Looking to the Birds: A Perspective on the Interpretation of Nature

We often yearn to integrate or harmonize our understanding of nature and our understanding of God. I suggest forming such spiritual-natural connections in a subtle way, by donning a spiritual perspective and then looking at natural phenomena from a distinctly Christian point of view. In this spirit, I reflect on the natural history of the African village weaverbird, and draw connections to such notions as praise and accordance with the will of God, love of God, and human appreciation and responsibility. Such reflections are necessarily personal, which highlights the importance of the Christian's individuality in making spiritual-natural connections.

The created glory may be expected to give us hints of the uncreated;
for the one is derived from the other and in some fashion reflects it.
In some fashion. But not perhaps in so direct and simple a fashion
as we at first might suppose.
—C. S. Lewis, *The Four Loves*, chap. 2.

Humans have [a need] to connect important aspects of our understanding, to merge somehow our spirituality with our science, our religion with our reason.

A large room crowded with people and their brown-bag lunches bustles with conversation about everything life-related, from brachiopods to brachiation, from polymers to pollution. By the scientists present, hundreds of new species have been found and described, some named after them. Two will have cover stories in *Science* in the next couple of years, one for a discovery of a fossilized ancestor of modern whales, and another for establishing a crucial connection between deforestation and tree seed production in Indonesian forests. Another two are in the National Academy of Sciences, the highest honor America gives to its biologists. All diminish their talking and crunching as a graduate student rises to give his presentation. He is a thoughtful young scientist whom a leader in his field would later describe as having been the brightest undergraduate he ever taught at Princeton. The young man waits for silence, and then tells the audience what they already know, having seen the advertisement: his talk will be on competition and facilitation in plant communities.[1] But in his opening remarks on the factors that influence plant survival and recruitment to adulthood, he opens a book and reads the following:

> … some seeds fell on the path, and the birds came and ate them up. Other seeds fell on rocky ground, where they did not have much soil, and they sprang up quickly, because they had no depth of soil. But when the sun rose, they were scorched; and since they had no root, they withered away. Other seeds fell among thorns, and the thorns grew up and choked them. Other seeds fell on good soil and brought forth grain …[2]

Then he explains that this ancient source has described the three major factors plant ecologists have found to influence seedling

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recruitment: seed predation, edaphic (soil-related) factors, and competition. He then continues his talk, its poetic and unorthodox introduction having achieved its purpose by gaining the attention of the scientists. After a few smiles demonstrate the audience's appreciation of its quaintness, the biblical allusion is forgotten and the presentation continues in a more characteristic manner.

Spiritual-Natural Connections

When the quotation was read, why did a few in the room, perhaps only three including the speaker himself (who considered becoming a Carmelite monk before his biological career began), feel a spark of spiritual elation? It was certainly not because the Bible "got something right" with regard to science, for none of these three Christian biologists believed that the *ecological* verity of Jesus' statements is at all what is meant when the Bible is considered by believers to be divinely inspired. Had these biologists had such views of divine inspiration, they would certainly have been disappointed that Jesus would follow this statement by apparently misleading his followers into thinking that the mustard seed was the smallest of all seeds and becomes the largest of all shrubs.[3] No, the scientific validity of Jesus' statement was not the reason they were moved by it. Perhaps there existed a trace of mischievous delight that something Christian was able to sneak its way into the secular discussions of the proponents of the scientific world view. Such an attitude might bring forth a chuckle or a secret feeling of triumph, but it would not touch a person profoundly.

I think the reason for the flash of joy in their hearts was the need humans have to connect important aspects of our understanding, to merge somehow our spirituality with our science, our religion with our reason. "All truth is God's truth," we hear said, but we want it really to *feel* that way. We want the various aspects of truth to display some kind of palpable harmony with each other. To take the spiritual truths we experience through our life of faith, together with their theological framework, and to connect these things somehow to natural objects, events, and processes that we understand through science, can be a joyful, holistic, godly experience. Jesus repeatedly used nature to teach Scripture, the earth to teach of heaven, and the created to teach of the Creator. In so doing, he took the theological truths as primary, and used nature as a tool to reflect or image them. This is not the only way such fulfilling connections can be made between the two types of truth, but it is certainly a way that has been moving and worship-inducing for humans throughout history. As proof of this are Jesus' beautiful parables and illustrations, many of which were drawn from nature. These tend to leave a mysteriously enduring impression on our minds. I know apostates for whom images of such things as lost sheep, fish, pearls, lilies of the field, and trees bearing fruit are among the last surviving conscious memories of the Bible. John Bunyan defends the value of these types of connections as follows:

