

# Introduction

There are many different interpretations of the character, value, and importance of the natural world. Some interpreters see it as a perilous, tragic, disappointing place and spend their lives yearning for God to rescue them from the world and speed them to a perfect heaven. In some cases, this outlook is prompted by harsh experiences of injustice, suffering, deprivation, and despair. In others, it is perhaps an inability or unwillingness to recognize or accept the inevitable ambiguities and limitations of finite existence. Some conclude that the world is meaningless if it is not believed to be created by a personal God who imparts to it an overarching purpose or set of purposes for its existence. Some accept willingly the idea that the natural world is devoid of intrinsic value and devote their lives to exploiting it for their own benefit in whatever ways possible.

And some who have come to reject belief in such a God conclude regrettably that whatever purpose, meaning, or value the world is to have for them must be created arbitrarily and at first hand by their own personal decisions. The world means, in other words, whatever humans individually or collectively *decide* for it to mean in the way of importance and value. The world is nothing other than a blank slate onto which humans have to project and inscribe their own purposes. Thus the world means for them conceptually and existentially whatever they take it to mean or wish for it to mean, in an unconstrained, purely subjective manner. Implicit in this last view is the idea that the only beings capable of telic or end-oriented actions that can regulate and guide the uses of freedom are humans themselves. Since the world has no inherent purposes or values in itself, or so the reasoning goes, it is up to humans to confer such purposes and values on it by arbitrary, unguided human decisions and actions.

But is a world bereft of intrinsic meaning the only alternative to a world given its fundamental purpose by God? Panpsychists of various stripes do not all accept this conclusion. The view of the nontheists among them (and many *are* theists) is that *psyche*, that is, mind or spirit, is primordial. It is part of the universe at the very outset of its coming into being, meaning that it does not depend on emergence over long periods of time. Mind is as basic as any other aspect of the universe, present in it from its very beginning, and possibly in earlier universes as well, throughout all time. Mind *guides* evolution on earth and elsewhere, and is not the *outcome* of evolution. It is why life forms, with either their reflexive or intentional modes of behavior, exist. Their end-oriented reflexive or conscious actions stem from the primordial factor of mind always resident in nature.

Therefore, natural life forms or organisms do not bring telic, end-oriented, purposive actions into the world. The ends or values of the world are always there, awaiting recognition and response from living beings. They also are not products of evolution but prior to it and what ultimately guide its developments. Without such assumed guidance, proponents of panpsychism assert, the evolutionary process itself would be neither explicable nor intelligible. Mental or psychic purposes, ends, and values have everywhere and always been present in nature; hence the essential *pan* ("all") part of the term *panpsychism*. Psychic phenomena are timeless and primordial. They are not late-arriving outcomes of the history of the earth. That history only brings into greater prominence mental factors active in it from the beginning.

My own view, which I shall explain and defend throughout this book, is that telic phenomena and the ends and values associated with them are without exception *emergent* factors in the history of the earth. They are preceded by the temporal comings into being of new *real* possibilities, not by antecedently unrealized *pure* ones, and these real possibilities are themselves gradually produced over immense stretches of time. Therefore, telic phenomena are neither *de novo* nor primordial. The primordial factors or principles required for explaining their eventual emergence are two and only two: *matter-energy and time*. The interactions of these two bring continuing genuine novelty into the world, and two of the most striking of its novel emergent results are first, *life* and later, increasingly *conscious* kinds of life. All forms of life are teleological, I shall argue, and conscious life is most conspicuously so. The world, in my view, has no antecedent, overall, general purpose for its being. Instead, it is the ground of and source for temporally emergent purposes. There is no overarching, single purpose of the world as a whole, but a plethora of emergent and active purposes currently here on earth and probably elsewhere in the universe as well.

The presence of purposive responses, experiences, and actions in the world does not require their bestowal by God with an original single, all-encompassing act of creation. Nor does it require assumption of psyche, spirit, or mind as primordial components of the world. The current presence of these realities is a creation of nature itself and is as real as anything else in nature. It is possible to subscribe to such a view and continue to believe in God, but it would be the God responsible for creating a nature that has this creative potential *within itself*, gradually bringing telic and mental phenomena into being by the twin agencies of matter-energy and time. In either event, telic phenomena would need to be regarded as processive *outcomes* rather than as *preconditions*. No primordial, implicitly incoherent mind-matter dualism would in either case be needed so far as the earth is concerned.

There would still remain the problem for the theist of conceiving a *purely spiritual* God without being able satisfactorily to explain the alleged relations of such a God to a pervasively *physical* earth and to living beings as products of the physical earth. As a religious naturalist who focuses his religious faith entirely on nature itself, I can leave it to thoughtful theologians to tell us how they think the formidable problem of a seemingly intractable God-world dualism can be most convincingly resolved. My conviction is that all reality is natural reality. And whatever is to be explained can only be—and need only be—explained or accounted for in naturalistic ways. This “only,” however, leaves room for vast areas of fascination, wonder, perplexity, and mystery.

