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WILD COLLABORATION:  
ECOLOGICAL RESTORATION, RELIGION, AND THE REFORMATION  
OF THE HUMAN/NATURE RELATIONSHIP

By

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Thesis

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## ABSTRACT

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Environmental Studies

Wild Collaboration: Ecological Restoration, Religion, and the Reformation of the Human/Nature Relationship

Chairperson: Dr. Daniel Spencer

In recent years, the field of ecological restoration has gained momentum as an academic discipline, a scientific profession, and as a community-based form of environmental activism and land stewardship. At the same time, the number, scope, complexity, and diversity of restoration projects has expanded, and restoration is now being practiced in every corner of the globe. Witnessing this surge of activity and interest, many restorationists now believe that the practice of restoration can serve as a catalyst for transforming the human/earth connection from a relationship of coercion and exploitation to one of collaboration and mutual enrichment.

However, restoration also raises many problematic questions with regard to the human/nature relationship. The work of restoration often involves a high degree of intervention and tampering in ecological communities. Restoration entails disturbing the ecological trajectories of existing ecosystems, reconfiguring landscape features, and the killing or removal of plant and animal life. Accordingly, some critics suggest that restoration actually represents an extension of the dominant, destructive cultural paradigms by which human beings feel justified to intrude upon and manipulate natural landscapes however they see fit.

These concerns regarding the practice of restoration reflect deeper, more fundamental tensions embedded within the human/nature relationship, and relationship in general. These tensions are rooted in the existential challenge of otherness, and in the pervasive ecological realities of limitation, volatility, suffering, and loss. If restorationists hope to reform the relationship between humankind and the earth, then they must confront and negotiate these core relational concerns and tensions. I contend that a serious exploration of our religious and spiritual traditions can assist restorationists in navigating these intractable issues, inasmuch as religion constitutes a primary cultural response to the mystery of relationality. In this essay, I present an experimental reading of the meaning and practice of ecological restoration through the lens of one particular religious tradition—the Christian faith. In so doing, I seek to demonstrate that the religious technologies of sacred narrative, theology, and ritual can help us to conceive and conduct restoration as a collaborative endeavor, and to foster mutually enlivening relationships between human beings and the beyond human world.

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*OHV Trail Restoration Project, Lolo National Forest, 2010  
(Photo by A. Lohrmann)*

## INTRODUCTION

### WOUNDED LAND, WOUNDED LOVE

“There—right up there. See ‘em? This is how it starts.”

I did not see them, but I carefully maneuvered our rig over to the side of the narrow dirt road and set the emergency brake, while Allen Byrd—my supervisor—pulled on his jacket and fiddled with the GPS device. Climbing out of the truck, I spotted them—two muddy tire tracks cutting through the grasses of the subalpine meadow above us. Allen recorded our coordinates, and I snapped a few photos before my attention gravitated to the numerous deer and elk prints pressed into the soil around our feet. The sky overhead threatened rain, as it had for most of the past several weeks—an abnormally damp June for western Montana. Down slope, across the road, a red-tailed hawk dove through the mist in silent pursuit of some furry, scurrying little morsel.

“What do you suppose they were up to?” I wondered aloud.

Allen shrugged. “Probably just thrill-riding. I don’t know. Maybe checking out the hunting prospects—looking for a new spot to set up an elk camp in the fall.”

I located the hawk again, perched among the upper boughs of a towering ponderosa pine. Noting its empty talons, I felt grateful that my own lunch was conveniently stowed in my pack, and not holed up under a rock somewhere, actively seeking to evade me.



“We should check up here again next week,” Allen proposed. “The ground’s so wet right now, they only need to make one or two more passes through there, and we’ll have another mess to deal with.”

We had spent the better part of a week scouting the labyrinthine back roads of the Lolo National Forest for sites like this one, where illegal off-roading had carved fissures through the mountain ecosystems of the Northern Bitterroot and Coeur ‘D Alene ranges. Some of these trails appeared as wide gashes in the forest, established long ago and maintained year-to-year by a handful of anonymous all-terrain enthusiasts. Others, like the one we discovered on that cool, cloudy morning in June, indicated more recent and haphazard trespasses—faint tread marks that, but for their consistency and linearity, might be mistaken for ungulate tracks. But each trail bespoke a similar tale: that of the ongoing encroachment of human beings and their machines into the domain of wild nature. And yet, at the same time, the vast scale of this landscape seemed to suggest that nature could never be subdued here, not entirely. Allen and I were sharply reminded of this on another occasion, when a massive, cinnamon-colored black bear ambled through the understory and matched our gaze, seemingly unimpressed by the growl of our 4-wheelers. Chain saws and mud tires be damned: this was still the home of hawk and bear. We worked in the messy interface, the meeting place of wild nature and civilization.

As a seasonal forest ranger for the Superior Ranger District (located on the western border of Montana, where the St. Regis River flows into the Clark Fork), much of my work revolved around the management of motorized recreation—a popular activity in the area. All-terrain vehicles (ATVs) and dirt bikes are permitted in this national forest, but only on authorized routes that are maintained to withstand the stress of motorized traffic. Off-road travel is prohibited, as it can lead to rapid ecological degradation of natural landscapes. Among other effects, off-road recreation causes soil erosion and loss of native vegetation, and facilitates the spread of aggressive nonnative plant species like knapweed, orange hawkweed, and oxeye daisy. It can also contribute to stream impairment, habitat loss, and disturbance of wildlife. For these reasons, unmanaged motorized recreation can pose a threat to the natural resources that the U. S. Forest Service is mandated to protect and maintain.

In 2010, Allen—the recreation planner for the Superior Ranger District—secured funding through the Legacy Roads and Trails Restoration Initiative to restore a number of unauthorized off-highway vehicle (OHV) trails in our area of the Lolo National Forest. My position directly involved me in the coordination, implementation, and inspection of this restoration work. Our goal for these projects was fairly straightforward: we sought to make these trails disappear. That is, we intended to make these areas resemble their pre-disturbance condition—both in appearance and in function—and thus restore the ecological integrity of the surrounding ecosystems. All signs of human intrusion would be removed, and nature would once again govern the landscape.

Our methods for achieving this goal were, at least on the surface, similarly straightforward. First, we attempted to eradicate any noxious weeds using targeted

applications of herbicide. Next, a heavy equipment operator was brought in to scarify the compacted soils with a small excavator, and erosion control features were installed to facilitate the even drainage of stormwater over the sites. Following decompaction, we distributed climate-specific seed mixtures of native grasses over the trails, and added fertilizer to areas with particularly poor soil quality. We then covered the seeded areas with a straw mulch to encourage germination, and spread slash (dead or downed trees and brush) over the sites to help them blend into the surrounding landscape. Finally, large boulders were hauled in and placed at the access points of the trails to prevent further motorized traffic through these areas, and informational signs were posted to alert visitors to the sensitivity of these landscapes. (For a more thorough description of these projects, please consult my 2010 Ranger Report in the Appendix.)

Over the course of the 2010 summer season, I participated in the restoration of seven of these unauthorized trails, each ranging between one and three miles long. During the decompaction phases, I worked alongside one or two equipment operators, helping them to navigate the treacherous terrain and narrow corridors through the woods. However, I also spent many days working alone, spreading mulch and slash, photo-documenting the ongoing process of revegetation, and patrolling the sites to prevent further vandalism. For the most part, I found this work to be enjoyable and rewarding. I relished the long hours of sustained silence, and the quieting of the mind that often accompanies manual labor. I appreciated the opportunity to engage so directly with these landscapes and converse with their inhabitants, to observe them carefully and participate in their gradual transformation. I took pleasure in contributing concretely to the healing of damaged ecological communities. In particular, I delighted in the notion that, at least

in some cases, human mistreatment of natural landscapes might be reversed or rectified, and that wild nature might reappear in places once compromised by thoughtless and destructive human activity.