> … Were not God's Laws,
> His Gospel-Laws, in olden time held forth
> By Types, Shadows, and Metaphors? Yet loth
> Will any sober man be to find fault
> With them, lest he be found for to assault
> The highest Wisdom. No, he rather stoops,
> And seeks to find out what by Pins and Loops,
> By Calves, and Sheep, by Heifers, and by Rams,
> By Birds, and Herbs, and by the blood of Lambs,
> God speaketh to him. And happy is he
> That finds the light and grace that in them be.[4]

This process of interpreting nature for a spiritual end is different from classical natural theology, although they probably grow from the same motivation. Old-styled natural theology was the attempt to reason from natural facts on which everyone could agree, to conclusions about supernatural facts. Part of this involved looking to nature to discover the attributes of God. This, however, was usually fallacious as a philosophical exercise and crude as an exploration of spiritual-natural connections. Many people from the Christian perspective now realize that there is very little basis for assurance that lessons learned from nature will be the right ones. On the contrary, nature will teach whatever kinds of lessons one wants to learn, good or bad. As Calvin said: "If men were taught only by nature, they would hold to nothing certain or solid or clear-cut, but would be so tied to confused principles as to worship an unknown god."[5] Nature "red in tooth and claw" could be a lesson learned just as readily as nature the beautiful and harmonious; trickery and thievery can be seen just as readily as affection and aid. In fact, one of modern biology's most unsettling discoveries is that, in an important sense, struggle and competition are more fundamental in natural processes than peace and cooperation.[6]

It may be that some can say with Augustine, "Through the testimony of all of creation, I discovered you our Creator."[7] Indeed, Paul says this testimony leaves us with "no excuse."[8] But there are two features of this testimony which we should keep in mind. First is the simple fact that nature at its best can only lead us part of the way down the road to an understanding of God; the myriad religions and beliefs about the supernatural testify that many paths eventually diverge from it. Second, both Paul and Augustine agree that our attitude toward nature that interacts with its testimony is variable, such that the testimony is fruitful only in certain people. Paul talks of a darkening of the mind and futile thinking which can pervert nature's indication of God.[9] Augustine enlarges on this point. The minds of some might be "deaf" to nature, for instance, and so receive no message. Others "through their love of nature become subjected to it, and subjects lose their capacity for judgment."[10]

Article

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The connections we yearn for … must respect the different kinds of truth sought and apprehended by our scientific and spiritual modes of understanding. … Our beliefs about God are not so much informed, as realized*, in the sense of* made real to us*—as Lewis says, "clothed"—in the images we receive from nature.*

The natural theologians often assumed that the way to connect our natural with our supernatural understandings would be by simple logical deduction, one from the other. Perhaps this method has its place; but in many, perhaps most cases, it results in either a dragging down of the spiritual into the realm of science (as when in our day people reduce Genesis 1–3 to scientific statements), or the equally damaging exaltation of science into the realm of spirituality (as when we are exhorted to "worship at the temple of science" or trust it for our spiritual fulfilment).

In reality, the connections we yearn for can be of a much subtler nature. And they must respect the different kinds of truth sought and apprehended by our scientific and spiritual modes of understanding. For instance, we might begin by donning our spiritual understanding as a pair of glasses, and then approaching those same old, seemingly secular natural facts with this new perspective. We may find that spirituality does not require us to deduce things from natural phenomena, but rather requires us to look at those phenomena in a certain way. The highest truth of Jesus' nature analogies is not in the natural objects or occurrences themselves, but in the way some humans ("those who have ears to hear") are able to perceive those things and connect them with a spiritual understanding. C. S. Lewis spoke of such a subtler type of spiritual-natural connection in *The Four Loves*. He writes:

> What nature-lovers … get from nature is an iconography, a language of images. I do not mean simply visual images; it is the "moods" or "spirits" themselves—the powerful expositions of terror, gloom, jocundity, cruelty, lust, innocence, purity—that are the images. In them each man can clothe his own belief.[11]

Our beliefs about God are not so much informed, as *realized*, in the sense of *made real to us*—as Lewis says, "clothed"—in the images we receive from nature.