What I have offered so far here, however, is only a brief and in many ways vague sketch. It will have to be filled in with further elaboration, explication, and argument. It is the skeleton of a religious naturalist’s interpretation of teleological phenomena that will need much fleshing out. Teleology is my focus throughout, and the key term *teleology* can best be explained by noting its etymology. The Greek word *telos* (plural: *telè*) means “end,” or “goal.” In some contexts, it can also be rendered as “purpose.” And the attached word *logos* can, for our purposes, mean something like “study of,” “reasoning behind,” or even “logic of.” *Teleology*, then, is the study of telic, or end-oriented and directed phenomena, with the hope of providing coherent, convincing general explanations for their presence in the world.

Such a study or inquiry need not assume that the world must have some kind of all-comprehending purpose. It can be satisfactory to conclude that all purposes are *in* the world, not *of* the world, meaning that none need apply to the world conceived as some kind of whole system that contains all other subsystems. The world gives every appearance to me, as

I shall demonstrate later, of being a pluriverse rather than a universe, in the etymological senses of these two words. A multitude of internal telic phenomena, each linked to many others but not to all others, need not presuppose a telos of the whole.

A world with a plethora of internal purposes, meaning, and values available to our contemplation and exercise is, in my way of thinking, an amply satisfying and fulfilling world. Such a world can be this for us despite all of its frightening and uncertain ambiguities. It does not center on us humans, but it can succor and sustain us even in the face of its enormity of scope, and of its necessary extensive order that enables it to be a cosmos rather than a mere aggregation and shamble of particular modes of being. But *kosmoi*, namely, the Greek term for a collection of interconnected but not necessarily finally hierarchically arranged, completely interdependent orders, makes the idea more plain. Throughout the universe (or, more properly, *pluriverse*), there are elements of autonomy combined with elements of interdependence.

This picture is part of the fascination, wonder, and daunting sublimity of a multifaceted, many-splendored world. It must also be accompanied by acknowledgment of the world's uneven distributions of tribulations and trials for its finite beings, and for some of them—human or nonhuman—much more so than for others. Such inequitable features of the finite world are outcomes of its vastness and pervasive contingencies, while others sadly result here on earth from ruthless or uncaring human choices. We humans must find ways to live in the face of the first, while constantly searching for ways to avoid the second—for the sake of ourselves as humans as well as for the other creatures of the earth. Ours is a world interlaced with tragedy and uncertainty as well as with confidence and hope.

I shall soon move on from this introduction to the book's main body, but first I want to offer a description of each of its seven chapters in order to give an initial idea of their contents and of how they, as the principal parts of the book, are connected with one another. My major focus here, however, shall be on the first chapter, since it gives a picture of six options for explaining or at least addressing the psychic phenomena that shall occupy us in the book. The sixth one of these options is my own. Having done so, I shall move to a briefer introduction to the other six chapters.

The first interpretation in chapter 1 is that of the French existentialist philosopher Jean-Paul Sartre. Sartre assumes that there is no such being, presence, and power as God and no creation of the universe by God. In the absence of God, he reasons, there is no such thing as a purpose of the

world as a whole and no such thing as divinely ordered and prescribed meanings and values placed by God in the world.

There is also no such thing as a common human nature with obligations and expectations implanted in them as creations of God. They are not like manufactured goods with previously conceived and assigned purposes. Each human being is left entirely to itself when it comes to ends or purposes of human thought and behavior. Ends and values appropriate to human life are arbitrary and must be created from the outset by each and every human by naked and unassisted, arbitrary and undirected acts of the human will. We must each choose our own personal *telé* without any hope of assistance, assurance, or guarantee.

We are telic beings with absolute freedom of choice when it comes to such matters. But we are also abandoned and alone, and it is entirely up to each of us to go about deciding what we ought to aspire toward and how we ought to live. Our ends are our creations alone and not God's. They are also not assisted or warranted by nature because, for Sartre, nature is riddled with arbitrariness, contingency, and sheer openness of possibility.

At the other extreme from Sartre are traditional theists who believe that the world is a purposeful creation by God that gives abundant purposes to human life. And God makes known to humans in many ways, including direct revelations, what these purposes are and how they can be accomplished. Moreover, the nonhuman realm itself is a creation by God, with multiple evidence of God's purposeful intention and design. The world contains implicit values, meanings, and purposes inviting human response. It is a vast telic arena, and its telic ends are everywhere to be sought and found. It is such because it and everything in it invites and awaits responsible human choices. The second teleological interpretation sketched in this book's initial chapter, therefore, is that humans are not abandoned or alone. They can live their lives with confident reliance of the ends, values, and purposes God has designed and made available to them.

In the case of Sartre, as we just saw, ends lie nowhere but in the goals envisioned by isolated human beings. They, and they alone, are the sources and arbiters of telic phenomena. There are no intrinsic purposes or goals in an absurd and meaningless world. Only in humans are psychic concepts, aspirations, and behaviors to be found, and these are nothing other than expressions of an absolute, unguided, and unconstrained human freedom. For traditional theists, however, abundant telic goals are implanted in them and throughout nature by God. These goals can be aspired toward and achieved through the gracious help of God. Sartre's is a bleak, forlorn, and

solitary picture of humanity, while traditional theism centers on an assumed benevolent God, creator of the universe and everything in it. Humans possess a divinely constituted common nature. Such a telic world elicits individual, communal, and confident response. It lays out the scope and character of human freedom, while Sartre's view of the world does not.

