxes, and has cheated on his wife once, but who uses his position in the oil industry to proactively make changes to address global warming and to urge others (in government, other companies, etc.) to do so. By understanding the ultimate function of morality, and its relationship to the natural world, we can better differentiate between different types and degrees of moral or immoral behavior.

Also, because the NMS has a function in the natural world, and is relatable to principles of the natural world, it is highly suitable to help us understand and address moral dilemmas associated with our impact on the environment, our relationships with other species, and the questions of human sustainability—for example, questions associated with global warming, genetic engineering, cloning, biotechnology, pollution, and population growth.

- The NMS is holistic. By understanding its nature and dynamics, we can understand the “bigger picture” of morality and how moral principles relate to each other. We can also understand why specific principles in our traditional moral systems seem to have exceptions. When specific moral principles conflict, which one has the higher priority? Why? What is the bigger picture? Ultimately, what end or effective function does human morality serve? The NMS addresses these questions.¹⁵
- The NMS helps clarify how we might think of the word *system* as it relates to morality in general and to the concept of “moral system” in particular. It helps us view and understand the foundational *universal* aspects of human morality and differentiate them from the culture-specific twists and flavors that arise *from* them. Indeed, this view of morality can help facilitate ongoing efforts to understand the relationships between deeply-grounded universal aspects of morality and the culture-specific twists.¹⁶
- The NMS, in the context of a broader understanding of evolution and human nature, reflects and explains the relationships between morality and survival, morality and happiness, and (to an extent) survival and happiness. Any valid scientific understanding of morality, of course, must provide or lead to an understanding of the interrelationships among human moral dynamics, the

requirements of survival, the human quest for happiness, and the human desire for meaning—all within the context of evolution and with a realization that these facets of life must have co-evolved (albeit to different degrees during different periods of our development). Indeed, the validity and explanatory power of the NMS view of human morality can be seen in the growing consilience (an E. O. Wilson concept) among the sciences of morality, health and survival, and happiness.¹⁷

- An understanding of the NMS and its origins sheds helpful light on the relationships between morality and *meaning*. The same factors that shaped (and continue to shape) our moral nature—including the process of natural selection and our resulting human social nature—give rise to the richest sources of meaning in life, including the meaning we find in relationships, in having children, in natural environments, and in contributing to causes larger than ourselves, including to the lives of others.¹⁸
- The NMS, along with a broader understanding of evolution, puts in context and explains the roles of truth, honesty, and deception in life and in situations with moral relevance.¹⁹
- An understanding of the NMS, its origins, and its role provides insights and answers regarding the important difference between *is* and *ought*—i.e., the fact that just because something *is* a certain way doesn't mean that it *ought to be* that way. Indeed, this understanding places the *is-ought problem* in a context that acknowledges realities of the natural world (as science understands them, and as scientific understanding continues to progress) *and* the possibilities of human behavior, ideals, and imagination. *The Obligations Of Reason* addresses this vital topic on pages 206-210.²⁰ I will expand on that discussion in a future essay on this site.
- An understanding of the NMS does not preclude us from what some might describe as “rising above” it. Indeed, although the NMS provides compelling guidance regarding many types of behaviors, it does not define a specific moral “bar” over which we should *not* try to rise. It does not somehow set low standards or condone harmful behaviors. It contains goals, principles, relationships, and even *ideals*—and leaves people free and encouraged to contribute as much as they can to the goal of sustainable species survival while respecting the rights and feelings of others. In other words, it would be inaccurate to think of moral behaviors that exceed the norm (such as rare extremes of heroism, exceptional sacrifices, above-normal levels of altruism, and the like) as behaviors that necessarily “rise above” the NMS. Such behaviors are more accurately thought of as following the principles and ideals of the NMS, and contributing to its effective goals, to a degree greater than the norm. The NMS, in its context and effective function, encompasses a holistic continuum of behaviors: The varying degrees of negative or positive behavior that individual people can

muster—ranging perhaps from Hitler at one end of a spectrum to Mother Teresa at another—all fall within its scope.

- An understanding of morality based on the NMS—and more broadly, on nature’s principles, evolution, and human nature—goes beyond internal moral sentiments and internal judgments, extending into tendencies and patterns of *behavior*: i.e., action and reaction. The science of morality is best considered a science of interaction, including not only what goes on *within* each individual but also what occurs *among* individuals as well as important relationships between the two. (Indeed, most sciences are sciences of interaction, not identity.) Of course, each person’s emotions and judgments occur within himself or herself. Nevertheless, many of our emotions and judgments are significantly influenced, often subconsciously, by the actions, emotions, and appearances of other people. And, we are dependent upon others, at least to some degree, for important aspects of life, including our ability to mate and reproduce. Furthermore, our emotions and judgments are usually *expressed* in one way or another—at least eventually, if not immediately—through our choices and actions.²¹