However, our projects also forced me to contend with a number of problematic issues regarding the process of restoration, and the human-nature relationship in general. For instance, some of our methods seemed strangely at odds with our purported goal of restoring the natural character of these landscapes. In fact, much of our work included elements more typically associated with the destruction of wild nature. Toxic herbicides and chemical sprayers, hard hats and radios, straw bales and fertilizer, dump trucks and excavators: it all seemed rather heavy-handed, even violent. Even the gentler aspects of our work—the sowing of seed, the guiding of stormwater, the rearrangement of debris—involved purposeful tampering with these ecosystems. In what sense, then, was nature re-establishing control of these landscapes? Was I, in spite of my benevolent intentions and intimate interactions with these communities, unwittingly contributing to the ongoing subjugation of wild nature? How could I reconcile my desire to restore the natural character of these places with the manipulative measures being taken to accomplish this goal?

On the other hand, I wondered what would become of these sites if we chose not to intervene at all. Why could we not simply install the barricades at the access points to prevent further damage, and let nature take care of itself? Conceivably, these areas could revegetate on their own, given enough time. This kind of “hands-off” approach might be less efficient, but it would also be less intrusive, more respectful of nature’s autonomy, and more attuned to the self-healing capacities of ecosystems, would it not?

I recall deliberating with Allen over one such site, where beargrass, prince's-pine, kinnikinnick, and other native herbaceous species had begun to re-colonize the bare ground along one relatively level stretch of the path. The excavator was sure to trample these plants, ironically perpetuating and aggravating the same travesty we were seeking to undo with these projects. However, the severity of the erosion on other parts of the trail (especially on the steeper slopes), and the presence of noxious weeds along the entirety of the route, virtually guaranteed that this landscape would not return to a pre-disturbance condition apart from some human intervention, at least not any time soon. We considered the possibility of bringing in a trail crew to manually scarify the compacted portions of the trail, thus avoiding the collateral trauma that the heavy machinery would cause. However, this strategy would significantly lengthen the anticipated time required for this project, and thereby reduce the number of projects we could reasonably expect to complete during the brief summer months. The excavator could perform in a matter of hours what would likely take days for a hand crew to accomplish. In the end, we chose to accept the unfortunate killing and losses incurred by the use of the excavator in order to increase the total amount of restoration work that could be completed over the course of the season. In our judgment, the benefits of aggressively intervening in order to hasten the healing process outweighed the costs of further violating the autonomy of these landscapes. But was this a wise judgment? Was the sense of urgency reflected in our decision appropriate or reckless? Did our decision belie an underlying attitude of arrogance, disdain, and impatience toward the natural world?

In addition to these difficult questions surrounding our restoration work, the OHV trail projects also drove me to critically examine the complexities of the relationship between human communities and ecological communities. Given the prevalence of motorized recreation in the Lolo National Forest, it came as no surprise when our restoration efforts received a mixed response from the local citizenry. As the recreation planner for the Superior Ranger District, Allen worked hard to build friendly relations between the Forest Service and the all-terrain community. He helped facilitate the establishment of a popular ATV club in the area, and assisted in the development of several large group events for this organization. Alongside our efforts to restore the illegal ATV trails, Allen also sought to change the official designation of several other unauthorized routes located in less ecologically sensitive areas, in order to expand opportunities for motorized users in those areas. Nevertheless, our trail restoration projects were often met with suspicion, disapproval, and in some cases, active resistance. Frustratingly, several project sites were vandalized following the conclusion of our work: informational signs were torn down or stolen, boulders were winched out of place, slash was removed, and in one case, the restored trail was repeatedly driven over with all-terrain vehicles.

Considering these deliberate assaults on our restoration work, it might be tempting for some to demonize the motorized recreation crowd, writing them off as malicious, ignorant, and hostile toward nature. However, I spent enough time interacting with this community to know that this was not the case (at least with respect to most individuals). Most of the machine-riders that I encountered conveyed a deep sense of love and appreciation for the natural world. They were fiercely protective of their

favorite areas of the backcountry—everyone, it seemed, had his or her own “secret spot” for camping, fishing, and hunting—and were committed to retaining access to them. Moreover, they often displayed an expansive knowledge of their local bioregion, much more—I would wager—than most people today could claim. At any given time, they could tell you where the snowline ended. They knew where the best huckleberry patches could be found. They kept track of the elk migration routes and the fly hatches. Much of this knowledge, like it or not, was facilitated by their extensive adventures through the mountains while mounted on all-terrain vehicles.

The undeniable passion and affection expressed by many machine-riders for their home landscapes forced me to look more closely at the tensions embedded in all relationships between human beings and ecosystems. One could easily chide these people for their ecologically inconsiderate activities, and my responsibilities as a ranger compelled me to do so from time to time. But I also grew increasingly cognizant of the countless ways in which well-meaning people perpetually violate, both directly and indirectly, the ecological wellbeing of natural landscapes that they love and wish to protect. I remember laughing to myself one morning while documenting an illegal ATV route I had just discovered. As I scribbled away, it occurred to me that the process of manufacturing the notebook in which I was dutifully recording the environmental misdeeds of others had likely caused far more ecological damage than that which resulted from the little trail I had found. In other words, even in my role as guardian and steward of the land, I could not absolve myself of the manipulative, destructive, and consumptive dimensions of the human-nature relationship.

These troubling aspects seem to be everywhere and at all times present in humanity's interactions with the nonhuman world, even in the midst of ostensibly benign, ecologically attentive encounters between people and natural places. For example, even "low impact" activities like hiking and wildlife photography necessarily entail a measure of disruption to the natural landscape. As we seek to immerse ourselves in our ecological communities, to engage deeply with them, we invariably influence them. Our love, respect, and concern for the natural world does not preclude our involvement in its continual transformation. And there are both creative and destructive dimensions to this transformation, in part because creation and destruction are both intrinsic to life itself. The disturbances that human beings inevitably impose upon their natural surroundings obviously occur with varying degrees of intensity, and critical judgments must be made regarding the type and severity of the disruptions that we will permit ourselves to inflict. But *all* of these disruptions are in some sense problematic and pose challenging questions about how we as human beings ought to conduct ourselves in relation to the ecosystems that sustain us.

As I discovered in my work on the OHV trail projects, ecological restoration brings these complex issues of relationship into sharp focus, for here we have a practice that explicitly aims to set nature free and "make nature whole" while simultaneously requiring human beings take an active, interventionist role in determining the ecological constitution and function of natural landscapes (Jordan 11). Restorationists seek to demonstrate that human beings can relate to the natural world in nurturing, respectful, and mutually enlivening ways. At the same time, however, the process of restoration always involves some measure of intentional manipulation, killing, and destruction. It is



easy to understand why some may wish to downplay these elements of restoration, or soften the language we use to describe them. In the end, however, these troubling aspects must be reckoned with openly and honestly if restoration is to be embraced as a major new ecocultural endeavor, and a model of the kind of reciprocally supportive relationships that must emerge between human communities and ecological communities. Ultimately, we cannot hope to establish new, mutually enriching relationships between human beings and natural landscapes without dealing with the difficult limitations and sacrifices that accompany *all* relationships, including the ecocultural relationships forged between people and places through the practice of restoration.