But theism also requires for its defense of panpsychism belief in the existence of God, belief in God's creation of the world, confidence in the goodness of God despite all of the perils, ambiguities, and uncertainties of the world, and an intelligible account of God's relations to and activity within the world. Psyche or spirit is assumed by most versions of theism to be the ultimate source of everything in the world. Not only are matter-energy and time given a secondary role, but it is not clear how a purely spiritual God, thought to exist beyond the conditions and constraints of time, could have intelligible relations to the pervasively physical and temporal character of the world.

The third option laid out in this book's first chapter for interpreting telic phenomena is eliminative, mechanistic materialism. This option is eliminative because it reduces everything to the level of physics, and it is mechanistic because it discounts the possibility of anything that cannot be accounted for in mathematical, strictly causal ways. What may look like human actions directed toward optional ends or goals are in reality no less causally determined, predictable, and constrained—at least in principle—than the functions of a highly developed machine. Teleology is reduced to or eliminated in favor of extremely complex modes of mechanistic behavior. No matter what things may look like or how they may feel, this is what they all amount to. What cannot be accounted for in a strictly scientific manner, and reduced finally to the domain of high-level mathematical physics, does not exist.

This statement would include Sartre's absolute freedom and the traditional theist's purely spiritual God. Chemistry, biology, psychology, the whole of human culture from its earliest time to the present, are reducible from seeming quality to pure quantity, and from a future with various possibilities open to different choices to one confined to inevitable, causally controlled ones. Humans themselves are robots or complex computers, and the world is one vast machine. Or alternatively, the world can be rightly viewed as a massive logical system or set of mathematical, deductive premises and conclusions awaiting analysis. There are no novelties anywhere, except what seem to be such from our limited and entirely mistaken human perspectives. Efficient causes are both necessary and sufficient conditions for any occurrence.

Time itself is devoid of novelty. It rolls relentlessly on, its every moment completely predictable at least in principle, and its future already completely contained in its past. In this eliminative, mechanistic perspective, there are no teleological, end-directed phenomena requiring explanation. Thus teleology is not so much explained as explained away. And the open future that teleology would seem to require is reduced to a future that simply replicates or reenacts what is already implicitly contained in its past. Not only is a credible role for teleology eliminated, so too is a credible account of the flow of time and of the very meaning of time.

The fourth, fifth, and sixth ways of interpreting teleological phenomena I present and discuss in chapter 1 are the way of the American philosopher Thomas Nagel, that of the English philosopher Alfred North Whitehead, and my own way of doing so. Nagel defends panpsychism, or the primordial, original, underived presence of directing mind in nature. And he does so without appeal to the existence of God. Whitehead defends a version of panpsychism or panmentalism by arguing that each of the basic units of reality has a “bipolar” character composed of an interlinked physical and a mental aspect. I, on the other hand, deny that mind is primordial, arguing instead that it is emergent, requiring a prolonged evolutionary time to become present in various developing forms on earth. I champion an emergentist source for teleology without making reference to God, thus agreeing with Nagel only in the latter respect. I do so as a religious naturalist whose focus of religious faith is on nature itself rather than on belief in God.

Nagel defends the thesis that there are teleological laws operative in the universe as complements to its efficient causal ones. Acceptance of such laws is necessary if we are to give a satisfactory account of biological evolution. They are necessary preconditions for the evolution of mind rather than being emergent products of it. The staggering intricacy and complexity of the processes of biological evolution demand for him such preconditions, an operative aim and direction already present in every stage of evolution. He is convinced, therefore, that my two sole primordials of matter-energy and time would be insufficient to explain teleological phenomena, even with long expanses of time and a crucial role of chance or novelty factored in. Whitehead’s metaphysics is based on the conviction that the world is a blend of dependence on the past and purposive movement into the future, and that his actual entities (or actual occasions) are required to explain why this is so. He also gives a prominent role to God in explaining how this is so, but his God—unlike the traditional theistic one—did not create the world and needs it as much as the world needs God.

I do not need to belabor my own view of teleology at this point, since this book as a whole is principally dedicated to its development and defense. Suffice it to say that I do hold that time is real, that novelty is an essential factor in the working of time, that matter-energy is dynamic and protean, that human freedom is real and not just a mechanistic process, and that the mind has a genuinely qualitative character throughout, meaning that its firsthand experiential qualities cannot be successfully explained as mere epiphenomenal illusions or reduced to something purely quantitative and mechanical.

Especially crucial to my teleological theory is the reality of time. Time for me makes tremendous differences over its extremely long stretches because time is a combination of continuity and novelty, and the novel factor in its flow becomes increasingly important and constitutive of material reality as that reality extends into the future. Time moves relentlessly forward and cannot be wound backward. This means that the present cannot be reduced to the past and that the future cannot be reduced to the present. Mine is thus a radically *non-eliminative* form of materialism because of its insistence on a central role for novelty in the ongoing history of the world and on the presence of teleological phenomena—that is, forms of life here on earth—as the outcome of well over three billion years of that history, starting with extremely simple anaerobic types of life.