The conception of the science of morality as one of interpersonal interactions and influences as well as (but not only) internal moral sentiments and judgments is important for several reasons. Consider this example: A person who does not believe in God, and who also does not understand or accept a nature-grounded view of morality (or even the existence of moral dynamics in human nature), may think to himself that moral principles do not exist in any *real* sense. He may argue, therefore, that he should have a right to behave in any way he pleases. He may even try to approach life—including his interactions with others—from this standpoint. Nevertheless, he cannot simply “think away” or “wish away” the existence of moral dynamics. If he cheats on a test, he may get caught and punished. If he lies, he may lose the trust of people on whom he relies for some resource or privilege. If he steals from his neighbor, he may get clobbered. If he resorts to rape for sexual pleasure or reproduction, he may get thrown into prison—or his unhappy victim may impose some consequence on him when his guard is down. Thus, human social-moral dynamics cannot be imagined away. Why not? *Because other people exist, and the way of the world is that we must live with each other.* Instead, at least from the standpoints of science and practicality, human social-moral dynamics must be acknowledged, understood, and explained.²²

- An understanding of the effective role of morality in nature and of the NMS sheds immense light on the issues of human sustainability, biological sustainability, and environmental sustainability. This understanding helps us see the *survival-oriented* origin, history, and effective function of morality—a vitally important connection for us to see at this point in history. The fact is that the concepts of morality and survival (of genes and species) are intimately and inextricably linked. Morality *exists* to serve survival—not predominantly the survival of individual persons or organisms, but the survival of genes, next generations (i.e.,

children), and species. Consequently, it would be the ultimate misunderstanding and irony—not to mention *tragedy*—if we don’t use moral considerations wisely to help us achieve sustainable survival. For example, if we choose to focus our moral attentions primarily on heated arguments over gay marriage, abortion, and so on, while we ignore—or don’t act strongly to address—global warming, pollution, population growth, and so forth, or if we bequeath an increasingly unsustainable or hostile world to future generations, *we will have missed the main point of morality entirely!*²³

Altering Paradigms

As mentioned, in considering this understanding of morality, it helps to realize that the natural moral system does not simply exist without origin, function, or vital place in the human story. It is not merely “here”—or even a recent arrival on the scene. Human morality, and the NMS, have an origin, a home, and an effective purpose. Moreover, they have an inextricable relationship with our biological-emotional-cognitive design, a practicality, and a close relationship with other important life dimensions, including happiness, meaning, reproduction, and others. These are vital points to comprehend in order to achieve a paradigm shift.

Often, scientists who acknowledge the existence of universal human moral sentiments and tendencies focus on specific observations and mechanisms—and their most likely evolutionary (historical) explanations—without placing them in the context of the larger story. They often do not address the *so what?* of the matter or use the new learning to paint a more accurate overall paradigm of morality. Nor do they typically explain how newly discovered pieces of the puzzle fit with, and relate to, other pieces—for example, how the new understanding relates to other important everyday considerations of life such as survival, happiness, family, meaning, and so forth.

In contrast, in order for most people to understand and internalize a new paradigm, they usually need *more* than an awareness of individual facts (for example, the results of research on specific behavior patterns or brain activity) and *more* than evolutionary explanations of how those patterns probably came about. To embrace a new paradigm, people not only need facts that support the paradigm; they also (typically) need to understand the overall *story* of the new paradigm and how it fits with their other paradigms and other important aspects of life. Furthermore, people must be able to *connect* the new paradigm to their own everyday experiences—to judge for themselves whether there seems to be *truth* in the new paradigm in terms of whether it jives with whatever their senses and experiences tell them. And finally, people usually must perceive *benefits* in a new paradigm before they will readily adopt it. After all, paradigms are simplifying, habit-forming, and comforting. People ask themselves, subconsciously or consciously, “Why should I adopt the new paradigm unless it will be better—for *me*—than my current one?”

So, how does the understanding of morality presented here, including the NMS, stack up against these very human needs?

