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The Patterned and Emergent Boundaries of Wilderness Beings: Ponderings on the Creature at the Edge of the Woods

Prologue. My nephew started his freshman year at the University of Maine this past fall, studying forestry. We went to visit him in September and found the wall of his dorm room covered with leaves, as he focused on class requirements to learn how to identify the trees of North America by analyzing the characteristics of each type of leaf. When we went back to visit in November I asked how he was doing with learning the leaves. "Fine," he said. "Except now the leaves are all gone so we have to know the trees by their bark."

Introduction. My nephew's experiences studying the intricacies of forestry are reflective of our knowledge of the natural world in general. Much of nature exists as a mystery with opportunities for knowledge dependent upon seasonal variation, serendipitous encounters, and the mutually interrelated decisions of human beings and other living creatures. In the following essay I will reflect on how some personal experiences with wildlife in my own backyard have led me to reflect on the potency of knowledge between humans and free-living creatures in the natural world.

(photo by author)*

The Human-Wildlife Interface. The vantage point of my small rural home built on the edge of the woods nearly a quarter century ago has given me a viewpoint on many creatures, including songbirds, raptors, turkeys, deer, bears, fisher cats, raccoons, coyotes, frogs, nesting turtles, bees, and hornets. Many of these have been seen from my window, which offers a buffered boundary from which to view, but not to alarm, the animals. The emergence of these creatures has been influenced not only by their own seasonal patterns and survival needs but my own decisions and habits, which include planting nurturing species of plants, creating a water garden, providing bird seed, and refraining from the use of herbicides and pesticides. When I first moved into the house, I had asked my father to build a wildlife feeder from which I envisioned feeding all sorts of animals who would live together in peace. The original wooden feeder eventually fell into disrepair, but the bird feeders that replaced it have continued to draw an assortment of animals over the years. The appearance of some creatures has been sporadic, while others arrive regularly, not only from season to season, but in a sequential emergence over the course of the day. The morning typically starts with visits by songbirds and squirrels, followed midmorning by a flock of turkeys and later nocturnal visitors, such as raccoons and opossums. Each species comes in its turn, and I have never witnessed any predation at the feeder other than one hawk that swooped toward a bird one day, but fortunately missed his target.

One species in particular has inspired the reflections leading to this essay: the coyote. Encounters with a coyote living in the woods behind my house helped generate much insight into the natural world for me. In this paper I will share the story of my encounters with this fascinating creature, and then explore these experiences in relation to the metaphysics of philosopher Bernard Lonergan.

Moonshadow — A Coyote Encounter. The coyote first came to my attention one cold night in the snowy winter of 2015. One of my cats, Yukon, sat at the back door gazing through the glass at something beyond. When I first flicked on the light I was able to see only a glimpse of a medium-sized brown creature as it fled. I thought it might be a small deer or a coyote. It turned out to be the latter. The coyote soon came back, despite the backdoor light. It seemed willing to take a risk in order to eat the sunflower seeds scattered beneath my birdfeeder. In a pattern that was to be repeated night after cold winter night, the thin hungry creature stayed for hours, long after any intact sunflower seeds had disappeared, to eat the shells that had been left behind by the birds.

I was able to take some photographs and began reading about coyotes to learn more. This led me to a wildlife biologist who studied coyotes. From the pictures, he thought it was a female, due to the shape of her snout. Feeding wildlife is generally discouraged to avoid human-wildlife conflicts. But seeing the animal so thin at the time of year when female coyotes were likely to be carrying a litter I asked if it would be OK to feed her temporarily, keeping the food by the woods. He said it would probably be all right. Thus began a new pattern. I began making her warm oatmeal mixed with yoghurt, and then expanded to high protein pancakes. Night after night she came. When I brought the food out to the edge of the forest and placed it on "coyote rock," she would temporarily retreat into the woods a bit. After I'd returned to the house she would come back and eat the food. The coyote was quite timid and never showed any aggression toward myself or my dogs. I noticed that when I spoke to her in a low voice she often stopped to listen. I never made any attempt to move closer to her or to touch her. I suspect that I might have been able to with time. But it was important to maintain some boundary with the wild. Coyotes that become too used to humans often end up in situations in which they are harmed.