I regard all life as teleological in the sense that all of it has at least to some degree a built-in orientation and directedness toward future ends. In doing so, I follow the lead of Evan Thompson. In his book *Mind in Life*, Thompson makes a convincing case for the thesis that all forms of life have the three basic, interconnected traits of *autopoiesis* (self-making), *sensation* (sense making), and *purposiveness* (future-oriented adaptive behavior in relation to aspects of a life form's natural environment). These three traits entail what Thompson calls “the deep continuity of life and mind” (2007: 157; see especially 157–62). What this idea amounts to is that teleology makes its first appearance on earth with the evolution of life and continues to this day to be a property of all forms of life, including our own.

Agreement with Thompson in this respect is essential in my approach to teleology. I have found no reason for thinking that Nagel would disagree with some of my convictions despite my strong disagreement with his version of panpsychism. He is staunchly opposed to eliminative materialism, for example, although for a reason different from my own. Nevertheless, this difference in reasoning is fundamental and far-reaching, as is our disagreement about the nature of teleology itself. Nagel's view is similar in



many ways to that of the Swedish philosopher Mikael Leidenhag, whose extended arguments in favor of panpsychism I take into consideration and challenge in much of chapter 5.

Moving now to chapter 2, the two meanings of *telos* I explore there are those of the ancient philosopher Aristotle. The first meaning is that of the end or outcome regularly achieved by some kind of natural process. An egg becomes a chicken, an acorn becomes an oak, or an embryo becomes a child, for example. In similar fashion, the sun and the moon are thought by him to circle the earth, their regular circuiting orbits being their natural ends. There is no suggestion of purpose in these processes. They are not for Aristotle the creations of an intentionally purposive God.

The other sense of *telos* has to do with some sort of purposive behavior, and it is the focus of this second chapter. In its most basic form, as I have argued earlier, it is a property of all life, but not necessarily as a kind of consciously intended action or behavior, a capability that emerges only with more complex forms of life on earth.

Nature as a whole has a *telos* for Aristotle but does not have such by virtue of being created by a conscious God. It is not the product of purposeful creation. In fact, the world for Aristotle has always existed. He has no concept either of its creation or of its evolution. His Unmoved Mover is simply the form or actuality of the whole, that is, the end it exhibits in its profusion of regular, orderly, predictable processes and changes. But his idea of the whole of nature as having no kind of *purposive* end was transmuted later by Jewish, Christian, and Islamic theologians and interpreters of Aristotle into its being the creation of a personal God who gives intended purpose to every aspect of the world in the act of creation. In this way, versions of theistic panpsychism have been developed, partly on the basis of Aristotelian philosophy.

This interpretation of Aristotle is mistaken, showing in one important way why it is important to distinguish the two senses of *telos* and, by implication, two very different approaches to teleology. Nature has as many kinds of immanent purposes as are implicit in the modes of action and behavior of its many types of life, but it has no overall purpose, as I have already indicated. Its sole *preconditions* are matter-energy and time, and neither is a conscious agent. They eventually produce life on earth, but conscious life takes an extremely long time to evolve from the innumerable earlier unconscious but also teleological forms of it.

I go into some detail in this second chapter describing the stages of this evolutionary process. In doing so, I emphasize the distinction between

“how” questions and “why” questions. There is no meaningful answer, in my view, to the question of *why* the evolution of life and its teleological character has occurred on the face of the earth. The only possible answer is just that this has been nature’s way of doing things, an answer that leads directly to the more answerable question of *how* it does so. And that, in my judgment, is where our investigations should be directed. I focus throughout the chapter on the how question and include in my discussion attention to the adaptive values of conscious types of life, paying special attention to conscious human life in this regard.

In doing so, I set forth a view of the status of values, their adaptive ends with respect to aspects of a creature’s natural environment and in relation to the social lives of human beings. I argue that values should not be conceived so much as independently resident in nature but as existing in the relations of living beings, and especially conscious ones like us, to aspects of the world. Values have a vector character. They are experienced here as about something there. What may have the value of food from one aspect may have the value of an inviolable thing of beauty from another. What may constitute a home for one creature may be construed merely as a tree from another. What may be seen as a friend from one perspective can be regarded as an enemy from another. And so on. Value, disvalue, and teleology are inseparably bound together. No valuative ends to be sought for, no teleology. No teleology, no such thing as values.

Everything necessary for the telic functioning of any organism is experienced as such from its perspective and for its purposes. And everything that functions in this manner for the organism is thereby constituted as a value or disvalue for it. In looking at the matter in this way, I contend that I do not commit some kind of “is-ought” or “naturalistic” fallacy. That is, I do not claim that the mere act of valuing creates genuine values. Values are potentially present as discoverable facts of nature, but they exist as such only in their relations to telic beings. Were there no telic beings, there would be no values.

But it is also true, I hold, that there would be no such thing as facts. What count as facts count as such from the perspectives of beings capable of recognizing, naming, or responding to them as such. The world is through and through an *interpreted* world, both in the way of putative values and in the way of putative facts. The role of teleology is implicit in both ways of thinking about it. I defend at length a version of this crucial idea of the world as an interpreted world in an earlier book (Crosby 2022b; see especially chapter 7).