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In this thesis, I will explore how the most problematic dimensions of restoration—including the intentionality, disturbance, and violence that restoration work entails—are situated within larger concerns regarding the human-nature connection, and are reflective of the deeper challenge of relationship itself. In light of this understanding, and in recognition of the transdisciplinary nature of this challenge, I will argue that restorationists can benefit from a careful investigation of those cultural traditions in which people have for centuries grappled with the foundational but troubling issues of relationship. Specifically, I am referring to the manifold traditions of religious thought, sacred narrative, and spiritual practice that continue to shape the worldviews of many people today. The task of reforming the relationship between human beings and the nonhuman world from one of coercion to one of collaboration requires that we find ways *through* the problems of otherness, interference, limitation, and disruption. Evasion or

denial of these dimensions of relationship will not get us anywhere. Religion, broadly understood as a response to the primal mystery of relationality, regards these problems as matters of ultimate concern, and thus can provide promising avenues for reflection and action as we undertake this task, both in the context of restoration and in our everyday lives.

In Chapter 1, I begin by addressing one of the primary charges leveled at restorationists, a critique that encompasses many of the concerns that I raised above: namely, that instead of liberating and renewing nature, restoration actually perpetuates human domination of the natural world. I then discuss the counterarguments that some restorationists—including Andrew Light and Eric Higgs—have developed in response to this critique. In brief, these practitioners acknowledge the problems generated by the role of human agency in the process of restoration. However, they insist that restoration can be practiced as joint endeavor between natural landscapes and human beings, an idea reflected in Higgs' concept of “wild design.” Moreover, they claim that when restoration is conceived and conducted in this way—as a mutually enriching collaboration with nature—it can provide a functional paradigm for reforming the relationship between human culture and wild nature.

While agreeing with this promising assessment, I argue that restorationists still must find ways of confronting and coping with the limitations and losses that authentic relationship inevitably entails. With regard to this problem, I suggest that an exploration of our long-standing but oft-neglected religious and spiritual traditions might provide support for restorationists as they contend with the challenges of relationship, given that religion continues to serve as a primary cultural mechanism for dealing with the mystery

of relationality. Given the fallibility of religious institutions, the frequency with which religious stories and ideas are misinterpreted, and the ease with which they are misappropriated—including by their adherents—this exploration must be undertaken carefully and critically. Nevertheless, the core concerns facing restoration today (and environmentalism generally) are relational in nature and thus religious in character, thereby necessitating a voyage into the realms of sacred narrative and ritual, wisdom traditions, mythology, theology, and the like.

In Chapter 2, I seek to elucidate more fully the foundational challenges of relationship underlying the practice of restoration. Building on ideas presented by William Jordan III, I outline two opposing philosophical positions that demarcate the spectrum of thought regarding humanity's relationship with the nonhuman world. The first position, which I term "romantic nondualism," demands that we regard the fundamental unity of all beings and processes as the guiding principle for our conceptions of nature and our interactions with ecological communities. The destructive behavior of humankind will diminish—and will eventually cease to be of concern—with the growing recognition of the interconnected reality of nature. The second position, which I term "pure nature dualism" or "strong dualism," demands above all that we honor the radical distinction between human civilization and wild nature, and seek to preserve the purity and autonomy of natural places as much as possible. This position entails strict limitation and regulation of the interactions that humans may have with wild places. While few people would locate themselves exclusively within either of these two philosophical camps, most gravitate toward one end of the spectrum or the other. Both views, I claim,

pose serious difficulties for those attempting to develop a robust theory and reciprocal practice of ecological restoration.

I go on to argue that, at its core, the challenge of restoration is the challenge of otherness. Authentic relationship and true collaboration requires that we respect the sacred otherness of the nonhuman realm, and take seriously the intrinsic tensions, ambiguities, and limitations that arise from that otherness. At the same time, we must not allow the sacred otherness of wild nature to preclude us from engaging deeply and meaningfully with our ecological kin, for the natural world constitutes our true heart and home.

In Chapter 3, I test my hypothesis that religious traditions can help us to contend with the challenge of otherness, and to properly conceive the meaning of restoration as a reciprocal and reconciliatory endeavor with wild nature. Recognizing the limitations and dangers of exclusively dealing with “religion” in the abstract, I present a theological reading of the paradox of relationship in light of the classical Christian doctrines of God and creation. Following this discussion, I offer an experimental interpretation of the practice of restoration through the lens of the biblical narrative of the incarnation, death, and resurrection of Jesus Christ. Finally, I suggest ways in which the notion of collaboration with wild nature resonates with Christian views regarding the divine work of redemption as it is accomplished in and through earthly means, including through the imperfect vessel of humanity.

In Chapter 4, I offer a contemporary case study in ecological restoration. In recent years, plans have been developed to remove all nonnative fish species from several alpine lakes and streams located in Montana’s Bob Marshall Wilderness in order to create

suitable habitat for Westslope cutthroat trout—a species native to this area, but whose future survival is uncertain at this time. I outline a number of ethical challenges that this project presents, and discuss the limitations of the ethical arguments that the project has generated. I describe the painful ecological losses that would be incurred if the project were abandoned, as well as the losses that would accompany approval of the proposal. Finally, I explain how rituals or ceremonies partially inspired by religious themes discussed in Chapter 3 can help restorationists and local communities to deal with these losses and to develop a fresh, collaborative and communal relationship with the ecosystems of the Bob Marshall Wilderness.

I conclude this thesis with a few remarks about the role that restoration and religion can play in realizing the vision of a coming age of ecocultural rejuvenation.

While the challenges and tensions that bedevil the work of ecological restoration cannot fully be deciphered in one brief essay, it is my hope that this thesis will provide a helpful introduction to the more fundamental, relational dimensions of these issues, and will inspire further critical analysis of the manner in which the practice of restoration can draw people into more complex but also more mature and gratifying relationships with natural landscapes. For those working in the field of restoration, I hope that my work here will prompt further interdisciplinary exploration of cultural traditions that have too often been ignored or abandoned by many in the environmental community, especially the immensely rich traditions of religious devotion, spiritual practice, and theological reflection through which people have wrestled with the challenge of relationship for millennia. For those belonging to religious communities, I hope that this project will promote deeper contemplation of the ecological implications of our sacred narratives,

theological interpretations, and faith perspectives. In addition, I hope that my efforts here will encourage broader participation and further development of the work of restoration as a spiritual vocation. In the end, the challenge of developing mutually supportive relationships between human communities and wild ecosystems will require a collaborative effort by thinkers and practitioners from every sphere of human culture, just as we must learn to collaborate with our ecological brethren in the beyond human realm.

## CHAPTER ONE

### ECOLOGICAL RESTORATION: THE PROMISE AND THE PREDICAMENT

For many years, philosophers and practitioners in the field of ecological restoration have wrestled with a perplexing question: despite the benevolent intentions of restorationists, does restoration ultimately represent another form of human domination over the natural world? A number of prominent critics, including Robert Elliot and Eric Katz, have answered this question in the affirmative, and have gone on to argue that restoration is largely irredeemable for this very reason. In his controversial essay, “Faking Nature,” Elliot argues that restoration is deceptive, likening restored landscapes to forged artwork. He suggests that restoration degrades our valuation of original (or truly “natural”) ecosystems by its assumption that human beings can replicate the works of nature, when in fact, the primary value of wild places explicitly resides in their non-human origins (Elliot 388). Katz has echoed many of Elliot’s concerns. In his own article, “The Big Lie,” he asserts that the whole notion that human beings can assist in the recovery of natural ecosystems is a dangerous hoax. Restored landscapes, he claims, are mere artifacts; their natural “essence” and autonomy is lost through the manipulative intrusions of arrogant human beings (Katz 238-240).