- Human nature, human morality, and the NMS have an *origin*. As we have discussed, their origin lies in the properties of the natural world and the basic requirements of biological life—shaped through natural selection acting upon genetic variation.
- The human NMS has a *home*. Its home is in human nature, and it also lives actively in the *interactions* among people. Furthermore, as we have discussed, this home is not disconnected from the broader natural world.
- The NMS has an effective *end*, an effective *function*: It facilitates the survival of genes and, through genes, of species. In considering a change in moral paradigms, people might naturally wonder *why* the NMS is the way it is, in the sense of, *What purpose in nature does it serve?* The answer: The NMS serves the same ultimate purpose in nature as our hearts, our lungs, our minds, our emotions, and our hands—to further the survival of human genes and the human species.
- As already mentioned, the NMS is *rooted* and *grounded* in the natural world and in the many millions of years of our biological, mammalian, primate, and ultimately human evolution. It is not without context.
- The NMS is understandable and explainable via science. Although many people don't require a scientific basis for their paradigms or paradigm shifts, those who do are naturally *unconvinced* unless such a basis is available. Moreover, the nature of the NMS makes it completely amenable to advances in scientific understanding, as we would expect it to be. Although the understanding of morality discussed in *The Obligations Of Reason* is based in part on a current understanding of the process of natural selection acting upon genetic variation, including two important outcomes of that process—often referred to as *kin selection* and *reciprocal altruism*—it can readily accommodate new findings associated with the evolutionary process, perhaps yet to be discovered. It can also readily accommodate future advances in our understanding of the interplay between genes and environment as well as of cultural influences on morality.
- This understanding of human morality, including the NMS, *fits* intimately with other pieces of the human puzzle, including the advancing scientific understanding of the roles and nature of happiness.²⁴
- This understanding of human morality, including the NMS, when understood correctly, corresponds with human experience and can thus “ring true” to most people. In other words, because it is an understanding based on human nature, it is *accessible* to all of us—including people from diverse backgrounds, genders, ethnicities, personalities, and so forth.

- This understanding of morality, including the NMS, offers substantial practical *benefits* to individuals and to society. Many of these are discussed in *The Obligations Of Reason*, and a few are mentioned elsewhere in this essay.
- Finally, beyond these considerations, some people may still have nagging feelings associated with those ultimate questions—*Where did the universe come from in the first place?*, and *Does God exist?*—when considering a shift in their understanding of morality. It might be difficult for some people to shift or broaden their moral paradigms without first gaining conclusive answers to these overarching questions. We humans intuitively feel that we are part of a bigger picture, a bigger story, a story that reveals our relationship to the cosmos—and we are by nature curious to know just what that bigger story is. Does our story emanate entirely from the natural universe, or from some aspect of the natural universe that we don't yet understand, or from some consciousness that lies beyond what we think of as the natural universe? Of course, I can't answer those questions. Nevertheless, there are compelling reasons—some highly pragmatic, some scientific, some philosophical and theological—why we can benefit from a deeper and more universal understanding of morality without waiting for definitive answers to these larger, more perplexing questions.²⁵

What About Happiness?

An understanding of the NMS, its origins, and its effective role provides a much better basis for an accurate understanding of human morality than does the human quest for happiness. The dynamics of gene survival, under the pressures of natural selection, have been the primary shapers of morality. Put another way, gene-species *survival* is a better basis than individual *happiness* for an understanding of the foundations and dynamics of human morality. Similarly, in pursuing improvements in our understanding of human morality (or the social-moral behaviors of any species), we should first look to explanations grounded in the dynamics of gene survival and proliferation, before resorting to explanations based on our quest for happiness. And of course, our understanding should also reflect the important role of happiness in life and its own relationship to survival.

This is not to say that the NMS precludes our quest for happiness or that happiness isn't important. I, for one, retain my fondness for happiness! Instead, my point is primarily that the quest for happiness is *not* the most fundamental driving factor in our moral nature. In *The Obligations Of Reason*, I discuss happiness, its relationships to morality, and the ways in which we can choose to enhance our moral aspirations in order to possibly enhance happiness for ourselves and others.²⁶

Basis For Unifying Theory

Although far from fully understood and clarified, this understanding of morality—including the NMS, along with its underlying causes in nature and evolution—provides a solid foundation for a unifying theory of morality. As already mentioned, this understanding is readily amenable to scientific advances, which (among others) are likely to include advances in our understanding of the interrelationship among genes (and their expression) and environment; the influence of cultural factors on moral attitudes and behaviors; and even the long-term influence of cultural factors on the evolution of human demographics and human nature itself.²⁷

Why Shift Paradigms?

The summary above returns us to the idea of paradigm shifts and to Epicurus's wisdom—*Empty is the argument of the philosopher which does not relieve any human suffering*. The question is, How can the growing understanding of morality have a substantial positive impact on our lives and on the world? The answer: The impact will pick up steam only as the new understanding actually *shifts people's paradigms* and, in so doing, influences their moral considerations, choices, and behaviors.

Why should the new understanding shift paradigms?

First, the NMS provides a real, rooted, understandable, reliable, and universally accessible way to understand the universal aspects of human morality. It acknowledges the most fundamental aspects of morality as real—not as a mirage, nor as sets of cultural opinions (which are often seen as no better or worse than any other opinions), nor as something that requires religious faith for justification. The NMS understanding of morality respects morality for what it is—real, rooted, and relevant; not random and relativistic, let alone irrelevant.