The theme of the essential connection between teleology and values is taken up again in chapter 3. There I discuss four types of positive values we humans discover in our relations to the world. The first is the value we naturally feel toward ourselves and for the preservation, prolongation, and enhancement of our personal lives. The second is the values we find and urgently require, as naturally social beings, in our relations with others. These values can and should extend from our fellow humans to all of the sentient beings with whom we share our lives in this planet. The third is the captivating values we discern in the earth, sea, and sky of our remarkable home planet. And the fourth is the values pertaining to the sacred majesty of the massive universe (or pluriverse) of which planet earth is but a tiny part. In the broadest possible perspective, we earthlings and our planet are to the enormity of the universe what a microbe is to the earth as a whole.

All such values, whether relatively minor or inexpressively sublime, can have either explicit or implicit moral, aesthetic, and religious import. And they can elicit the unending fascination and wonder of scientists, philosophers, and other committed inquirers as they strive for a greater, more comprehensive, more liberating and healing understanding of our human selves and of our world. Teleology and its necessarily accompanying values are no less grand and amazing subsequent outcomes of an evolved and continuously evolving nature than they would be as something always and everywhere primordial and underived.

Chapter 4 continues on this path of observation and analysis by stressing the interconnections of causality and contingency that have made the evolution of the universe and of the earth to date. Causal relations provide a basis of continuing order for the ongoing work of novelty or chance to do its work. On earth, the result of these two factors, in their necessary dependence on the more ultimate inherent powers of matter-energy and time, has been the universe as we experience and regard it today, and especially the closer-to-home marvels of extensive terrestrial development and change, including the evolution of teeming numbers of diverse kinds of living beings with their widely varying teleological capacities and powers.

So extensive is the teleological power of human freedom, accompanied by the remarkable potencies of the human mind, that the fate of the earth is today direly threatened by human freedom's past misdirections and misuses and by its continuing destructive effects for the earth itself and all of its creatures, including its human ones. This is the ecological crisis of our time. I attend first in the chapter to the fate of the earth itself and its nonhuman creatures, and second to the fate of us human beings, as these two aspects

of earth continue to be increasingly and even exponentially affected by human choices or failures of choice, and their resulting actions or inactions.

The crucial importance of teleology is underscored by the urgency of this crisis. The reality of human freedom and our capabilities as intelligent beings give assurance that we are capable of dealing effectively with this ever-growing crisis. So it does not have an already fated or determined outcome. But commendable and hopeful resolution of it will require maximum concentration and use of our cooperative imaginations and powers of thought, planning, and will. I discuss three commonplace miracles present on earth today in order to provide assurance of our ability to meet the challenge of the crisis, but only to the extent that we proceed immediately to actualize and enforce them.

The first miracle is the primordial creative power of matter-energy and time that has produced us as creatures with an extraordinary amount of intellectual acumen, genuine freedom, and actionable capability. We are material beings who can join our own creative abilities with those of nature, and do so in ways that contribute to nature's wellbeing on earth in the helpful, constructive, comprehensive ways needed for rising to the challenge of the current ecological crisis. The other two miracles are the evolution of life itself and, with it, the evolution of conscious forms of life, including our own.

We are outcomes of evolution, and the powers it has conferred on us have now paradoxically become severe threats to the integrity of parts of the earth such as its sky, oceans, and land, to the continued flourishing of its nonhuman creatures in their natural environments, and to our own flourishing and long-range survival as one of its innumerable creatures. The stupendous responsibility this inescapable fact imposes on us humans today cannot be ignored, postponed, or set aside. We can meet the challenge of this crisis by drawing on faith in the resilience of nature and our awesome adaptive capabilities as creatures of nature. And we can best do so, in my considered judgment, by placing aspects of both our secular and religious faiths in nature and in the extraordinary powers conferred on us by nature.

Nature on earth in some shape and form will probably survive even our worst travesties, but we and countless other natural beings may not survive if we fail to do our necessary part as humans today. Like all natural beings, we depend crucially on nature here on earth, but it is becoming increasingly evident that the prosperity of earth and of large numbers of its other evolved creatures depend crucially on us. We have the urgent responsibility of putting our naturally evolved powers to work, not only in service to one another but in service of other evolved creatures and their

interdependent ecosystems on earth, of which we humans are integral parts and on which we vitally depend. The immediate full recognition and effective utilization of our telic powers is the issue of greatest moment confronting human civilization today. Viewed in this way, the topic of teleology comes to have an overwhelmingly relevant importance it might seem to lack when approached and regarded only in a detached, abstract manner. Chapter 4 is designed to bring this message home.

The last section of the fourth chapter underlines this point by noting that the ultimate authority to which appeal must be made in dealing with the current ecological crisis, our roles as creatures of an evolved and evolving nature, and our profound responsibility to our natural home *lies in our interpretations of nature and of our perceived place in nature*. There are many religious traditions that take fundamentally into account the truth of the *sacredness* of nature itself and of every aspect of nature—whether this truth is traced to divine creation and maintenance of the natural order or simply to the inherent creative and sustaining powers of nature itself. We humans are the final interpreters of the religious, moral, aesthetic, and scientific meanings of nature, no matter whether our faith in all of these realms centers finally on nature or some other kind of religious or secularly assumed reality deemed to be more critically important than nature. But even in the second case, it is we who are the interpreters of that presumed other reality as being even more basic than nature.