While Elliot has moderated his critique of restoration somewhat in recent years, Katz has continued to roundly condemn the practice of restoration as an insidious violation of the purity and authenticity of wild nature (an argument that I will explore further in the following chapter). Meanwhile, other restoration theorists have sought to

develop a more nuanced understanding of the problem of human agency in restoration work. In his book, *Nature by Design: People, Natural Process, and Ecological Restoration*, Eric Higgs acknowledges that human influence does in fact play a central role in the practice of restoration. As the title of his book suggests, Higgs believes that good restoration depends in large part on good design, and design necessarily implies intentionality on the part of practitioners. There is no escaping the fact that restoration involves purposive human intervention in ecosystems: “any act of restoration makes explicit our inscription of the future. Every act of restoration is also and always an intentional reach for what will be or what might be...As restorationists we are involved in the design of ecosystems and places whether we like it or not” (Higgs 271).

Higgs’ emphasis on design does not, however, mean that he endorses a view of restoration as human mastery over nature. Restoration designers do not (or should not) believe that they have license to manipulate ecosystems in any way that they deem fit. Rather, according to Higgs, a well-designed restoration project will take its cues from the ecological community that is to be restored. In other words, rather than imposing one’s own vision of nature onto a degraded landscape, a good restorationist will allow the landscape and its community of inhabitants to shape his or her vision of the place. The ecosystem itself thus serves as elder and guide in the process of restoration. Higgs refers to this approach paradoxically as *wild design* (Higgs 265-289). Wild design requires that restoration workers accept the mantle of ecological interventionism, with all of the vexing philosophical problems and material responsibilities that that position entails. At the same time, it requires restorationists to acknowledge and attend to the transformative



agency of the more-than-human world, and to expect and allow natural landscapes to play an active, guiding role in the work of restoration.

Higgs's notion of "wild design" may be confusing at first glance, but the ideas underlying this concept are critically important for understanding the multiple aims and values of ecological restoration. Many environmental philosophers, including Andrew Light and William R. Jordan III, have suggested that the primary value of ecological restoration transcends the immediate goal of repairing damaged landscapes. Ultimately, restoration is about nurturing or renewing the vital relationships that exist between human communities and ecological communities. Light argues that "restoration [can] help engender...a positive normative relationship with nature...we are bound *by* nature...[and] also bound *to* nature in the act of restoring" (Light 64). Restoration, properly conceived and conducted, can be a profoundly relational activity that illuminates and manifests the interconnected, interdependent nature of earthly life. Wild design, through its honoring of the agency of place, explicitly integrates this understanding of the reciprocal bonds between humanity and nature into the practice of restoration.

Wild design, and restoration in general, is thus fundamentally about cultivating a collaborative relationship of reciprocity between people and places. It is about "creating new ways of being with wild processes," and engaging with them (Higgs 285). For this reason, project designs that ignore or overwhelm the creative and re-creative power of wild creatures and places may yield impressive feats of environmental engineering, but do not make for good restoration. Higgs employs a remarkable metaphor to further clarify the reciprocal nature of wild design: *restoration as conversation*:

A conversation in the most general sense is a reciprocal exchange. Reciprocity implies mutual interest...Conversation is *talking with*, not *talking to* [such that]

true conversation implies a sharing of information, perspectives, knowledge, and wisdom...Restoration is working well as long as there is a genuine conversation between restorationists and natural processes. (Higgs 286)

The conversation metaphor helps us to understand the kind of relationship that must emerge, and the type of cooperative interaction that must occur between restorationists and ecosystems if restoration is to fulfill its promise and potential as an ecoculturally regenerative practice. Higgs goes on to suggest that if restoration projects are effectively designed and conducted as a mutual exchange between practitioners and places, even greater depths of meaning and relationship may emerge; the conversation may generate new forms of ecocultural narrative, with both human and ecological participants serving as storytellers:

Depth [of relationship] depends on more than the passage of time. Our connections depend on the practice we engage and on the stories we tell, literally, about our involvement with place, and how these are transmitted from one generation and group to another. The ardor and commitment required by restoration practice tends to ensure that stories will be told for a long time and that these will enrich the care of a place. *Restoration is about re-storying place...* With restoration design, the point is not to be an author of nature, but to create a narrative in which [both] natural and cultural processes can write the text. (Higgs 285, 289, italics added).

Conversation. Narrative. Storytelling. Sharing of wisdom. Higgs' language in these passages is striking, and it suggests new directions and modes of discourse that restorationists might turn to for help in sorting out the complexities of the human-nature relationship, and finding ways of dealing with these complexities. His manner of speaking certainly bears little resemblance to conventional discourse about ecology and the relationship between nature and society in the modern industrial era. In recent decades, worsening ecological crises around the world (especially those related to climate change) have thrust environmental issues into mainstream public dialogue, and ecological

literacy is rapidly improving throughout many areas of the globe. Clearly, people are becoming more adept at talking about the natural world. But Higgs' concept of wild design and restoration as conversation suggests that talking *about* the land, even intelligently, is no guarantee of good restoration in the full, holistic sense of the word. Rather, restorationists must learn to talk *with* the land and its inhabitants. The emergence of a renewed relationship between humanity and the whole of the natural world, a relationship based on mutual vitality rather than human dominance and exploitation, finally depends on our willingness and ability to hear and respond effectively to the other members of our ecological communities: "The loud, garrulous humans will always dominate unless specific attention is given to the soft-spoken ecosystem...The restorationist-as-designer must be skilled at the art of conversation" with natural places and processes (Higgs 286).

Higgs' ideas may resonate with many in the field of restoration. However, these concepts—wild design, restoration as conversation, reciprocal relationship with the natural world, and so forth—raise many challenging questions that require further exploration. How precisely does one go about engaging in a "conversation" with the natural world? What does authentic dialogue with an ecosystem entail? What does it mean to collaborate *with* the wild? Are there limits to the depth of engagement or quality of collaboration that can be achieved between restorationists and natural landscapes? How do we deal with those limits? Can a mutualistic, cooperative model of restoration accommodate or cope with the drastically alterative, destructive, and lethal practices that routinely occur in the process of restoration? Is genuine collaboration between human beings and ecological communities even possible, or is this merely a clever ruse to

assuage the troubled consciences of restorationists? What, finally, does it mean to be in reciprocal, mutually enlivening relationship with wild creatures, processes, and places, given that true relationship invariably involves difference, tension, and reciprocal sacrifice or loss?

Collectively, these questions stand at the core of the promise and the problem of restoration. There is a compelling case to be made that ecological restoration, if pursued widely and effectively, may represent a critical turning point in the ongoing story of human life in the earth community. Some people, of course, will continue to view restoration as merely one more tool—along with recycling programs, renewable energy, and environmental regulations—for mitigating the devastating ecological impacts that humankind inflicts on the earth. Others may politely aver that the basic task of restoration—the physical recreation of historic ecosystems—is sufficiently challenging as it is, and suggest that we refrain from further problematizing the work with bewildering philosophical and cultural matters. But for many people working in the field of ecological restoration, including many of the discipline’s most prominent writers and visionaries, the promise of restoration means nothing less than a total reformation of human-earth relations. As Andre Clewell and James Aronson of the Society for Ecological Restoration boldly assert, “ecological restoration [is] conducted to renew the nexus between nature and culture” (Clewell and Aronson 111).