Gradually, spring arrived, and with every lengthening day the line of snow retreated until Moonshadow, as I'd come to call her, was easily visible prior to dusk. I wondered if she had a litter somewhere and continued to feed her, but knew the day would come when I had to wean her from the supplemental food. By May I was often out working in the yard after work, and she began arriving regularly around 5 pm or so. During March it had been dark at that hour, but now the longer days exposed her, making her vulnerable. One day while working outside, I noticed that she was trotting around the back of the garden, waiting expectantly for her dinner.

I had read that coyotes are highly intelligent and adaptable. I thought that she could adapt to a later schedule. So I began waiting until dark to put her food out. And sure enough, she began showing up later. Finally I knew it was time to wean her and began putting out less and less food each day, until I stopped altogether. However, she continued to visit after dark for most of the summer to eat fallen seeds from the bird feeder. Finally, when I was away for a week's vacation at the end of August, she seemed to stop visiting and I did not see her for some months. I wondered and worried about her. But she had become mystery again.

This past January, on the night before the first snow storm, Moonshadow returned. I was happy to see her alive and well. I resumed our winter feeding schedule. She continued to remain very cautious, although during the late winter there was a two week period during which she arrived in the morning some days for breakfast. My back yard slopes downward, and several mornings after eating she sat on that hill overlooking the woods, almost as though the yard were now part of her dominion.

Moonshadow is an Eastern coyote, which is now known to be a hybrid of the Western coyote and the Eastern wolf. The term "coywolf" has been suggested as more accurate

than coyote (Way, "Taxonomic"), and recently the species nomenclature of "Canis oriens," meaning "eastern canid," has been proposed (Way & Lynn).

Patterned and Emergent Conditions for Wildlife Intelligibility. My experiences with the coyote, as with most human-wildlife encounters, are characterized by shifting successions of disclosure that involve both continuity and change. The seasons provide what philosopher Bernard Lonergan would call "flexible circles of ranges of schemes of recurrence" (*Insight* 495). Human knowledge of wild creatures is conditioned by rhythmic and seasonal variation, schemes of recurrence that are not identical from one year to the next but nonetheless have recognizable patterns. My knowledge of these creatures is partially conditioned by seasonal variation that both hides and reveals.

For example, this year our neighborhood had its first encounter with river otters that had migrated to a nearby pond. Our experience viewing them was delightful but temporary, as it was made possible by the winter ice which rendered the otters visible during times of eating and play. With the return of open water, otter sightings became much less frequent.

Variations in the seasons create new possibilities for intelligibility. A spring snowfall opens a horizon into events from the previous evening, as a narrow ribbon winds over the snow bank on the pond's edge signaling an "otter slide," much as the same snow makes visible the coyote tracks by my back door — creatures I did not witness, but whose presence I can discern through the patterns left but for a moment in glistening crystals of space-time.

Our knowledge of wildlife is conditioned by varying manifestations of the organism. On a biological level the appearance of the creatures themselves changes through processes such as molting feathers and shedding fur, which renders them more or less visible. Visibility also varies due to an animal's behavioral choices to meet biological needs, such as procuring food and shelter, along with patterns of hibernation. Natural rhythms external to the creatures, such as sun/moon/day/night and winter/spring/summer/fall, all contribute to revealing or concealing the woodland wildlife. Not only is visibility affected by these changing conditions, but sound as well. During times without snow I have been alerted to Moonshadow's presence though her footsteps on crunching leaves. Shifting boundaries emerge across space and time.

My awareness is often mediated by the sensory, interpretive, and behavioral capacities of other creatures, such as my cat's observance of the coyote or the particular barking of my dogs when she is nearby — they are aware of her presence long before I am. My knowledge of the coyote involves assembling and analyzing both data I have attended to directly and data I attend to indirectly through understanding my pets' behavior.