Here I would like to provide examples of these kinds of spiritual-natural connections from recent research I have undertaken with my wife on a species of African weaverbird. In this research, I take my spiritual ears and eyes to nature, rather than looking to nature for them. And I also unabashedly take my natural facts from ordinary science, rather than expecting my spiritual viewpoint to create them for itself. Within these ground rules, it may be that an important kind of harmonization can arise from this exploration. Such a harmonization could involve, for instance, the cultivation of an understanding or appreciation that is deeper, more holistic, or more personal.

The Village Weaverbird

We are to remember the Creator when we arise at the sound of a bird, says the writer of Ecclesiastes.[12] Among the compact villages along the wide flat river of The Gambia, this bird is likely to be the village weaverbird *Ploceus cucullatus*, widely known in the region because of its commonness, conspicuousness, and readiness to nest in the midst of human habitation.[13] These songbirds whistle, blabber, and squeal exuberantly throughout the day, certainly rousing some villagers to remember their Creator, if only to pray that the racket may stop. The weaverbirds nest by the dozens and even hundreds in large trees, often the central "meeting tree" of the village, although they almost always are found near water. "By the streams the birds of the air have their habitation; they sing among the branches."[14]

We can look at these birds in such a way that they point to something larger than themselves. Their incessant activity and song may jog our spiritual imagination, suggesting that we ask the question *why?*—Why does this bird even exist? Why is it so intent on performing its behaviors and living its little life? Before any biology or even physics comes to bear upon the matter, we may realize that at the most fundamental level, none of this diversity of life and forms was necessary. It is all an option, a gift. A bird lifts its head and sings, a bird that in an ultimate sense is here because it was deemed worthy of existence: it was loved into being. "And God saw that it was good."[15] Such a God, who looks at things in and of themselves and judges them good for their own sakes, loves them for what they are, is a broader and deeper God, we might say, than a god interested only in humanity. God has interests we do not understand, has loves that flow in other directions than our own. He is

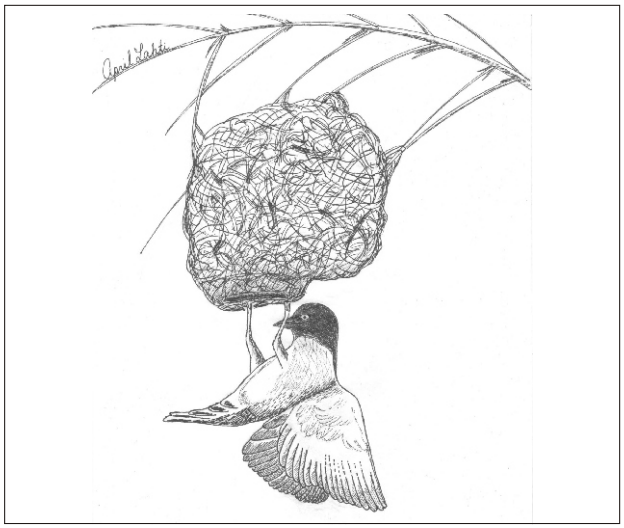
a God who loves living things, loves variety, loves activity. We, like Job, need to be reminded of the greatness of God and the breadth of his love, lest we treat him as if humans are the only created things, and challenge God in a way that betrays our arrogance. It is God who "provides for the raven its prey," God who put the proudly waving plumes on the ostrich, and it is by God's wisdom that the hawk soars.[16]

From this realization, one might venture in one of several directions. The creation is *we*: God produced the village weaverbird as he produced us, and both of us take part in this mysterious program of feeding and moving and reproducing. We are all in this existence together. We are all part of the community of those loved by God. But the creation is also *they*. God has other entities on his mind, objects of his love, which are not us, and have nothing to do with us.

Moving on from the we-they distinction, we might explore the concept of created things as reflections of their divine Maker. Any understanding we can gain about creation can be a startling and wondrous experience when we consider the fact that we are exploring the handiwork of a Master, examining the artistry of a divine Personality. Even a modest bird can be a bridge to God in the same way that a modest sketch is a bridge to its artist.