This expanded vision of the meaning and purpose of restoration, at once inspiring and daunting, has important implications for restoration theory and practice. If the ecological crisis is, at its root, a crisis of relationship, then the fulfillment of the promise of restoration as a means to resolve (or at least alleviate) this crisis hinges on the

development of a distinctly relational approach to the philosophy and performance of restoration. If the fundamental purpose of ecological restoration is not merely the recovery of certain endangered ecosystems, but also the establishment of convivial and mutually enriching relationships between human cultures and the natural world, then restoration will need to be conceived and conducted as a reciprocal, collaborative endeavor with wild places and their inhabitants, in accordance with Higgs' notion of wild design. In order for restoration to be regarded as something more than eco-engineering with a history fetish, then restorationists will have to deal with the troubling questions identified above regarding the possibilities for genuine communication, cooperation, and communion between human beings and natural landscapes.

Responding effectively to those core questions surrounding the human-nature relationship will require restorationists to delve into realms of culture, thought, and discourse that, with a few notable exceptions, have been largely overlooked in the field of restoration up to this point. Appropriately, the environmental sciences have commanded a central position in the field of ecological restoration throughout its development during the last century. No restoration project can hope to succeed apart from a fundamental understanding of the natural elements, interactions, and processes that together give shape to ecological communities. By itself, however, the science of ecology cannot accomplish that larger purpose named above—the emergence of authentic, mutually enlivening relationships between human beings and the living landscape. For while the natural sciences effectively serve to describe the multiplicity of physical interactions that occur among the biotic and abiotic components of ecosystems, they cannot readily speak

to the wide variety of ways in which human beings understand, identify with, and relate to the natural world, both collectively and as individuals.

The incapacity of the sciences to fully explicate the complex nature of relationality may in part account for Higgs' unconventional but compelling language of storytelling, the sharing of wisdom, conversation with the wild, and the power of place in his discussion of wild design. This sort of language seems more at home in other ecocultural landscapes of meaning; it draws us toward other realms of human experience, into folkloric, spiritual, and religious terrain. A handful of other restoration scholars have noticed and begun to elucidate the latent religious dimensions of the restoration endeavor as well, perhaps none more explicitly than William R. Jordan III. Jordan, observing that the mystery of relationality stands at the heart of our current environmental concerns, suggests that an exploration of religious traditions of thought, language, and practice may prove exceedingly helpful in our struggle to make sense of humanity's tumultuous relationship with the natural world, and in our efforts to cultivate new, mutually sustaining and enriching ways of engaging with ecosystems:

[The] central task of environmentalism—the creation of relationships and the building and extension of community—is ultimately a religious task in the fundamental sense that religion is the art and discipline of dealing with the problems of relationship at the psychological and spiritual levels. It is in religious tradition that we find the most profound experience and the most deeply felt and deeply considered ideas regarding the fundamental issues of relationship... This being the case, exploring the roots of these ideas in religious tradition may well lead us to insights into our own ideas about nature and community and the limitations of those ideas. (Jordan 56)

If ecological restoration, as has been argued, is all about relationship, then it seems fitting and necessary for us to confer with the subjective spheres of religious/spiritual experience in our consideration of the meaning and practice of

restoration. For in a broad sense, as Jordan notes, relationality stands at the heart of religion as well. Religion is all about relationships: relationships between people; relationships between people, other living creatures, and the earth itself; and the relationship between human beings and the sacred or divine (however perceived or construed). We may certainly be justified in critiquing certain religious communities for their understanding of what constitutes right relationship, or for their failure to live up to the relational values they claim to espouse (and there are many failures). However, amidst all the criticism, it is easy to forget that most spiritual traditions are geared toward the preservation and healing of relationships. Many religious thinkers and communities today are striving to develop robust eco-spiritual practices that aim to restore the broken relationships that exist between people, ecological communities, and the spirit “in whom we live and move and have our being” (Acts 17:28). To the extent that ecological restoration shares this purpose, and to the extent that religion and spirituality shape the ways in which human beings understand and interact with the world around them, these realms of ecocultural experience must be included in conversations regarding the future of restoration.

In this chapter, I have sought to identify a number of key issues facing contemporary restoration theory and practice, as well as propose a direction for further exploration of these issues. To begin, I drew attention to a recurring critique with which many restorationists continue to grapple: the lingering question of whether restoration in some way (or entirely) constitutes a human violation of wild nature. Many writers have produced thoughtful responses to this problem, but it will nevertheless continue to agitate practitioners of restoration. Next, drawing on Higgs’ concept of “wild design,” I

discussed the notion that restoration might be conceived and conducted as a mutual, reciprocal endeavor with natural landscapes and their nonhuman inhabitants. I proposed that a relational, collaborative approach to restoration is, in fact, vital to the fulfillment of the promise of restoration: namely, that it can provide a means of reforming the relationships between human communities and ecological communities.

However, the concept of collaboration with nature raises a host of difficult philosophical and pragmatic questions as well. Above all, how do we reconcile the undeniable destruction, interference, and violence that takes place during the work of restoration with the purported goals of restorationists: to heal and liberate wild nature, and to cultivate nonmanipulative, gracious, and mutually vivifying relationships between human societies and natural landscapes? How do we deal with the inherent tensions and limitations that authentic relationship entails in our effort to achieve collaboration and communion with wild nature?

Finally then, I suggested that if restorationists are seriously committed to the promise of restoration—that is, to reform and renew the relationship between nature and human culture—then they would do well to consult the domains of culture in which human beings have dealt most directly and most deeply with the challenges and ambiguities of relationality: namely, the domains of religion, spiritual practice, sacred narrative, and wisdom traditions that have shaped human life for millennia, and which continue to simultaneously disturb, comfort, perplex and enliven many people today.

In the next chapter, I elaborate more fully on the fundamental challenges of relationship that restorationists must explore if they are to present an honest and coherent account of the meaning and practice of restoration. Ultimately, of course, these are



challenges with which all people must grapple, reflecting again the assertion that they are, at base, religious issues. In Chapter 3, I attempt to demonstrate what an exploration of the religious dimensions of restoration might actually look like, at least in the earliest stages, within the context of one particular religious tradition—that of the Christian faith.

## CHAPTER TWO

### THE CHALLENGE OF RELATIONALITY

As William Jordan forcefully argues in his book *The Sunflower Forest*, the American environmental tradition has failed to produce an adequate response to “the tensions and ambiguities inherent in relationships,” particularly those that define the relationship between humanity and the beyond human world (Jordan 162). Consequently, it has also failed to provide human societies with adequate tools for negotiating and nurturing this relationship. It has failed, in other words, to come to terms with the perplexing “otherness” of the natural world, and the paradoxical position of human beings in relation to it (that is, as evolutionary offspring and members of the wider ecological community who, at the same time, exhibit qualities and powers of influence seemingly found nowhere else in the ecological kingdom). Instead, environmental thinkers have routinely encouraged people to choose sides between two polarizing positions regarding the human-nature connection: one that insists on an essential or substantially qualitative distinction between humanity and wild nature, or one that minimizes the otherness of nature or denies it altogether. Jordan seems to feel that most environmentalists are inclined to adopt the latter position, which emphasizes the fundamental unity of all beings while ignoring the remarkable and disconcerting differences that define them:

The problem for humans has never been the ultimate oneness of things, but the manifest and troubling differences... simply to declare our radical naturalness is not to solve the problems of difference and of relationship... Difference, in other

words, is real. And the psychological tensions associated with difference are not the result of a peculiarly Western—or modern—nature/culture dualism. Whatever categories a culture uses to make sense of the world, it encounters difference and finds it troubling. The presence of others all perfectly natural yet unlike ourselves, is a fundamental problem, not only for the philosopher trying to make sense of the puzzle of the one and the many, but for the self confronting a world full of intractable “others.” And it is not a problem we can solve simply by declaring or insisting on our identity with the world or our membership in a universal community of subjects. (61-62)

Those who reject the notion of a fundamental distinction between humanity and the nonhuman world are likely to maintain a favorable attitude towards restoration, viewing it as an extension of the unequivocal harmony depicted in their (often idealized) vision of wild nature. However, this position—which I term “romantic nondualism”—is unsatisfactory and even detrimental to the development of a fully actualized relationship between human beings and natural landscapes, in part because it overlooks or sidesteps the vital but deeply problematic dimensions of relationality that stem from the genuine “otherness” that suffuses the natural world. Indeed, it precludes the possibility of authentic relationship by its refusal to confront the multiplicity that relationship requires and the difference it implies, blithely proclaiming that “all are one” without acknowledging the unsettling paradox implicit in that expression. The view of reality that emerges from romantic nondualism may be spiritually attractive to some, but it is ultimately devoid of meaning. As Jordan notes, “Meaning depends on distinctions and boundaries, the primary one being the distinction between the self and others, and one way to articulate this distinction is in terms of ‘nature’ and ‘culture’” (118).