The NMS also places our focus where it should be for most purposes: on universal commonalities. This understanding of morality establishes a framework—a way of thinking, a paradigm—that helps us accurately differentiate between universal aspects of morality and the cultural twists, flavors, and preferences that emerge from them. It helps us see the important difference between universal commonalities—which we should respect ourselves, and which we can reasonably ask others to respect when dealing with us—and cultural preferences—which we can agree to respect ourselves (if we like) but which we shouldn't force upon others.

An improved understanding of universal morality should cause us to challenge ourselves in situations where our moral or cultural preferences may *not* be genuine universals, and to act with appropriate restraint in such situations. On the other hand, an understanding of universal morality should also help us act more wisely—with more understanding, empathy, confidence, and effectiveness—in situations where we want to uphold genuine moral universals, or help others do so, when it makes sense to do so. Such an

understanding will also provide more *common ground*, *wisdom*, and *sense of direction* in solving shared problems with other nations around the world. And, it will help us understand our obligations to each other, to future generations, to other species, and to the natural environment.

This understanding also calls for us to acknowledge the effective foundational role of morality in nature—survival of genes and, through genes, of species. In doing so, it requires that we either focus suitable attention on major dilemmas such as global warming and nuclear proliferation—and *address them effectively*—or that we admit to being in a state of moral denial, apathy, or impotence. Moral paradigms or movements that cause people to focus too narrowly on certain issues (including many that are not universals but instead are cultural preferences), if they do so at the expense of addressing the larger issues, miss the point of morality entirely.

Approaching the question of paradigm shifts from another angle, why might an *individual* want to consider the new paradigm from her or his own perspective? In addition to the points mentioned above, I offer the following reasons based on my own observations. (There are other important reasons as well, discussed briefly in *The Obligations Of Reason*.²⁸)

- Many people want to do what's right, and want to contribute to a better world, but don't quite know how to figure out what's right in many situations on their own. We all face important social-moral questions every week, if not every day. How can we make our decisions more wisely, more empathetically, more responsibly, more confidently, and more effectively? A grounded understanding of human nature and morality can help immensely.
- Many people are frustrated by the harmful or unjust actions of others but are often held hostage to passivity because they don't have enough confidence in their views to generate an appropriate and effective response. They may have a conscious (or subconscious) suspicion that their own views are not valid, or they may not be able to explain to themselves convincingly why their views are indeed valid. "If I know that someone is habitually cheating in class, what should I do?" "If someone has harmed me substantially, should I forgive and forget, or should I avoid that person or perhaps seek appropriate reparations?" "If they continue to harm me, what then?" "How should I vote in the next election?" By using the phrase "held hostage to passivity", I don't mean to suggest violence. Instead, I mean that many people are passive even in the sense of not speaking out against harms or injustices, not speaking up to defend themselves (or others), or not taking a stand to help improve their communities. Some people are passive in this sense because they lack confidence in their own views or because they have a conception of forgiveness that largely displaces other ideas such as justice, responsibility, or even self-defense. In any case, having a grounded understanding of morality can give a person confidence and wisdom to act appropriately, when action of some sort is appropriate. And, it can provide the wisdom to avoid reaction when reaction is unwarranted.

- Many people want—or need—to *connect* with people who have different moral paradigms and moral systems in order to solve shared problems. Doing so effectively requires two abilities, among others: an ability to understand the other person’s perspective, and an ability to find common ground. The understanding of morality presented here, and described in *The Obligations Of Reason*, facilitates both.
- Many people want to understand how to *live well*. Fortunately, to many people, the idea of living well includes a healthy synergistic combination of personal happiness, responsible behavior toward others, healthy relationships, and meaning. But what are the relationships among these aspects of life—happiness, morality, healthy relationships, and meaning? To what degree do these goals complement each other? How, and why? The understanding of morality described in *The Obligations Of Reason*, combined with the latest scientific understanding of happiness and of the relationships between the social aspects of life and health, provide answers to these questions that are more scientifically sound than ever before.
- Finally, many people simply want to understand human nature. Admittedly, it’s a very interesting and practical topic!

Of course, some people—whether they are aware of this or not—*rely* on moral confusion and uncertainty in their communities, in the culture, in the broader world, or even in themselves to get away with selfish actions that are harmful to others, and to justify them. There are some who *prefer* moral confusion and who purposefully prey on it—or at least are enabled by it.

In the political realm, debates over some moral issues typically devolve into never-ending political ping-pong games. These often generate divisiveness and rancor—perhaps they are sometimes intended to do so?—rather than constructive human progress. Meanwhile, other vitally important issues go largely unaddressed. The science-based understanding of morality sheds light on the fallacies of these dynamics and gives insight into how we might address them.