Here I will explore in still another direction, relating to created things' responses to the Creator. Since the flying birds, as all creatures, are commanded to praise God,[17] they, by the operations of their very nature, participate in praise, not having the alternative, as we do, to walk either in or out of God's ways. Matthew Henry, the biblical commentator, chose to view birdsong in this way: "They sing, according to their capacity, to the honour of their Creator and benefactor, and their singing may shame our silence."[18] On a walk in the Venetian marshes, Francis of Assisi was said to have encountered a large group of birds singing together. He recognized it as praise of their Creator, and with a fellow monk joined in with their own hymns.[19]

If the behavior of the weaverbirds represents their praise and obedience, they are responding most energetically to the command to "let birds multiply on the earth."[20] It is thought that the purpose of the dense coloniality in this species is for protection against natural enemies, increasing the survival of the colony members.[21] The complex, protracted songs of the males are directed toward potential mates. The songs reach a deafening din when a group of females return to the colony from nearby rice fields, where they have been building up nutritive reserves for the long period of nesting to come. The weaverbirds are as enthusiastic in multiplying as they can be, breeding continuously as long as climate (especially rainfall) permits. In fact, the command to multiply is reflected in this maximization of reproductive success throughout the natural world. The principle of natural selection assures this. Reproduction is as truly the primary objective of natural entities in a biological sense as it is the prime (first) directive of God to his creation. Moreover, those individuals of any species that are more effective at multiplying eventually replace those that are less effective. God through time develops the adaptation of his creations to their environments, thereby enabling them to adhere to his command to multiply.



The male village weaverbird *Ploceus cucullatus* sways beneath a freshly completed nest and flutters his wings to attract a female to it. Drawn by April Lahti.

Of course, this multiplication cannot continue for long without significant subtraction. If no village weaverbirds were to die, in just twenty-five years at current rates of reproduction, weaverbirds would be packed shoulder to shoulder across the entire land surface of the earth. So, in this world, even death is a necessary part of the reproductive success (the multiplying) of organisms. And living things of other species are sacrificed as fuel for the weaverbirds' multiplication. Insects constitute approximately 30% of their diet, and seeds (which contain living plant embryos) make up the rest. As Augustine said: "The land and the sea are organically replenished, growing things taking the place of those that are decaying."[22]

The weaverbirds, as their name implies, actually weave their nests, alternating strands of vegetation above and below other strands, rather than thatching them together as other birds do.[23] This unique ability has allowed them to build remarkably sturdy homes, resisting even the sharp claws of vervet monkeys and the talons of hawks. These birds tend to live in lands of torrential rains and high winds, yet they nest so densely in trees that they remove much of what would have been protective foliage. In fact, for the sake of visibility (first, females are attracted from a great distance to colonies with many visible nests; and second, the sentinels can more easily see approaching

predators), nearly all the leaves in a thickly settled tree can be removed. Yet, through the wild storms, the tightly woven nests usually remain dry inside, the eggs unbroken. The weaverbirds utilize up to eight different hitches or knots, using them in the same applications each time they build a nest. A sturdy ring is constructed first, and attached firmly to a branch with a specific series of knots. The shell of the nest is then built around this ring, incorporating a threshold so that the eggs will not roll out of the opening, which is in the bottom of the nest. Finally, a descending entrance tube is constructed. During nest-building, each strand end is invisibly woven into the structure until the nest looks like a firm basket hanging from the tree. Do these birds worry about how they will live in the shadow of harsh predators and thrashing storms? They do not have the ability to question or doubt the command to multiply. They can do nothing but attempt to survive and reproduce with the tools they inherited or learned from their parents and fellows. Their superior nest-building ability is without rival among the birds; their gifts are extravagant. Their adaptations are as praising as they are practical.

We could learn everything there is to know, scientifically speaking, about [the village weaverbird]—its evolutionary history, its ecological relationships, its anatomy, its behavior, its physiological mechanisms—and we would have advanced very little toward making any sense in our hearts about what it is like to be a weaverbird.

Below a colony, a young Wolof boy picks up a discarded nest from the ground. He squeezes it; it remains firm. He sticks his finger into the tube, and feels soft cottony grassheads behind the threshold, an almost unimaginably exquisite bed, nothing like his palm mat. He absently fills it with water from the river; it drips slowly. He tugs at the tight weave and cannot easily find the ends to the elephant grasses and eucalyptus leaves of which it is constructed. He wonders at the abilities of these weaverbirds, and is momentarily stunned by the realization of life beyond his understanding, and powers greater than his imagination. It confuses him, humbles him, and may bring him closer to an understanding of God and (what is more important) to a yearning for him.