This inability to confront the otherness in nature, or to allow for any substantial distinction between humanity and the rest of the natural world, correlates with the inability of romantic nondualism to fully cope with a host of troubling ecological realities

that Jordan refers to collectively as the “scandal of creation,” which shall be discussed further below (40). Instead, the romantic nondualists emphasize that properly functioning natural ecosystems exhibit a variety of positive characteristics, or ecological values, that serve to facilitate their ongoing survival. These values include abundant life, emergent novelty and diversity, adaptability and resilience, balance and stability, and so forth. They go on to posit that human beings can overcome our apparent estrangement from nature—and ensure our own long-term survival—by recognizing our intrinsic connection to natural ecosystems, and by conducting our lives in a manner that preserves and promotes these ecological values.

Jordan suggests that Aldo Leopold, whom many regard as a founding father of the restoration movement, actually leaned toward a position resembling romantic nondualism. Leopold’s now famous “land ethic” was founded on the idea that the natural world constitutes a universal community of life, and that, as members of this community, human beings must uphold and abide by the core values that the community espouses: namely, the values of ecological integrity and stability, beauty, and community (Jordan, 30). Human beings, whether they like it or not, are thoroughly enmeshed in the earth community, and can no longer afford to view themselves as somehow existing above and apart from the ecological laws and values of this community. Few environmentalists would dispute these ideas today. However, Jordan argues that Leopold fails to account for the problematic distinctions that define communities, and the persistent internal and external tensions that continually threaten the wellbeing of actual communities. Ignoring the challenge of otherness, Leopold provides little in the way of guidance when it comes to developing ways of negotiating these tensions and distinctions:

[Seeing] community in entirely positive terms, this idea [of the universal community of nature, by itself] offers no way of identifying, much less dealing with, the difficult or troubling elements that presumably limit the formation of actual communities...Community may be a great, even irreducible value, but like other values and virtues—beauty, say, or charity or chastity—it is not the solution of a problem but is rather the problem itself: of *course* community is a good thing; the problem is how is it achieved and maintained?...[While] community entails exclusion as much as inclusion, Leopold implies that community can include—and indeed ought to include—everything, and that extending to everything the moral status of membership in a community is the key to solving environmental problems. He betrays little awareness of the sense of the radical other, the chaos and ontological inferiority that lie beyond the psychological membrane surrounding a traditional community and give the community much of its meaning and importance. (Jordan 33, 36, 43)

Leopold is far from alone in his gravitation toward a romanticized vision of the earth community. Many other renowned environmental thinkers often seem to downplay the problems of difference and discord as they pertain to the human-earth relationship. David Abram's provocative and engaging writings offer a current example of this tendency toward romantic nondualism. Perhaps more than any other contemporary environmental philosopher, Abram has helped to break down the intellectual divide between humanity and the more-than-human world, and has presented a forceful argument for celebrating our wild, bodied existence. Abram's thesis, in a nutshell, is that the fundamental materiality and sensuality of human nature provides the basis for our communication and communion with all the creatures, elements, and processes that together constitute our cosmic reality. He writes:

There's an affinity between my body and the sensible presences that surround me, an old solidarity that pays scant heed to our overeducated distinction between animate and inanimate matter. Its steady influence upon my life lies far below my conscious awareness, deeper than the animal sensations that stride along my neuron, beneath the vegetal sensitivities that rise like sap in my veins. It unfolds in an utterly silent dimension, in that mute layer of *bare existence* that this material body shares with the hunkered mountains and the forests and the severed stump of an old pine, with the gushing streams and dry riverbeds and even the small stone—pink schist laced with mica—that catches my eye in one such

riverbed, inducing me to clasp it between my fingers. The friendship between my hand and this stone enacts an ancient and irrefutable eros, the kindredness of matter with itself. (Abram 29)

Abram certainly recognizes that otherness and diversity pervade the relational matrix of reality, and he occasionally acknowledges that this otherness can be somewhat unsettling, regardless of the corporeal commonality of the natural world. He makes reference to the “distressing ambiguity of the real” and the “strangeness of things” (8). He understands that our sensual capacities awaken us to the manifest differences that give definition and identity to all earthly phenomena, even as these capacities also disclose our fundamental kinship with all beings:

[The] crystallizing sense of one’s body as a general locus of awareness does not arise on its own, but is accompanied by a dawning sense of the rudimentary *otherness* of the rest of the field of feelings. The earliest experience of selfhood, in other words, co-arises with the earliest experience of otherness. One’s own awareness is born of a rift within a more primordial anonymity, as one begins to locate one’s sensations in relation to sensations and feelings that are somehow elsewhere, and hence in relation to an awareness that is not one’s own, but is rather the rest of the world’s. (38)

In spite of this keen awareness of the reality of otherness, however, Abram rarely addresses the profound uncertainties, vulnerabilities, and limitations that this otherness imparts to all relationships between earthly creatures. And this is the critical point: romantic nondualists routinely pay tribute to the stunning diversity of ecological life, but are reticent to acknowledge the troubling separateness, divisiveness, and discord that accompanies this diversity. To demonstrate this point, let us briefly examine just one pericope from Abram’s most recent book, *Becoming Animal: An Earthly Cosmology*.

In a chapter regarding the communicative power of the nonhuman world, Abram offers a compelling personal story of interspecies conversation. While kayaking amongst the coastal islands of southeastern Alaska, Abram inadvertently paddles into a large

colony of Steller sea lions. Upon detecting him, the gigantic bulls on the shoreline begin to bark and roar in his direction, and in return, Abram sings out to them in a tone both calming and bold. Perhaps in response to this cacophonous vocal exchange—get this—a humpback whale breaches alongside Abram’s kayak, nearly sending him into the drink. Apparently startled by the sudden appearance of the whale, the sea lions abandon their rocky hold and begin aggressively racing toward the equally discombobulated kayaker. Quickly realizing that he has no hope of out-maneuvering these aquatically agile mammals, Abram instinctively drops his paddle, raises his arms, and starts waving his body in a sort of improvisational dance. Amazingly, this spontaneous physical expression produces the desired response from his audience: the sea lions become still and silent, seemingly mesmerized by Abram’s movements. Many tense minutes pass and Abram’s limbs begin to grow weary, but eventually, the sea lions allow him to pick up his paddle and glide away. (Abram 159-166)

The encounter is truly remarkable—an authentic moment of relational grace. Abram shares this story to illuminate the primal sensuality that underlies and empowers all communication between earthly creatures. Above all, he writes, the experience taught him that:

there exists a primary language that we two-leggeds share with other species...My encounter with the sea creatures had initiated me into a layer of language much older, and deeper, than words. It was a dimension of expressive meanings that were directly felt by the body, a realm wherein the body *itself* speaks...To the fully embodied animal *any* movement might be a gesture, and *any* sound may be a voice, a meaningful utterance of the world. And hence to my own creaturely flesh, as well, everything speaks! (166-167)