Finally, my opportunities to learn more about this coyote have been influenced by our mutual unfolding relations and emerging trust. Lonergan describes the human person as a unity, revealed to others only gradually, using the metaphor of peeling back "the successive coatings in an onion" (*Insight* 495). In a similar fashion, nature gradually reveals itself. A free-living creature chooses to let itself be known. Coyotes usually stay hidden from humans due to the threat that people impose. Moonshadow's self-revelation has been gradual, with building trust based on her experiences of me. Moreover, the coyote's experiences of me and my dogs is also influenced by change, as our own behaviors shift with the seasons. Lengthening days and warming temperatures lead me to spend more time in the garden. Open windows allow sounds from the house, such as my voice and noises from my pets, to be audible. Unfamiliar stereo music now wafts through the air to the edge of the woods, where Moonshadow prances uneasily.

Unfolding horizons of awareness are thus mediated through systematic and nonsystematic convergences and the relationship between myself and the wild creature, as well as other animals and the natural world. Intelligibility is not fixed, but dynamic.

Wildlife Encounters as Potency. The metaphysics of Bernard Lonergan, SJ, can offer some perspectives from which to further explore encounters with the natural world and its free-living creatures. Lonergan was a twentieth-century Canadian philosopher and

theologian. Lonergan views human knowing as a process leading toward "being," which he defines as "the objective of the pure desire to know" (*Insight* 372). The objective is what is to be known by the totality of all true judgments, and includes all that is known, as well as what is to be known. Lonergan describes the notion of being as an anticipated judgment about concrete reality. He further distinguishes "proportionate being" as that portion of being which lies within the realm of potential human understanding. Proportionate being is "whatever is to be known by human experience, intelligent grasp, and reasonable affirmation" (416). A free-living creature could then be considered as a dimension of proportionate being, an intelligible entity which lies at least partially within the capacity of human understanding.

Lonergan describes a structure of knowledge using three elements of metaphysics: potency, form, and act. In brief, potency corresponds to "the component of proportionate being to be known" (457) through explanatory knowledge of empirical experiences, form corresponds to full understandings about those experiences, and act corresponds to a judgment or verification of that which we have reasonably affirmed as true. For Lonergan, metaphysics comprises a unified and cumulative progression of human knowledge moving from that which is experienced to a higher level of understanding through critical reflection and reasonable affirmation.

Lonergan further distinguishes the metaphysical elements into two types. *Central* potency, form, and act, are the experiencing, understanding, and affirmation of an individual existing unity. *Conjugate* potency, form, and act are the experiencing, understanding, and affirmation of change within the unity. "Central act is existence, for what exists is the intelligible unity. Conjugate act is occurrence..." (462). This distinction provides for understanding the unique unity of an individual being while also apprehending changes within a particular unity over time. Within a single being we can appreciate both continuity and change. Research with human subjects suggests that this cognitive distinction between central and conjugate act is critical to overcoming group bias, and in building peace with former enemies (Perry, *Catholic*; Perry, *Israeli-Palestinian*).

In the movement from potency to form and to act, our own understanding progresses from a given experience of a natural creature to a fuller understanding of them. At the same time, that creature is evolving and changing. Lonergan's philosophy provides for a metaphysical accounting of both our own progressive understanding as well as the developmental changes that are occurring in the being that is the object of our consciousness. As our knowledge of a particular wildlife creature progresses, we recognize that we are achieving a fuller understanding of the same creature. In our

understanding of a coyote, for example, *central* act is the affirmation of that coyote's existence as a unique identity of unity. *Conjugate* act relates to affirmation of an occurrence in that coyote-as-unity.

Coyote as Known. Wildlife encounters, then, exist as potency. Indeed, in Native American traditions, each animal is believed to provide special teachings for human beings (Sams & Carson; Andrews). We then can ask of encounters with natural creatures, what is to be known here? There is an intelligibility in this creature open to deeper understanding. Thus my experience with a single coyote can be the stimulus to call forth a deeper knowing through observing and reflecting on her behavior, reading scientific studies about coyotes in general, conversations with experts, and further reflective encounters.

Lonergan indicates that the notion of a thing moves beyond sensory and explanatory insights to grasp "a unity, identity, whole in data" in its "concrete individuality." "Thus, the dog [or coyote] Fido is a unity, and to Fido is ascribed a totality of data whether of color or shape, sound or odor, feeling or movement" (*Insight* 271). Lonergan goes on to say that things are "extended in space, permanent in time, and yet subject to change" (271). The notion of change is conceived through differences in data at different times within the same thing.