We can explore further God's particular gifts to the village weaverbird. Solomon in all of his glory could not maintain such a vibrant coat of orange, yellow, and black as the males of the village weaverbird display, renewing it each year out of their very bodies, needing no servant or merchant to design it, and caring for no opinion on its beauty, though it is beautiful. The females will mate with the more brightly colored males, and by so doing will maintain and even increase such beauty in the population.[24] The males hang upside-down beneath their nests and frantically (and in unison among the colony) flap their wings to attract females. The colony appears to be on fire, or glittering, when such activity is viewed from a distance. If the rich king of Israel were caught in a storm of West African proportions for an evening, a bedraggled human with his ruined silks would trudge home the next morning for a lengthy overhaul of personal appearance. But the humble weaverbird preens for a few minutes and appears so smooth, healthy, and colorful that one is tempted to view the coat as a single fabric rather than a precisely ordered collection of thousands of feathers.

Take a weaverbird gingerly in hand, not merely as human holding bird, but as the powerful crown of creation caringly restraining a precious living thing over which we have been granted the awesome responsibility and right of stewardship. As the sage Agur could not comprehend the way of the eagle in the sky,[25] we cannot fathom this small being as it cocks its head, strong smooth bill tapering to a precise point, orange eye upturned gazing at us. Soft warmth flows into our hand, with the sensation of a rapidly beating heart. The scaly toes grip our fingers. We could learn everything there is to know, scientifically speaking, about this bird—its evolutionary history, its ecological relationships, its anatomy, its behavior, its physiological mechanisms—and we would have advanced very little toward making any sense in our hearts about what it is like to be a weaverbird. When it looks at us, we look back curious, dumbfounded, and ignorant despite any knowledge we may have. The living bird is a tangible reminder of the otherness of creation (and so, by reflection, the otherness of God), lest we be complacent or conceited.

A female cannot always remain in her nest when she is laying and incubating eggs. But when she leaves her nest to find food, the cuckoo strikes.[26] Possessed of an amazing ability to mimic the eggs of other species, the diederick cuckoo *Chrysococcyx caprius* waits in thick vegetation for a weaverbird to depart. Then the cuckoo flies into the nest, removes an egg, and lays one of her own. In less than a minute, she is gone. When the

cuckoo egg hatches, a day or two before the weaverbird egg or eggs, the cuckoo chick, while still blind, will bend over to create a depression between its shoulder blades. It will squeeze beneath any other egg in the nest, rolling it into this depression. Then it will lift the egg over the threshold and out the entrance tube, to fall to the ground below. The female weaverbird will have lost her entire brood to the cuckoo, and will be exploited further for feeding and protection until the cuckoo can leave the nest and fly.

The diederick cuckoo builds no nest. It relies on other species for its reproduction, as much as the weaverbird depends on the grasses and leaves to construct its nest. Both were created by God, both considered good, both commanded to multiply. They represent different strategies of reproduction, which would surely have a moral dimension in the realm of human society; but the strategies exist in the nonhuman world without an alternative for the respective species. The diederick cuckoo is designed as a "brood parasite."[27] The circuits in its brain associated with nest building and parental care have long ago disappeared, to be replaced with circuits associated with stealth and the determination of suitable nests to invade. In replacing the weaverbird egg with their own, they praise God in the only way they are capable, which is no less a praise than that which is accomplished by the weaverbirds.

We are naturally disturbed by this fact. Why must life be like this? Why must some animals have such a lifestyle? Why must one species kill another in order to live? Why must death exist at all? Is this how sin has corrupted the natural order? Is this what is meant by creation anticipating the end of its bondage?[28] We perhaps sense that a perfect world would be different, and think of visions where leopards lie down with kids.[29] We wonder what the meaning of such visions are, and what the world without human sin and its effects is like, and how we will find it to differ from the one we knew in this life. In this way, the cuckoo stimulates us, perhaps uncomfortably, to think of cosmic plans, the Fall, and Paradise. As the cuckoo, unaware of its spiritual effect on us, sits on a log and eats the insides of an egg it has stolen from a weaverbird's nest, we struggle and wonder. Perhaps we may simply attempt to be still and know that God is in control.[30] "Does a bird fall into a snare on the earth, when there is no trap for it?"[31] God will accomplish what he sets out to do.