The value of Abram’s insights for a human culture yearning for deeper relationship with the natural world cannot be overstated. However, it occurs to me that

the story of the sea lions is equally illustrative of the frustrating *limitations* of communication and relationship between ecological “others.” As Abram himself describes it, the whole experience was fraught with anxiety, tension, misapprehension, and struggle. Inasmuch as this story highlights the fundamental bonds of sensuality that enable reciprocal exchange and authentic dialogue to occur between unlike creatures, the tale also points to the terrible uncertainty and ambivalence that often infuses this dialogue. “Conversation with wild,” in other words, can be a frightfully capricious endeavor. But Abram never addresses these disconcerting aspects of the experience in his subsequent assessment of the story, and instead focuses exclusively on the ways in which this encounter displays the common powers of expression shared by all worldly creatures and entities. In this regard, his analysis reflects the tendency of romantic nondualists to de-emphasize the problems of difference. As Jordan puts it: “Difference, [they] say, is good—but only so long as it really makes no difference” (Jordan 61).

Alongside this downplaying of difference, the romantics routinely overlook the most troubling characteristics of ecological life, and the “negative, monstrous principle” of creation (Jordan 64). These darker aspects of nature, while vexing, nevertheless undergird the very ecological values that the romantics, along with most environmentalists, wish to lift up. Here we confront the reality that “nature...is radically at odds with itself in the very act of creation” (40), and that every ecological gain entails ecological loss. The ongoing life of the biosphere, as any observer of the natural world can tell you, is wholly contingent on the ongoing death and decay of the biosphere. Moreover, acts of killing, consumption, violence, and conflict are pervasive and vital features of every functioning ecosystem. The evolutionary processes that facilitate the



emergence of new and diverse species also lead to the inevitable loss of many species. Ecosystemic resilience or stability, of course, mean nothing apart from an acknowledgement of the disturbances and disruptions, often cataclysmic, that buffet every ecological community. In short, the glorious flourishing of life on earth is wholly and continually bound up with the realities of impermanence and limitation, violence and destruction, suffering and death. Jordan refers to these umbral ecological realities as “the scandal of creation” (40).

The romantics struggle to account for these “monstrous” dimensions of ecological existence. They celebrate the harmony of nature without attending to the countervailing discord that gives harmony its sweetness. Their response to the “scandal of creation” is simple: there is no scandal. Volatility and evanescence, pain and affliction, killing and dying, frailty and loss- these are in fact undeniable elements of the natural world, but they should not be viewed as troublesome or problematic. It’s all part of the elegant balance of nature, they claim, while ignoring the perpetual and difficult tension necessary to achieve and maintain that balance.

Human beings, of course, fully participate in the scandalous dimensions of ecological life, a participation further complexified by the depth of self-awareness and other-awareness exhibited by the human mind. Though we do not exercise these powers evenly, human beings possess extraordinary capacities of perception and reflection that can intensify our experiences of difference, transience, dependence, limitation, and loss. These experiences significantly complicate our relationships with the innumerable “others” with whom we share this world, and can in turn generate a profound sense of anxiety (what Jordan terms “existential shame,” in contrast with guilt) regarding the

nature of existence (Jordan 46). Contemplation of the “circle of life,” so often lauded by the romantics for its beauty and elegance, can quickly become an occasion for profound uncertainty and existential anguish when we realize that the “circle” involves continual transgression of the ecological “others” to whom we owe our very lives. Romantic nondualism, however, suggests that this anguish is unwarranted and unnecessary, ironically inducing a new series of anxieties in those who recognize and struggle with this anguish:

The problem with this [idealistic or uncritical nondualism] is that it makes the experience of alienation from nature, or a fundamental anxiety about any aspect of our relationship with it, into an intellectual or spiritual error or mistake...rather than a vital aspect of our experience of the drama of creation. In fact, these myths [of the unambiguous harmony of the ecological community] conceal their own nature/culture dualism, since they rest on the idea that what we might call relational anxiety is a peculiarly human experience, isolating us from the rest of nature. (Jordan 45)

As Jordan rightfully suggests here, the realities of difference, conflict, change, loss, and the like do not belong exclusively to the human realm. Rather, these elements are woven into the fabric of the natural world. Nevertheless, we as human do face the challenge of negotiating these experiences as we perceive and understand them, and romantic nondualism offers precious little in the way of assistance with regard to this challenge. To be sure, the romantics may acknowledge that survival involves killing, consumption, and death. However, they maintain that as long as we manage these unpleasanties in a “sustainable” way and do not overly disrupt the balance of nature, there should be no cause for concern. Here again, they neglect to deal with the most fundamental and most challenging dimensions of otherness and our relationships with others, namely, that our very existence means that we are entirely and continually complicit in the violation of others, regardless of how much we may honor, cherish, and respect them. A mere

recognition of the ecological interconnections that bind all creatures together cannot relieve of us this burden or fully alleviate the angst it produces. Nor can the cultivation of low-impact lifestyles and sustainable practices, commendable as these efforts are, eliminate the innate tensions, ambiguities, and associated anxieties that occur in our relationships with the nonhuman world. Proclamations of unity and exhortations for harmony cannot effectuate perpetual stability within the ecological household any more than a recognition of genetic commonality precludes individual differentiation and conflict within a human household.

As noted above, romantic nondualists may be inclined to support the practice of ecological restoration, because restoration ostensibly promotes worthy ecological values like ecosystemic integrity and stability. Unfortunately however, their conception of what restoration actually means and entails is likely to be rather shallow and—like their conception of nature—unambiguously positive. Just as the romantics tend to downplay many troublesome and disconcerting aspects of wild nature and humanity’s relationship with it, so also will they tend to gloss over the most problematic dimensions of restoration. Restoration manifests the “scandal of creation” no less than any other ecological process, and the monstrous qualities of creation are in full play in the work of restoration, as Jordan notes:

[Restoration] commonly begins with a killing—first, the killing and destruction of the ecosystem, an act of violence that implicates the restorationist in the very act of attempting to reverse it; and second, the killing associated with restoration itself, to clear exotic vegetation, for example, or eliminate or control populations of exotic animals. (172)

Moreover, the scandal is intensified by the self/other-conscious participation of human beings in the restorative transformation of landscapes. The inexorable anxiety that arises

from the human encounter with otherness, and from the tight but troubled relationship between humans and the nonhuman world, is sharply experienced in the act of restoration. Jordan (who is, recall, a fervent advocate of restoration) is acutely sensitive to the trepidation and angst that, to some extent, accompanies all serious restoration work:

[Restoration] is at every point an encounter with shame. Restoration is shameful because it involves killing and a measure of hegemony over the land; because the restoration effort is never fully successful and never complete; because it dramatizes not only our troubling dependence on the natural landscape, but—equally troubling—its dependence on us; and because it dramatizes the restorationist’s complicity, not only in the destructive acts he attempts to reverse, but, more fundamentally, in the shameful process of creation itself, in which he presumes to participate. (50)

In other words, the beneficent aims of restorationists do not exempt them from the existential ambiguity and anguish that haunts our every interaction with nature. Rather, the restorationist must confront and deal with this ambiguity openly and honestly if restoration is to offer an occasion for authentic communion with natural landscapes and provide a means of reforming the human-nature relationship.