This approach is helpful for understanding the natural world, particularly coyotes, which are known to be highly adaptable. As coyotes adapt they have been expanding their habitat considerably, even into urban areas, leading to increased human experiences of seeing and hearing coyotes (Way, *Suburban Howls*). This offers an opportunity for expanded human understandings and judgments about coyotes. My observation of a single coyote over time has yielded considerable insight about the characteristics of the coyote, while also observing changes over time. My understanding of both continuity and change within the same animal has led to cognitive affirmations about *this coyote*.

Encounters with wildlife are patterned not only by the revealing or concealing rhythms of the natural world. They are also patterned by the individual lens or "mediated immediacy" (Doran) that the human knower brings to that encounter. Despite the fact that coyotes are an important part of both urban and rural ecosystems, they are "viewed by many people as a pest or vermin, something un-desirable to be disposed of " (Way, "Love wolves" 11). This is partially due to the perceived threat of coyotes to livestock and pets. But the profound disvaluing of this animal often results in lethal — and cruel

— forms of control, including being trapped, poisoned, shot from the air, and killed in contests. Coyotes are often subject to inhumane practices that are not only ineffective in population management but result in prolonged suffering and death. Indeed, 42 of 49 (86%) of U.S. states allow unlimited bag limits of coyotes, suggesting that they are of little to no value (9). Current coyote management practices are not only of ecological concern but raise disturbing ethical questions (Way, *Suburban Howls*).

The understanding — or misunderstanding — that humans have about particular wildlife creatures holds important ethical implications for how such creatures are treated. Human bias towards coyotes has many interesting parallels to group bias of humans against other humans. I am addressing this in a separate paper and research project. But it is worthwhile to note here that coming to know "this coyote," this unity-identity whole of Moonshadow, has helped dispel some of the myths I had heard about coyotes in a similar way that personally knowing the human "Other" helps to remove the stereotypes that comprise and perpetuate group bias.

Research suggests that human attitudes towards animals can change with time. One study that examined attitudes toward coyotes on Cape Cod, Massachusetts, found an increase in positive attitudes and diminished fear toward coyotes in 2012, as compared with 2005. These changes in attitudes were also associated with decreased support for lethal management (Jackman and Rutberg).

Through knowing Moonshadow I have experienced changes in knowledge about coyotes, as well as new perceptions about myself as connected to and relating with wildlife. This understanding provides a view of myself as mutually unfolding in relationship with this wild creature. Mutual trust is needed for each of us to become vulnerable to the other. New patterns are created based on this trust and evolving relationship. The human-wildlife boundary becomes more permeable.

Thus this transition from potency to form and to act involves a change in the *known* related to coyote appearance and behavior, a change in the *knower* comprised of a development in intelligence about coyotes, and change in the *context of knowing*, the environment which illuminates or obscures the intelligibility of the thing to be known. Human, coyote and ecological development are intertwined.

Coyote as Knower. As stated above, the totality of data about "Fido" includes "feeling or movement" (*Insight* 271). Lonergan notes that animals possess a further degree of freedom that allows them to move beyond the limitations of their material situation and

outer circumstances. This further degree of freedom emerges from the animal's sensibility:

> the animal pertains to an explanatory genus beyond that of the plant; that explanatory genus turns on sensibility; its specific differences are differences of sensibility; and it is in differences of sensibility that are to be found the basis for differences of organic structure, since that structure, as we have seen, possesses a degree of freedom that is limited, but not controlled, by underlying materials and outer circumstances. (291)