To the extent that this faith recognizes and takes into serious account the *sacredness* of nature, whether inherently so or made such by some sort of nature-transcending power, to that extent I hold the faith to be *religious* (see Crosby 2022a: chapter 6). In any event, since we are the ones who have to do the interpreting, even of alleged religious authorities that are claimed to lie beyond our human comprehension to a significant extent, there is a basic sense in which the buck stops with us and our respective interpretations of what, if anything, is finally and most importantly and valuably real. Whatever it turns out to be, that is the focus of our faith, whether it be religious or secular. In any event, our indebtedness to, dependence on, and responsibility toward nature here on earth cannot be ignored. Our telic powers are in these manners brought forcibly and inevitably into play, and to refuse to make appropriate and much-needed use of them is folly of the highest order. What we do or refrain from doing has profound bearing on the fate of the earth.

Chapter 5 takes up the challenge of responding critically to an extended defense of *panpsychism* mounted by Mikael Leidenhag in a journal article and throughout a book devoted to this purpose. I take note of five

of his basic arguments, presenting them as fairly and fully as I can, and then responding to each of them in turn—defending in this way my own *emergentist* account of teleology in contrast with his panpsychist position. His arguments are carefully thought out, and I try to do as much justice to their logic as I can while highlighting the counter logic of my own position. I am grateful that the different logics of the two positions can in this way be brought more clearly into light. Leidenhag is an able adversary and supports his position with admirable care and skill.

In the final section of this chapter, I discuss three types of theistic religion (traditional theism, pantheism, and panentheism). These types of theism give foundation to panpsychism, as Leidenhag notes, but he does not give explicit support of his own to any of the three. Assumed in each of the three is some kind of God, whether that God is thought to be the creator of the universe, pervasively present in it, or its being somehow present in God. God is typically assumed in each of the three religious perspectives to be a kind of being, presence, or power of a mental or spiritual order, meaning that psyche, spirit, or mind is primordial rather than derivative. This amounts, of course, to a kind of panpsychism.

I compare and contrast this kind of religious panpsychism with a discussion and defense of my own version of religious naturalism, in which psyche, mind, or spirit are emergent, not primordial phenomena, showing why for me nature is the most appropriate focus of religious commitment and why there is no need for appeal to God to account for psychic phenomena or to be the necessary focus of religious faith. I can respect and appreciate the appeal of the three kinds of theism Leidenhag makes note of, but I do not find them to be personally convincing.

Religion is a broad area of human thought and commitment, and there is ample room and even need for different versions of it, given the continuing debatability of even its greatest and most widely influential historical and contemporary versions. These many different versions expose the fallibility of human conceptuality and belief in the area of religion as in all other areas of thought and experience. Frank acknowledgment of this unavoidable human fallibility gives compelling evidence of the finally indescribable character, power, and greatness of the ultimate focus of each profound religious system. I celebrate and do not deplore this diversity, and Leidenhag's spirit, displayed in his writings, leads me to think that he would agree. So I take leave from him in this chapter on a charitable and pacific note. He is a partner in an extremely important philosophical enterprise.

Chapter 6 traces out the major stages in the evolution of mind and in this way offers further defense of an emergentist, non-eliminative (or nonreductive) account that requires no reference to any kind of preexisting psychic factor prior to the evolution of the earliest forms of life on earth. The key to the evolution of life, which counts as the earliest stage of the evolution of mind, is *organization*. This idea is the theme of the chapter. Increasing numbers of new types and levels of organization can be observed as we proceed from the matter-energy of the Big Bang origin of our present universe; to the evolution of ordinary atomic and molecular matter; to the evolution of living cells and systems of cells devoid of consciousness; to the evolution of conscious living ones; to the evolution of those with cultures of various types; and to the evolution of human beings and the great variety of their supporting and sustaining cultures that have developed and evolved in their histories on earth.

Throughout this process the roles of matter-energy and time are fundamental. Matter-energy provides the continual basis of these transformations, exhibiting a protean, extraordinarily alterable propensity throughout while still keeping its fundamental character. Time, with its combination of continuity and novelty, introduces changes and innovations that reach their highest levels of complexity—at least here on earth and in relation to psychic, teleological phenomena—with the emergence of human beings.

The clock of evolution cannot be set back because the novel or creative power of time brings into existence complexities of organization that were not there before. These evolving systems are genuinely and irreducibly new and can be observed even in the transition of the earliest kind of matter-energy in the Big Bang to the ordinary matter of atoms, molecules, microscopic systems, and macroscopic objects of various kinds. I conjecture that the Big Bang itself transforms ingredients of earlier complexes of world systems into the distinctive character of our present pluriverse.

The basic problem with the theory of panpsychism, in light of the continuing evolutionary process as I outline it in this chapter, is its strong tendency to overlook the creative role of time and of the protean character of matter-energy. Mind is an outcome of these two and not in any way a precondition for the presence of teleological phenomena on earth. And mind's emergence is a function of the complexity of organization. I illustrate this to be the case by the use of three analogies: the intricate organization of the bodies of living beings, a deck of cards, and democracy as a political system. No complex organization, no life, and no life, no mind.

The organization of the universe as I view it is not that of some kind of massive order that encompasses and contains all other orders. Instead, it is a multiplicity of orders of various types and sizes that includes many other orders, but no one of which contains all orders. And there is nothing existing that is not some sort of order. Hence, there are no simples, and there is no such thing as an order that contains all other orders. Every existing thing is a system of some sort, and there is no such thing as a master system said to contain all other systems. In making these crucial observations, I draw in the chapter on the thought of American philosophers Justus Buchler and Lawrence Cahoon.