Bird species can go extinct because of brood parasitism.[32] Some species are depleted such that they occupy only a portion of their former range, or enjoy only a fraction of their former population size. While some birds decline, the village weaverbird populations, however, grow and spread.[33] This species is blessed with an effective defense against the cuckoo. The eggs of female village weaverbirds are among the most variable of any bird species in color and spotting.[34] Each female lays eggs of similar appearance throughout her life, so her eggs bear a signature, or fingerprint. Village weaverbirds can distinguish foreign eggs by even tiny differences in color or spotting pattern.[35] Females pick up eggs that look different from their own, and throw them out of their nests. So whereas another weaverbird, the red bishop, must commonly suffer losses of whole nests of offspring when a diederick cuckoo parasitizes them,[36] the village weaverbird usually avoids the disastrous effects of raising a cuckoo instead of a weaverbird. Is this because of some intrinsic worth of the village weaverbird beyond that of the red bishop or those species experiencing declines due to brood parasitism? Certainly not. Birds can be no other than what they are; they have no alternative courses of action which would lead to differential merit. In this sense, God has "given them no share in understanding."[37] Whether and when adaptations arise in their populations to defend against natural enemies is unrelated to their goodness as God's creation. Moreover, birds sing, live, and reproduce, regardless of differences in success among individuals or species. They have no sense of unworthiness or injustice. The Potter molds these in one way, those in another way. "Will what is molded say to the one who molds it, 'Why have you made me like this?'"[38]

We who have tasted of the fruit of the tree of knowledge of good and evil live in no such state of automatic adherence to the will of God as does the village weaverbird.

To this point, we have considered a few aspects of the weaverbird, including its response to its Creator. Now, if we turn to look at ourselves in the context of nature, how can we fail to notice amid the several similarities (nature as *we*), an important aspect of sharp contrast? We who have tasted of the fruit of the tree of knowledge of good and evil live in no such state of automatic adherence to the will of God as does the village weaverbird. In our species, the clay can rebel against its Maker, and warp and bend to its own will. We are constantly plagued with responsibility, with alternatives of differential merit. Accordingly, our power is unmatched in creation, and is of profound significance in that respect. When we are granted dominion over the earth, we are granted the power to aid, modify, and even obliterate other vessels the Potter has created. To teach us humility, God asks, "Is it at your command that the eagle mounts up and makes its nest on high?"[39] And our answer is no—we must admit that we do not have that

power. Nevertheless, we can command that eagle to die, and all others like it, so that none remain.

Returning to brood parasitism, we note that our powerful actions of shaping the North American landscape to our needs and desires has resulted in a dramatic increase in this phenomenon's effect on many songbirds. It has happened at such an artificially rapid rate that the powers God has given to species of mutation and genetic recombination have not been able to produce defensive adaptations quickly enough.[40] Though questioning God's actions is fruitless and presumptuous, humans have the responsibility to question our own actions, and alter them when we believe that we have taken undue advantage of beings that we have not power to create, yet have power to destroy.

Duty is far from dry and burdensome, when accompanied by admiration and love. Together with God we can appreciate his handiwork. We can be impressed by the firm globular nests of the village weaverbird; watch the males in spectacular simultaneous display beneath them; enjoy the industry and exuberance of their foraging, building, competition, breeding, and parental care; realize the diversity and distinctiveness of their eggs; and wonder at the complexity and utility of the adaptations that allow them to be so successful. In all of this, we have played no role. We are simply observers and valuers.

A male weaverbird sits on an accustomed spot on an acacia branch, wings quivering as his mate has just entered one of his nests. He cocks his head to look at us with one eye as we walk by. He lets out a warning rattle, soon accompanied by those of dozens of his neighbors. Humans may be created in the image of God, but to this bird, we are merely intruders and a possible threat to his offspring. He is engaged in the fulfilment of God's creative will, and is doing so with boldness and panache. His beauty, vivacity, and remarkable lifestyle inspire us to appreciate and love the Creator. They also seem concordant with our understanding of God as Love. As Francis of Assisi said of birds he was observing, "Your Creator loveth you much, since He hath dealt so bounteously with you."[41] So, we need not be ashamed to enjoy creation for its own sake, having God for company in this act. Together with him we may exclaim, "Let birds fly above the earth across the dome of the sky!"[42]

Inevitable Individuality

These thoughts are offered as a few reflections proceeding from one person's limited set of experiences. By no means am I implying that familiarity with animals benefits understanding or integration of faith in a way superior to other experiences of nature. I have no doubt that a microbiologist or a chemist, or a nonscientist for that matter, has experiences which can lead just as readily to the formation of spiritual-natural connections. I would enjoy reading of them, as they would likely provide perspectives and insights that are unavailable to me by direct experience. Moreover, even within the limitations of experience, my thoughts here have been restricted. I have been partial to the notion of obedience, but I could have concentrated more heavily on such things as love, holism, or mystery.