Lonergan describes a species as "an intelligible solution to a problem of living in a given environment" (290). Here we must note that for coyotes the solution is not only intelligible but *intelligent.* Lonergan, following Darwin, contends that "for an animal to begin a new mode of living, there would be needed not only a new sensibility but also a new organism" (291). But the coyote is an animal that has adapted its ways of living, not through physical change, but through use of intelligence. For example, coyotes have acquired the necessary new insights to live quite successfully in urban environments, which has required changes in strategies for procurement of food, shelter, and avoidance of humans. Research on coyotes living in Chicago (of which there are approximately 2000 [Dell'Amore]) has revealed successful adaption to traffic patterns, including waiting at red lights, understanding direction of traffic flow, and pausing in median strips to wait for traffic to stop before crossing the further side of double lane roads (Badger). Now, to be sure, coyotes have not achieved the level of intelligence required for the *building* of cities. Nor, that matter, for polluting them. But it is clear that at least partially through their intelligence coyotes have achieved the developmental flexibility required for "a partial transcendence of environment in the animal that develops in the shelter of the egg or womb, that enjoys parental care, that can move about from one place to another, that is equipped to outwit or to conquer foes" (*Insight* 480). The intelligence of Moonshadow, "this coyote," is intelligible to me. I have observed and analyzed her behavior for more than a year now: how carefully she chooses her steps; how she arrives and departs from the Southeast, where the woods are deepest; her wary assessment for scent and sound; how discriminating she is in visiting only one section of my yard, hidden from other views. She is clearly making judgments as she constantly scans the horizon, sniffs the air for new scents, whirls, runs, and hides in between hastily yet hungrily gulped bites of food.

Moreover, the behavior of Moonshadow, along with bald-faced hornets who allow me to pass their nest unscathed yet sting newcomers, and my adopted feral cat that sits in

my lap but runs from all others, suggest that I am intelligible as a particular *thing* to my fellow creatures. While they may not know me in the *totality* of my data, they do grasp me as a *particular* individual, as different from other "things" of the same human species.

Lonergan notes the difficulties of understanding other animals from a psychological perspective because "animal consciousness is not accessible to us" (290). Additionally, understanding the significance of animal behavior cannot be determined upon any one instance, but must include "the range of different modes of behavior relative to another range of significant different circumstances" (290-1). Such a "range of significant different circumstances" gives rise to different expressions of potency as discussed above. It is thus critical that we recognize that our experiences with and insights into sensitive animal behavior are as yet incomplete.

In the six decades or so since Lonergan wrote his major work, Insight, scientific research has indeed expanded human knowledge of animal psychology. In a passage in his recent book, *Are We Smart Enough to Know How Smart Animals Are?,* world-renowned primatologist Frans de Waal discusses advances in human understanding of animal cognition, or the intelligibility of animal intelligence. He recounts the development of spontaneous insights in birds (as different from learning that is taught), orangutans who announce travel plans a day in advance, and elephants who have demonstrated self-recognition in experiments using large — and very durable — mirrors (Choi). De Waal argues against the hierarchical positioning in Aristotle's Scala Naturae in favor of recognizing a plurality of cognitions "exquisitely suited" to individual contexts:

> Clark's nutcrackers (members of the crow family) recall the location of thousands of seeds that they have hidden half a year before, while I can't even remember where I parked my car a few hours ago. Anyone who knows animals can come up with a few more cognitive comparisons that are not in our favor. Instead of a ladder, we are facing an enormous plurality of cognitions with many peaks of specialization. Somewhat paradoxically, these peaks have been called "magic wells" because the more scientists learn about them, the deeper the mystery gets. (De Waal)

De Waal also proposes that maltreatment of animals can partially be attributed to human resistance to affirming animal intelligence. He notes that this denial has moral implications, as historically human exceptionalism has been used to justify the use of animals to suit our own ends, from research to entertainment. Research in the field of human-animal relations supports his argument. Human perception of animal cognition

is an important component of public attitudes toward wildlife. For example, belief in animal mind is correlated with decreased support for animal use such as in personal decoration or experimentation (Knight, et al.).

Variabilities in Proportionate Being as Good. Recalling that proportionate being is "whatever is to be known by human experience, intelligent grasp, and reasonable affirmation" (*Insight* 416), it becomes clear that the patterned variations and boundaries in wildlife encounters are part of proportionate being. The variability itself is intelligible. It can be experienced, understood, and affirmed. This leads to the question as to what is the good to be known through variations in wildlife encounters.

Reflection on my own experiences suggests shifts in the interiority of the knower, including both cognitive understanding and feelings. The patterned boundaries and mystery of nature's revelations first serve an important purpose by calling forth the wonder that is at the heart of knowing. Additionally, the recurring patterns of seasons, with their variations, invite us to deepen our knowledge, much as a second reading of a text might do. With this process the knower also changes; there is both continuity and change within the knower with each season. Time is essential for a deeper, fuller understanding of the natural world to unfold.