These observations amount to the realization that the so-called *universe* is really a *pluriverse*. And it is a dynamic, fecund pluriverse of ongoing creation and destruction, relentless process and change. Outcomes of this dynamism on earth are, in their evolutionary sequences, ordinary matter, living matter, conscious living matter, and conscious living matter accompanied and assisted by various kinds of emergent culture, some relatively simple and others increasingly more complex. All of this is made possible by the *novel* aspect of time that is essential to time's flowing unidirectionally and irreversibly out of the past, through the present, and on into the future—and by the protean character of matter-energy endlessly amenable to ongoing transformation as it exhibits in itself the effects of the ever-gnawing tooth of time.

*Why* has time on earth continuously produced new orders of complexity of system and order? There is no answer to this “why” question other than that each formerly new emergent order has served as a kind of initial condition and impetus for the emergence of still newer, hitherto unprecedented orders. The universal “why” question thus admits of no clear, finally convincing answer. We can only say, fumblingly and inadequately, that it is in the nature of nature, as we have come to experience and know it, to operate in this way. We can explain aspects of natural order on the basis of other aspects, but we have no compelling requirement to try to explain the existence or most elemental properties and functions of nature itself. We can explain what is explainable by means of appeal to the givenness of nature, and we do not have to try to explain the existence of nature.

We are better equipped to answer the question of “how” nature has processed and evolved over eons, and I present an outline of what I take to be the principal stages of this process in chapter 6. There are marvel and miracle enough here so as not to require the positing of primordial teleology lying behind the universe conceived as a single-ordered whole and as imparting some kind of unitary, overarching purpose for life and mind on



earth. Wholes within wholes, systems within systems, organizations within organizations, and no super-complex of all such, are overwhelming enough.

The endless fascination of the “how” does not require an underlying, all comprehending answer to the question of “why.” Questions about purpose and not just ones about process can be meaningfully raised *within* the present pluriverse, not *about* it. Teleological phenomena, or goal-directed, purposive behavior—as I continue to theorize and emphasize throughout this book—is the outcome of immanent, gradually developing processes of material organization. There is no compelling need for it to be thought of as being already present and operative behind or inside these emerging processes.

The last part of chapter 6 provides an analysis of the psychological theory of behaviorism, showing it to be another example of the strong tendency to posit mind as something alien to matter and, as such, not amenable to scientific study in its own right. It is ironic that such a type of mind-body dualism should be assumed by some scientists as a way to insure the assumed objectivity or purely external character of scientific investigations and theories. Behaviorism can be seen in this way as another implausible kind of reductionism. As such, it fails to do justice to the fact that mental phenomena are genuinely real in their origination from and dependence on material bodies. In other words, minds are functions of bodies, but they cannot be reduced to earlier forms of those bodies. They are emergent realities and deserve to be studied and analyzed as such.

This point holds as true for mind as it does for life. Neither is some kind of mechanism but an aspect of reality that transcends the limits of mechanisms. Behaviorism is a tendency to look backward, not only to earlier stages in the evolution of matter but also to the Newtonian conception of matter as something inert and nonevolving. When viewed in that manner, mind comes naturally to be something that by its nature is radically immaterial and separate from matter. Implicit in this view is the idea that mind is not susceptible to scientific study, something that lies outside the domain of science.

Early modern philosophers resisted this idea, claiming that there can be something called science appropriate to the study of mind but focusing on a domain entirely distinct from matter. There would thus be two major kinds of science separate from one another and yet somehow also related to one another. This “somehow” was never resolved into a consistent, acceptable way of thinking. It either ended up with a final reduction of everything to the material, as *materialism*, or reduction of everything to the mental, as *idealism*.

Strongly resisting the idealist options, behaviorism chose materialism as an operational strategy. Mind can be studied scientifically, its proponents alleged, but only in terms of externally observable modes of physical behavior. Mind itself is basically only these modes and need not be thought of as something internal or phenomenological. Like all material phenomena, it is something mechanical or mechanistic. So far as science can discern, supposed interior qualities of mind and free actions of mind are reducible, in the final analysis, to externally accessible modes of motion, change, and behavior.

The method of scientific analysis can work only with externally and thus objectively observable phenomena, behaviorists reasoned, so mind becomes—at least for the purposes of scientific study—the study of behavior. A kind of reductive or eliminative materialism is thus assumed and proposed. The concept of matter this view assumes is basically the matter of Newtonian physics rather than the protean matter of biological evolution. Mind is nothing other in its true character than what is amenable to investigation by the field of physics. Material emergentism of the sort I have been describing in this chapter gives way, at least by strong implication, to reductionistic materialism. There is no real mentality in this outlook, and no purposive agency. Everything is reduced to external movements of the body. Whatever internal mental experiences or strivings there may be, these are negligible and unimportant to the extent that they cannot be reduced to scientifically observable behaviors of organisms, emphatically including the human ones.