Reflections like these may be most beneficial to the person who entertains them in the first place. In the end, each must think and explore, and relate, and realize for oneself. If a meaningful harmonization of our Christian spirituality and nature is to be accomplished, it must be appropriated to the experiences and personality of the individual subject. Recall that the distinctive qualities and receptivities of each person are the very reason why nature is an unreliable spiritual guide, delivering different kinds of lessons to different people, or even to the same person in different frames of mind. As is perhaps often the case, something which is a potential stumbling-block to spiritual growth when out of proper context is, when in its rightful place, a key feature of it. Individual differences were an obstacle earlier—they make classic natural theology largely a pipe-dream. But we should not for that reason denigrate this variable and individualistic part of ourselves, for it is the only place where a harmonization or synthesis of our natural and supernatural understandings can take place. In an argument for an "inwardness" or "subjectivity" in our relationship with God, Kierkegaard writes:

> Nature, the totality of created things, is the work of God. And yet God is not

In the end, each [person] must think and explore, and relate, and realize for oneself. If a meaningful harmonization of our Christian spirituality and nature is to be accomplished, it must be appropriated to the experiences and personality of the individual subject.

> there; but within the individual man there is a potentiality (man is potentially spirit) which is awakened in inwardness to become a God-relationship, and then it becomes possible to see God everywhere.[43]

The God-relationship lives and grows in that individually distinctive place the Bible calls the heart.[44] Therefore, our enjoyment of spiritual-natural connections will occur there as well. We do have a common foundation in the faith, and we may share an understanding of science as well. Nevertheless, each of us will look to the things that touch our respective hearts, and will learn from them in distinctive ways. The sage muses on nature, "Three things are too wonderful for me; four I do not understand"[45] —each of us can fill in our own list here, of natural things that point us to supernatural things. ❁

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Notes

[1]Facilitation is the incidental aiding of the survival of one plant by another, as when the shade of trees protects moisture-loving forest groundcover from the drying effect of the sun.

[2]Matthew 13:4b–8a (NRSV, *passim*).

[3]Matthew 13:31–32.

[4]John Bunyan, *The Pilgrim's Progress* (1678), "The Author's Apology for his Book." The words "pins" and "loops," neither of which feature in the King James Version of the New Testament, I would presume to refer to "needles" and "eyes"—not a connection with nature, but certainly an instance of the lower imaging or teaching of the higher.

[5]J. Calvin, *Institutes of the Christian Religion* (1536), trans. F. L. Battles, I.v.12.

[6]More individuals are born than the environment can support. This phenomenon underlies the differential survival that fuels evolution by natural selection. All instances of cooperation in nature, therefore, must have developed in the context of this struggle for existence. See, e.g., W. T. Keeton and J. L. Gould, *Biological Science,* 5th ed (New York: W. W. Norton, 1993), or other biology, evolution, or animal behavior texts.

[7]Augustine, *Confessions* (ca. 400), trans. D. C. Lahti, VIII.i.

[8]Romans 1:20.

[9]Romans 1:21–23.

[10]Augustine, *Confessions*, X.vi. For a critical look at natural theology from a contemporary of its heyday, see John Henry Newman's attitude as described in M. A. Kalthoff, "A Different Voice from the Eve of *The Origin*: Reconsidering John Henry Newman on Christianity, Science, and Intelligent Design," *Perspectives on Science and Christian Faith* 53 (2001): 14–23.

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[12]Ecclesiastes 12:1.

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[15]Genesis 1:21.

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[17]Psalm 148:10.

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[30]Psalm 46:10.

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[38]Romans 9:20.

[39]Job 39:27.

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[44]Psalms 27:8; 51:10; Isaiah 29:13; Jeremiah 24:7; Mark 7:6; Luke 6:45.

[45]Proverbs 30:18.