Going Forward

How might the growing scientific understanding of morality lead to a paradigm shift (at least among a growing number of people) and ultimately to a better world—that is, to a world that is more healthy, safe, just, sustainable, and even happy? I think the path needs to begin with dialogue—a dialogue that has already started (but still has a long way to go!) among scientists, philosophers, academics, theologians, and others. As that dialogue, along with continuing scientific discovery, continues to shape a science-based understanding of morality, this “understanding-in-progress” should be shared broadly with other audiences. As mentioned, the sharing of information with broader audiences

should go beyond a communication of specific findings by placing findings in the broader context (where appropriate) and explaining in accessible terms what they *mean* to our moral paradigms. Eventually, as more people experience a paradigm shift—or at least paradigm realignment or refinement—the new paradigm will surpass a tipping point beyond which it can have a growing positive influence on our lives and choices as individuals, interest groups, nations, and citizens of the world.

As discussed, worldviews and paradigms live and grow—or diminish and change—based on their correspondence with our life experiences; their fit with our other active paradigms; their benefits and appeal; and (for many) their correspondence with scientific understanding. Old and new paradigms are all appropriately exposed to the tests of scrutiny, time, and practical benefit. The understanding of morality sketched herein, and described in *The Obligations Of Reason*, should be no exception.

Epilogue: Note To Readers

Thanks once again for your interest in the subject of morality. Please provide any input you might have—questions, comments, critiques, additions, good jokes, or simply an interest in connecting—using the CONTACT AUTHOR page of the web site, www.ObligationsOfReason.com.

I plan to post future essays, answers to FAQs, and other material in this space on the web site in coming weeks.

Thanks again!

Jeff Huggins
Author, *The Obligations Of Reason*

Notes

1. Of course, some people have never thought carefully about the origins, foundations, roles, or practicalities of morality. Many of these people nevertheless act responsibly toward others. On the other hand, many people act predominantly on the basis of their immediate surroundings, impulses, and what might be called “group-think.” And some people cede their individual moral responsibility to the whims of the crowd.
2. See *Introduction*, pp. 10-12, in *The Obligations Of Reason*.
3. Some people interpret and critique evolutionary and biological descriptions of humans, or of human nature, as being overly reductionistic. Their argument is that the mechanical and

biochemical details of our bodies and brains cannot possibly explain wonderful human qualities that we experience—including consciousness, imagination, love, and others. This argument reflects a misunderstanding of the mechanisms and possibilities of evolution and overlooks the idea of emergent properties and qualities. A full appreciation of the process of evolution, and its outcomes, involves both reduction *and* an understanding of emergent properties. Put another way, a full appreciation of our human nature, and from whence it came (from a scientific and evolutionary perspective), involves not only breaking us (and the process) down into component parts, but also seeing us as systems with emergent qualities.

4. A reader could ask, “What came first—human nature, human social-moral nature, or the natural moral system?” The answer is that they are intimately intertwined and that their various dynamics *co-evolved*. Indeed, human social-moral nature and the natural moral system co-evolved with other important aspects of human nature such as our reproductive dynamics, our quest for happiness, our language abilities, our imagination and reasoning abilities, and others.
5. It is important to understand that nature can (and does) serve as a *basis* for the existence of morality and for a moral system. This is true not only from a scientific standpoint but also from a semantic standpoint—at least when considering the world in terms of what we can observe, discern, and eventually understand scientifically.

Moral systems typically have as a *basis* some aspect of reality or some believed reality. For example, the basis of most religious moral systems is God (or a god). The basis of some other moral systems is a belief in a dimension or property of the universe that is beyond direct human observation and scientific understanding (at least currently), as well as impersonal (and thus not a god), which carries spiritual-moral principles and ultimately rewards some behaviors (the good ones) over other behaviors (the bad ones). The basis of the natural moral system is nature and her properties.

When considering any moral system, it is important to understand that moral system’s basis. Ultimately, the nature and principles of any moral system are determined by what the *basis* of that system acknowledges, asks, and rewards. For example, in the Judeo-Christian belief system, the Ten Commandments reflect the behaviors that God acknowledges, asks of us, and rewards. In exploring the natural moral system, the question becomes, What does *nature* effectively acknowledge and reward?

Chapter 1 of *The Obligations Of Reason*—titled *Existence of the Natural Moral System*—discusses, among other things, key characteristics of moral systems as well as the characteristics of nature that make nature a valid moral system basis. See [ch. 1, pp. 48-62](#) and [pp. 66-72](#), and the personal exercise in [Appendix 1 \(pp. 327-328\)](#), in *The Obligations Of Reason*.