As I point out toward the end of chapter 6, the philosopher Charles Taylor offers a convincing objection to the behavioristic way of thinking. He does so simply by observing that movements of the body such as two people shaking hands or dogs yelping and drooling over morsels of food held in someone's hand provide direct and unimpeachable evidence of their being intentional indications of both mentality and agency. They are not just external movements but reliable, everyday indicators of the reality of conscious minds and conscious agency. They give compelling indication of the evolution, in these two species of life, of purposive minds capable of initiating actions in the world.

It is therefore mentally intended *actions*, not mere mechanical *movements*, that their bodily behaviors reliably express and communicate. Minds are essential elements in any reasonable and reliable conception of reality. And they are essential without being in any way separate from their embodiments, their being actualities made possible by the evolution of matter and complex types of material organization capable of housing, supporting, and

giving rise to the flourishing of irreducibly new and real mental phenomena of many different kinds.

Turning finally in this introduction to chapter 7, the last one of this book on teleology, I explore two options for religious faith and commitment: traditional Christian monotheism and my own stance of religious naturalism. I include this last chapter advisedly because I think that much of the appeal of panpsychism lies in its promise of providing primordial purpose, meaning, and value to human life. Its appeal is thus existential and not merely conceptual. As the fundamental part of this promise, it gives assurance of a personal God who has created the universe with a principal focus on human beings and with the fervent desire to enter into a loving relationship with them as fashioned in God's own image.

Prior to everything else, then, is the loving, saving, comforting presence and power of the putative God of the universe, and humans on earth are its principal beneficiaries. Not only that, but they are humble servants of God who are invited to live not only under God's protection but also constantly under God's judgment—a judgment essential to their flourishing as God's creatures. Notable in this monotheistic perspective is not only the idea that humans are created in the image of God, but also that God is in countless ways a radically anthropomorphic God whose humanlike traits are believed to be magnified to an infinite degree.

God is like us humans in many ways, and we are like God in many ways. A warm and reassuring relationship with God is therefore possible, despite the vast differences that also lie between our natures and the nature of God. God is both endlessly fascinating and saving while being at the same time awesomely daunting and powerful. God for monotheistic Christians is the personification of the sacred. God's sacredness pervades the universe, and it provides counsel, hope, support, judgment, and direction for every aspect of human life. God can also be seen as the impetus, direction, and guide for the evolutionary processes of the world when these are endorsed and accepted by Christians, making mind primordial rather than derivative, as in panpsychism. The allure of this vision of reality is undeniable. I acknowledge and respect it and those who are committed to it, but I do not assent to it.

My religious worldview is that of a religious naturalist for whom the irrepressible power and allure of the sacred resides in nature and not in something thought to be supernatural or surpassingly greater than nature. I find reassurance, purpose, and salvation in the immanence of nature itself with no felt need of recourse to some kind of being, presence, or power

beyond nature. Nature is personable without being personal. We humans can be confidently at home here. We can humbly accept our status and role as conscious creatures of nature, with all of the gifts nature has conferred on us. We can cultivate a deep-lying sense of cooperation and community with the nonhuman types of life that are so prolific on the face of the earth. In doing so, we can gratefully acknowledge our dependency on the intricate ecological networks that make possible all kinds of life on earth, including our own. We can devote ourselves to nature's wellbeing on earth and to working for the preservation and flourishing of its millions of interdependent creatures in their respective domains.

We have abundant purpose, guidance, and *reason for being*, in our character as evolved creatures of nature. The sacred is solidly ensconced and operative in the material world and not elsewhere. Earth is our home, and we need ache, pine, or aspire toward no other. Like all the other creatures of nature, we come into being and eventually pass out of being. The only thing that is permanent and everlasting is nature itself, nature that extends even beyond this present universe (or, more properly, pluriverse) to all the others that have preceded and will follow it in endless time, and with endlessly evolving as well as devolving types of matter-energy. There is no need to puzzle in this magnificent view of reality about how a purely spiritual God, unlimited or unconstrained by any of the restrictions of temporal existence, can relate in intelligible ways to the fundamentally material and temporal character of nature. Moreover, anthropocentrism is not a nagging problem in religious naturalism's vision of the sacred. Nature is not a personal being.

This vision is inexhaustibly fascinating, mysterious, and sustaining in its own right, and is rich with deeply inspiring and motivating salvific power. Most fundamentally, at least for the purposes of this book, religious naturalism is not only content but delighted to regard mind, spirit, and purpose as emergent from the incredible fecundity and creativity of nature itself. I discuss themes, interrelations, and differences between traditional Christian theism and religious naturalism in chapter 7. In doing so, I have sought to give credible shape and form in this book to important aspects of my philosophical and religious interpretations of teleology, and to do so in the contexts of other related views. My focus throughout has been on the metaphysical and religious ultimacy of nature.

Nature may not have an external, overarching purpose, but it sings today on earth a resonant song of inspiration, challenge, and opportunity—but also of somber warning. Do we have the sensitivity and resolve to respond effectively to this song in our time of approaching ecological peril? Only

time will tell. The song's drumbeat is quickening, sounding an ominous alarm that we must soon change some of the most deeply entrenched habits of our technological civilization. The opportune time for doing so may turn out to be shockingly short. Ours is a time of nature's judgment, laden with awesome responsibility. Nature can be a source of blissful assurance but also of rigorous demand—no less so for it than for the personal God of traditional monotheism.