The rhythmic, yet fluctuating, changes in the intelligibility of nature set a cycle in which knowledge is hidden and revealed. Even as the ice melts and river otter sightings have faded, we can now welcome the awakened songs of spring peepers and goldfinches coming into vibrant bloom. After a deep winter's sleep, there is rebirth. Moreover, this pattern of rebirth is intelligible and the expectation of its emergence brings hope.

The serendipity of our encounters with nature, particularly with wild creatures, brings feelings of unique joy and gratitude. Encountering a free-living animal has a mystical quality. To then extend a single encounter into a scheme of recurrence, and to build a relationship of trust with that animal, is deeply meaningful.

Potency and Vertical Finality. Lonergan argues that potency is the "ground of limitation," but "also the ground of finality" (479). From his delineation of potency, form, and act as the metaphysical structure of human knowing, it is clear that variabilities in potency, as the experientially-based starting point, would be a ground of *limitation* in human knowing. Earlier discussion highlights that human experience with wildlife is limited by variable conditions, such as animal biological needs and behaviors, as well as visibility from seasonal effects on plants, trees, and bodies of

water. In order to discuss how variabilities in potency might also be the ground of *finality* it will be helpful to discuss Lonergan's use of this term.

Lonergan describes different ends of human action: "life, the good life, and eternal life," which correspond to three types of finality: horizontal, vertical, and absolute. Here we will focus on vertical finality, in which an individual or community moves beyond mere survival, or "life," to a higher end of "the good life" ("Finality" 38). Unlike horizontal finality, which is achieved by nature's "repetitive emergence and maintenance of life" (39), the good life of vertical finality is a historical development of moving beyond material limitations through the "progressiveness of reason" (38). For Lonergan, the good life encompasses a range of human achievement, including practical outcomes such as technology and the arts, integrated within the higher ends of knowledge and virtue. (In later writings Lonergan (*Method*) moves beyond the Aristotelian language of "virtue" to the term "authenticity" to describe the actuation of human intellectual and moral capacities.)

We have established that the potency of human experience with wildlife is variable, thus setting up limitations in human knowledge about these free living creatures. But is there a way in which the variabilities in our encounters with the natural world also serve as a ground of vertical finality? In other words, can limitations in potency help to achieve the good life by virtue of their being limitations?

Lonergan describes the ground of vertical finality as the concrete plurality which allows for endless combinations and manifestations within a dynamic universe. The plurality of the natural world consists not only in its myriad of creatures and vistas but also in a "range of significant different circumstances" (*Insight* 291) within which each being is revealed. The variability in nature's revealing is itself a source of concrete plurality. In what way could this plurality of variations lead humankind to "the good life"?

Human Responsibility for Proportionate Being. Questions about vertical finality and achievement of the "good life" lead to questions about human moral development and responsibility. How do the variable boundaries of potency within proportionate being raise questions for moral deliberation? I suggest there are at least three types of questions raised: questions about our positioned experiences as one species existing within and relating to the larger whole of creation; questions about ourselves as responsible seekers; and deliberations about humanity's role as responsible guardians of proportionate being.

First is the consideration of our positioned experiences in relationship with other creatures and the larger creation. The emergent manifestation of nature within proportionate being teaches humility by reminding us that we are not in control. Despite the wildlife viewing made possible by technologies such as web cameras focused on eagles' nests and radio collars that track predators in national parks, there are many dimensions of nature that we cannot manipulate at will. Further, not all wildlife encounters can be predicted. To fulfill the potential for our knowledge of proportionate being in the natural world we need to cooperate with nature, to be present, to be attentive to unexpected encounters. Quietly present and aware, we can be with, not over our fellow creatures.

Second is the question of our ethical responsibility as seekers. Part of my knowing the coyote has involved learning about the great harm done to coyotes by humans. This knowledge means that there need to be boundaries in my knowing this wild creature. We have one common space, the rock upon which I put her food each winter's evening. But we enter that common space at different times. Getting her too comfortable around people could put her at risk, given that so much harm has come to coyotes at the hands of humans.