6. The fact that nature (i.e., the natural world and its properties) is *real* may seem obvious to most people. That said, some philosophers have occasionally doubted the reality of the world or at least anyone’s ability to prove the world is real. Some (but not all) of these doubts have been semantic: What do we mean by *real*?

The fact that nature is real does not mean that humans (or any other living organisms) perceive and experience the world in completely accurate detail. For example, the color red that we see when we look at a United States flag is a result of the way our human eyes and brains experience the light waves that are reflected from the materials on the flag (where the

red stripes are), and the reflected light waves are outcomes of the original light waves (from the sun or other light source) and the surface or chemical properties of the striped areas on the flag. Thus, the subjective experience of “red” exists in the eye of the beholder, not as a property of the flag itself.

Similarly, the fact that nature is real does not mean that we will all experience or remember the same event in the same way. Two people, watching the same traffic accident from different corners of an intersection, may see it or remember it in very different ways. Human senses, attentions, and memories are far from perfect. Nevertheless, the fact that two humans may remember an event in very different ways—even in ways that are contradictory—does not, of course, mean that the event actually happened in two different ways, or that two different events happened at the same time, or that nothing is real.

7. See ch. 1, pp. 48-66, in *The Obligations Of Reason*.
8. See ch. 1, pp. 67-72, and ch. 2, pp. 112-114, in *The Obligations Of Reason*.
9. See ch. 1, pp. 67-72, and ch. 2, pp. 112-114, in *The Obligations Of Reason*.
10. See ch. 1, pp. 67-72; ch. 2, pp. 112-114; and ch. 2, pp. 143-145, in *The Obligations Of Reason*.
11. See ch. 1, pp. 41-43; and ch. 2, pp. 112-114, 143-145, and 198-199, in *The Obligations Of Reason*.
12. Some people think of nature as being disorganized, random, and entirely without directionality. Those assumptions are briefly addressed elsewhere in this essay. Other people see so many harsh and apparently unfair aspects of nature that they conclude that nature could not have given rise to morality.

Let’s briefly consider the second point here. Although there are many harsh, unfortunate, and apparently unfair events in the natural world—and certainly in human life and behavior—there are also many productive, caring, generous, and wonderful events and behaviors as well. From a scientific standpoint (i.e., from the standpoint of our understanding of the observable world), nature gives rise to caring, generous, productive, and wonderful events just as she gives rise to the harsh and sad events. Indeed, as we can all observe, the harsh and unfortunate events and behaviors we see in the world exist whether God created the world (as many believe) or whether a universe consisting only of natural materials and principles evolved to what we experience today. Thus, the existence of harsh, unfortunate, and unfair events in life, in the universe, and in human behavior requires explanation in a universe created by God just as much as in a completely natural universe.

From a scientific standpoint, the behaviors we see and experience as morally good—the many examples of love, cooperation, generosity, fairness, sacrifice, and so forth—can be understood and explained as natural outcomes of evolution. They are important evolved aspects of human survival strategy—more precisely, traits that have contributed to the survival and proliferation of our genes and, through our genes, of the human species. A more detailed discussion of the specific ways in which evolution gives rise to moral behaviors is beyond the scope of this essay but is included in *The Obligations Of Reason* and in other books. See chapter 2 in *The Obligations Of Reason*, titled *Exploring and Understanding the Natural Moral System*.

13. See ch. 1, pp. 66-67, ch. 2, pp. 135-139 and pp. 166-172, and all of chapter 2, in *The Obligations Of Reason*.

Note that the *fit* between the effective function of the natural moral system and its form (its nature, characteristics, and dynamics) is strong but not always precise—and certainly not foolproof. As with other products of evolution, human social-moral nature (and the natural moral system) have been “good enough” to help us get to where we are today as a species. That said, our social-moral nature has not *had* to evolve to allow us to easily solve the new problems of today or those of the future. Evolution doesn’t anticipate the future. Fortunately, by chance, and because today’s challenges share at least some similarities to past challenges, our evolution so far has endowed us with many talents and qualities that should allow us to understand and address today’s problems if we choose to muster the will to do so.

14. If nature’s fundamental principles didn’t have directional and differentiating qualities—i.e., if they were totally disorganized, random, and non-directional—then the “raw material” for natural selection to work upon would not have very promising possibilities. Put another way, in that case, there would be nothing very meaningful for natural selection to act upon or work with. On the other hand, if the process of natural selection didn’t exist—if there were no such things as life and death—or if there were no natural mechanisms to give rise to occasional variations, mutations, or accidents, then there would be no creative mechanism to give rise to new variations of life (and new survival strategies) and no means of screening unsuccessful strategies from successful ones. These three aspects of the natural universe—nature’s fundamental directionalities, the process of natural selection, and the mechanisms of genetic variation—are necessary and *sufficient* to give rise to complex life and moral behaviors, given enough time and opportunity. See ch. 1, pp. 68-70, and ch. 2, pp. 112-114, in *The Obligations Of Reason*.
15. See ch. 2, pp. 135-143 and pp. 166-172, in *The Obligations Of Reason*.
16. For brief discussion of the use of the word “system” to describe the natural moral system, see ch. 1, pp. 41-44, and ch. 2, pp. 195-197, in *The Obligations Of Reason*.

Because people have traditionally used the word “system” as part of the phrase “moral system” to refer to sets of *specific* moral rules espoused by specific religions, cultures, or other groups, some people may object to using the word “system” in describing the natural moral system. The human natural moral system described in *The Obligations Of Reason* is universal to the human species. But if culture-specific moral systems are different from each other in some ways (even as they are equal or similar in the more foundational ways), how—and in what sense—can any moral *system*, including the natural moral system, be universal?

Such objections to use of the word “system” typically stem from one of several limiting assumptions: First, that a moral *system* can only exist if it is revealed (for example, by a god or prophet) or written; Second, that a moral *system* must consist of specific rules or principles that are written (or interpreted) as if they are independent rules defining behaviors that are always right or always wrong; Third, that a moral *system* can only exist in the way we have traditionally thought of them, explicitly covering all domains of behavior that a given culture deems relevant. As an example of this third assumption, some people might argue that no moral system can be universal if it can be shown, for example, that some cultures believe that polygamy is morally permissible while other cultures believe that it is

morally prohibited. After all, they argue, if polygamy is permissible in one place and prohibited in another, how can any moral system be universal? Of course, the implicit assumption in this argument is that a moral system must have a specific rule, one way or another, about polygamy (or abortion, or ...) in order to be considered a moral system in the first place. As it turns out, the universal dynamics of human morality—the most *foundational* dynamics of human morality—do not explicitly address every possible human action. For example, the natural moral system, of course, does not explicitly address the question of whether a 21-year-old male should or should not have consensual intercourse with a 16-year-old female.

The current semantics of morality seem to have a gap or, put another way, *a word missing*. If we limit our use of the phrase “moral system” to culturally-specific sets of written rules, covering a wide variety of human behaviors, then what term should we use to describe the universal aspects and dynamics of human morality? When describing the human species in a universal sense, we often use the term “human nature” or, more specifically, “human social-moral nature.” But these terms are so broad and ambiguous that, to many people, they don’t convey the meaning or understanding that many dynamics of human morality—indeed, the most foundational aspects of human morality—are universal.

So, from a semantic standpoint, we seem to have three choices: To use the word “system” in a natural and scientific sense to capture those very real dynamics of human morality that are universal; Or, to think of another word or phrase we can use to refer to these universal aspects of morality; Or, to avoid a name for the system entirely and to use phrases such as “those dynamics and principles of human morality that are universal to our species.” In *The Obligations Of Reason*, I have chosen to use the term *natural moral system*, which seems to me to best describe the essential substance of the matter.

17. See ch. 1, pp. 48-66; ch. 2, pp. 184-186; ch. 4, pp. 247-250; and all of chapter 4, in *The Obligations Of Reason*.
18. See ch. 2, pp. 175-182, in *The Obligations Of Reason*.
19. See ch. 2, pp. 127-143, in *The Obligations Of Reason*.
20. Because the understanding of morality presented in *The Obligations Of Reason* is based on aspects of the real world that are within reach of the sciences, subject to scientific understanding, and subject to improvements in scientific understanding, the topic of *is versus ought* is vital to address. I address it in *The Obligations Of Reason* in chapter 2, pp. 206-210. Because the topic is so very important to any consideration of morality from a natural-scientific standpoint, I will expand on the discussion in a future essay.
21. The vitally important roles of *interactions* and our *interpersonal interrelationships* in the science of morality can be seen in the following quotes from two leading thinkers in two quite different fields:

“The social brain’s wiring connects us all at our common human core.”

- The final sentence in the *Epilogue* of Daniel Goleman’s latest book, *Social Intelligence: The New Science of Human Relationships* (Bantam Books, 2006)

“And because, as we have seen, our interests are inextricably linked, we are compelled to accept ethics as the indispensable interface between my desire to be happy and yours.”

- Tenzin Gyatso (the Dalai Lama), in his book, *Ethics for the New Millennium* (Riverhead Books, 1999)

22. As can be seen in the quotes in note 21, we humans are psychologically linked as well as pragmatically interdependent. We react to each other. In a sense, we help “manage” each other—sometimes consciously, other times subconsciously, and through our actions. The ultimate actions of species survival—reproduction and child rearing—necessarily involve some degree of cooperation between at least two humans, if not more.