This dance between sun and moon at the rock on the edge of the woods has taught me that there are times when transcendence may lie in the decision to refrain from knowing; to respect the boundaries of knowledge. Researchers face similar boundaries when conducting studies with human subjects. The layers of the onion, however fragile, may be protective. The responsible desire to know is not an unrestrained accumulation of knowledge, whatever the cost. The limitation in our knowing can be a good. Human consciousness can choose to maintain some of the boundaries of knowledge. As noted by Lonergan, "being is defined, not only by the questions we can hope to answer, but also by the questions whose answer we have to postpone" (*Insight* 375).

Third are questions about our responsibility for proportionate being. The seasons not only turn, but they evolve. The cycles of nature are not mere repetition. One winter differs from the next; there are nonsystematic occurrences within systemic patterns. But beyond patterns and variations there are trends. Trends may represent progress or decline. Carefully reflective attentiveness can alert us to significant deleterious trends such as climate change. Lonergan points out that accurate predictions depend upon "the survival of schemes of recurrence" (473). It is clear that human behavior, particularly in the industrialized age, has negatively impacted the schemes of

recurrence needed for sustainable planet ecology. This insight leads us to inquire about the harm to nature caused by humans.

Irrevocable loss of natural creatures and their environment is not merely a loss of potency but a loss of proportionate being. Given that the "universal principle of limitation [for the "whole domain of proportionate being"] resides in the potency of the lowest genus" (468), if the potency of a particular dimension of the natural world is destroyed then there will be a limitation in "whatever is to be known by human experience…" (416). As we destroy creatures and their habitats we risk irrevocably altering *what could have been known*. We may indirectly learn about past beings through analyzing fossils and extracted remnants from the ocean's depths. But the fullness of personal experiences with a host of living beings may be lost to us. Sublime encounters between humanity and free-living creatures will slowly slip from actual experiences to a historical remembering, fading shards of memory and regret.

In Lonergan's discussion of human development he describes the self as "confronted with a universe of being in which it finds itself, not the center of reference, but an object coordinated with other objects and, with them, subordinated to some destiny..." (498). Pope Francis points to that common destiny in *Laudato Si,* noting that each creature has its own worth, which is not limited to its 'usefulness.' "The ultimate purpose of other creatures is not to be found in us. Rather, all creatures are moving forward with us and through us towards a common point of arrival, which is God..." (verse 83; 24). While Pope Francis brings a theological perspective to his position, a similar conclusion may also be derived from scientific processes. Findings of scientific research have made clear the interrelated destiny of the natural processes of our planet and all its living beings (Chivian & Bernstein).

But also within the concerning trajectory of ecological decline is the more hopeful emergence of progress through the possibilities of human creativity. For example, Humane Society president Wayne Pacelle discusses the emergent development of a "humane economy." Pacelle analyzes historical shifts in human relations with whales from consumptive patterns using brutal hunting techniques to the more recent emergence of a "wildlife viewing economy" (317). This perspective challenges humanity to use our capacity for intelligence and responsibility to develop conservational rather than consumptive relations with creation.

Conclusion. Human encounters with wilderness creatures emerge through the potency of experiences within the patterned and permeable boundaries of nature. Such experiences offer possibilities for human knowledge, yet are also characterized by

limitations. These glimpses into mystery provide an intellectual, moral, and even spiritual good that calls forth human responsibility for the "good life." But achieving the good life of vertical finality is not an automatic process dictated by natural laws. It occurs through conditioned probabilities realized through human knowledge and decisions ("Finality"). Moreover, finality involves change.

> Finality has been conceived as the upwardly but not determinately directed dynamism of proportionate being. Its realization may be regular, but its regularity is not according to law, according to settled spontaneity, according to acquired habit, according to existing schemes of recurrence; on the contrary, it is a change in the law, the spontaneity, the habit, the scheme; it is the process of introducing and establishing a new law, spontaneity, habit, scheme. (*Insight* 497)

Humans have the capability to introduce new habits, laws, and schemes in order to protect and sustain the natural world. Our task, then, is to fulfill the potential within the permeable boundaries of nature to realize the capacity for human knowledge and responsibility for our fellow creatures.

***Note:** All photos by author.

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