Our interpretations of each other, and our emotions, frequently (and perhaps always) influence our choices and often move us to action. Thus, by definition, moral considerations are social and interactive. I manage my actions with you, and you manage yours with me. In saying this, I don’t mean “manage” in the sense of being consciously manipulative. (Of course, conscious manipulation is a part of the human behavioral repertoire.) Instead, I simply mean that most of us live life through a considerable number of interactions with other humans. Thus, in considering the subject of morality from a scientific standpoint, we should realize that our individual *internal* emotions, views, and judgments do not by themselves complete a moral “equation.” Rather, just as most mathematical equations describe relationships between different variables, and just as most scientific principles describe relationships between different elements or forces, most of the equations of morality involve more than one person and describe relationships among people. In this sense, we are each a part of the broader moral equation.

Put another way, if we want to live, if we want to have children, if we want our children to live, if we want our children to have a fair chance in life, and if we want the world to be a reasonably moral place for its own sake and for the sake of future generations, we cannot (of course) ignore each other, violate each other, or deny the very existence of moral dynamics.

It is important to understand the difference between universal aspects of morality and the culturally-specific twists and flavors that can arise from the universal aspects or from other factors. One reason for this importance is that there is a very moral and pragmatic difference between respecting, encouraging, and supporting true moral universals (and doing so wisely) and trying to impose our culture-specific moral preferences on others.

23. For more on the relationship between morality and survival, and the subject of sustainability, see ch. 1, pp. 48-62 and pp. 80-81, in *The Obligations Of Reason*.

Many people hold worldviews, and corresponding moral perspectives, that involve other ultimate goals (or *effective ends*) for moral behavior or, for that matter, for the role of morality itself. For example, many believe that the ultimate role and goal of moral behavior is to respect and please God and to enter Heaven. Others believe that the ultimate goal of moral behavior is to respect universal spiritual laws, to become a better and better person over the course of successive lives, and to ultimately become one again with the universe. Many philosophers have argued that the human quest for happiness provides the best basis for understanding and defining moral behavior and that morality should be aimed at optimizing human happiness. Some people place personal freedom on top of the moral pedestal. Some people seem to place economic growth on top of the pedestal. And some others act as though they place knowledge—for its own sake—on top of the pedestal.

That said, from a scientific standpoint, and based on observable or discernible aspects of the natural universe as we currently understand it, these views regarding the ultimate roles or goals of morality do *not* provide the most accurate basis for understanding morality. While these views can all encourage and lead to positive moral behavior in many instances (and in varying degrees), and while some of them overlap in many respects with the understanding of morality discussed herein, they do not provide an accurate basis for understanding morality, and they can sometimes lead us astray in damaging ways.

24. Of course, happiness is important to most humans. And, the quest for happiness plays a central role in human life. See chapter 4 (pp. 225-255); ch. 1, pp. 62-66 and p. 77; and ch. 2, pp. 184-186, in *The Obligations Of Reason*.
25. We can and should benefit from an improved understanding of morality without waiting for final convincing answers to these most perplexing questions (e.g., Does God exist?), which may never come. Our scientific and technological capabilities in other fields have been racing forward, dangerously (in some cases) outpacing our moral understanding, wisdom, and mutual empathy. We have not paused our technical advances in most other fields to await final answers, that we can all agree on, to the question of God or the origin of the universe. Similarly, we can't afford to pause advances in moral understanding until these questions are fully answered. Indeed, as the quotes on pages 8-9 in the *Introduction to The Obligations Of Reason* tell us, and as common sense should tell us, our moral understanding, and our application of that understanding, must quickly catch up to other scientific and technological advances, else we might eventually kill each other or destroy our environment.

Some of the benefits of a better understanding of human morality are briefly discussed on the following pages of *The Obligations Of Reason: Introduction*, pp. 17-18 and pp. 27-32; ch. 2, pp. 202-203; and chapter 7, titled *Onward and Upward: An Appeal*.

26. See chapter 4 (pp. 225-255); ch. 1, pp. 62-66 and p. 77; and ch. 2, pp. 184-186, in *The Obligations Of Reason*.
27. See the following pages in *The Obligations Of Reason*: ch. 1, p. 72; ch. 2, pp. 173-175 and pp. 190-192; and Note 65 on pp. 372-374.

Of course, human cultures would not exist without humans to form, populate, influence, and evolve them. And, much of our primate and human nature was developed long before human "culture" as we think of that word today. Thus, human cultures *reflect* human nature even as they also influence certain aspects of our beliefs, world views, paradigms, lifestyles, expectations, and behavior.

28. See the following pages in *The Obligations Of Reason: Introduction*, pp. 17-18 and pp. 27-32; ch. 2, pp. 202-203; ch. 3, pp. 217-224; and chapter 7, titled *Onward and Upward: An Appeal*.