Finally, Higgs’s concept of wild design, or collaboration with nature, verges on tautology according to the framework of romantic nondualism. Nondualists would assert that nature collaborates with nature in the process of restoration. On the surface, this assertion might not seem particularly controversial. However, by glossing over the problematic “otherness” of human intentionality and intervention in ecological systems, this position hinders the ability of restorationists to make critical judgments about what kind of designs, methods, and technologies are appropriate for a given landscape, and frustrates every attempt to judge the relative success or failure of restoration projects. The foundational supposition that humans are natural creatures—*period*—can be used to

legitimate almost any form of manipulation or intervention in ecosystems, or to justify the questionable outcomes of restoration projects. One has to wonder whether strict nondualism can accommodate the notion of collaboration at all, since authentic collaboration implies the bringing together of different individuals and diverse perspectives toward a common end, while the nondualists at every point strive to minimize the substantial differences between creatures.

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While it is true that some within the environmental community have adopted the nondualistic position and have thus been reticent to directly confront the problem of human differentiation from the natural world, others have argued that the future of endangered ecosystems—indeed, the future of nature itself—rests upon the maintenance of a strict categorical distinction between wild nature and human culture. For those belonging to this school of thought, nature is by definition that which is not human and bears no mark of human interference. Bill McKibben effectively articulates this sentiment in his provocative book, *The End of Nature*. The tragic implication of climate change, McKibben argues, is that we now inhabit “a postnatural world” (McKibben 60).

We have changed the atmosphere, and thus we are changing the weather. By changing the weather, we make every spot on earth man-made and artificial. We have deprived nature of its independence, and that is fatal to its meaning. Nature’s independence *is* its meaning; without it there is nothing but us...we have ended the thing that has, at least in modern times, defined nature for us—its separation from human society. The separation is quite real. It is fine to argue, as certain poets and biologists have, that we must learn to fit in with nature, to recognize that we are but one species among many, and so on. But none of us, on the inside, quite believe it. (58, 64)

McKibben's language here may come across as somewhat extreme (is there really *nothing but us* apart from a wholly autonomous nature?), but many environmental thinkers and activists more or less adhere to this view of nature and human culture. Advocates of designated wilderness areas, for example, are likely to sympathize with McKibben's perspective, ascribing the highest value to landscapes that have been least impacted by human beings. Several prominent critics of restoration, including the aforementioned Robert Elliot and Eric Katz, also fall into this camp. In "Faking Nature," Elliot writes, "We value the forest and the river in part because they are representative of the world outside our dominion, because their existence is independent of us" (Elliot 384). Katz agrees, as evident in his article, "The Big Lie":

The 'natural' then is a term we use to designate objects and processes that exist as far as possible from human manipulation and control...Although there is an obvious spectrum of possible restoration and redesign projects which differ in their value...all of these projects involve the manipulation and domination of natural areas. All of these projects involve the creation of artifactual natural realities, the imposition of anthropocentric interests on the processes and objects of nature. Nature is not permitted to be free, to pursue its own independent course of development. (Katz 239-240)

For both Elliot and Katz, the meaning and value of nature resides in its radical "otherness" and its relative independence from human intervention. They posit that we cannot hope to preserve the essential meaning and value of nature without preserving this distinction. While purporting to recreate natural landscapes, restoration actually represents a unique threat to nature because it conceals the human intentionality and manipulation that, to a large extent, determines the appearance and function of restored landscapes. By stripping the landscape of its autonomy, restorationists also strip it of its identity and meaning. More deviously, though, restorationists mask the true character of the restored landscape, hiding their tracks to make it appear as though they were never

present, as though the transgression had never occurred. Regardless of the restorationist's skill at the art of camouflage, however, a restored ecosystem is no substitute for a natural ecosystem; it is rather like the changeling left in the crib of a baby snatched by the fairies, as depicted in the old European folktales. The restored landscape is not nature at all; it is a human artifact, grotesque in its deception.

As Jordan points out, however, this insistence on maintaining an inviolable distinction between human culture and nature is also untenable as a means of nurturing vibrant relationships between human beings and nonhuman nature. Meaningful relationship demands engagement and reciprocal exchange. But in the view of Elliot and Katz, engagement and exchange must be regarded as potential threats to the integrity of nature. Those who ascribe to this perspective might allow for certain types of “low-impact” human activities, but as a rule, human activity implies human influence, and human influence is a violation of the independence of nature. To interact with a natural landscape is—to a greater or lesser extent—to contaminate it, to despoil its purity. Thus, even the noblest aspirations and the most ecologically enlightened efforts of the restorationist represent the kiss of death to a natural ecosystem. Collaboration with the wild is impossible by definition, for as soon as human intentionality enters the scene, the wild disappears. Everything we touch turns to civilization. In practice, then, the best way to care for vulnerable natural landscapes is to extract ourselves from them altogether and avoid them as much as possible.

Few environmentalists would argue against the preservation of wild landscapes. But the conclusion that the “pure nature” or strong dualism position ultimately drives us toward is both bleak and absurd: namely, that there is no place for humans in the natural

world. In his critique of Elliot and Katz, Jordan asserts that within the framework of this strict nature/culture dualism,

the value at issue...is the autonomy of nature, or its freedom from human influence. But this idea of value is essentially *antiecological*, since it insists on the value of autonomous subjects, independent of their relationship with others...The position [Elliot and Katz] take...is inconsistent with the deeper kinds of relationship between ourselves and the rest of nature: denying our right or obligation to participate in the economy of nature, their position disallows the exchanges of goods and services and of gifts that are the basis for relationships generally. The result can only be a tragic alienation from the rest of nature. (121)

More specifically, the result is tragic irony: by striving to honor and protect the meaning and identity of nature, the sanctity of its “otherness,” we lose the ability to meaningfully identify with nature. Ultimately, this loss casts existential doubt on our own sense of meaning, belonging, and identity, inasmuch as these values are forged through relationship with others, including the others that inhabit our ecological communities. Thus, in an effort to preserve the purity of nature, to spare it from the defilement of human agency, we unwittingly excommunicate ourselves from the fellowship of life.

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In this chapter, I have outlined two popular but polarizing philosophical positions that I refer to as romantic nondualism and strong or “pure nature” dualism. Clearly, these two perspectives do not represent the only options for people striving to understand the human-nature relationship. However, I have presented them, perhaps in somewhat exaggerated forms, in order to establish the contours of the problem that environmentalists in general, and restorationists in particular, face as they endeavor to reform the relationships between human societies and natural landscapes. The problem, it seems, is that when speaking about human-nature relations, we must make several



contradictory assertions at once. We must declare that we as human beings belong to the natural world; we are the progeny of evolutionary processes, and we are full members of the interconnected ecological community. There is a unity or coherence to reality (as we experience and perceive it) that binds all things together, including all parts and members of the earthly kingdom. At the same time, we must declare that reality (as we experience and perceive it) is shot through with a radical otherness that is both awesome and troubling. Ecologically speaking, this otherness manifests itself in the wondrous profusion of elemental phenomena, and in the stunning dynamism and diversity of life on earth. This otherness also gives rise to the differences and limitations, the dissonances and divisions that render meaning and identity to creation and its creatures, but challenges the unity of nature and the harmony of its inhabitants. Humanity, too, exhibits its own peculiar otherness in relation to the rest of the natural world, an otherness that is likewise both marvelous and unsettling, an otherness that begets a host of troubles and tensions and anxieties regarding our place in the natural world and our relationship with it. We cannot resolve these tensions and anxieties by denying our incongruity with the nonhuman realm, by pretending that otherness does not exist. Neither can we resolve these tensions by consecrating our incongruity with wild nature, as if otherness is all that finally matters.

There is an art to saying two things at once. Some people—especially staunch adherents to either romantic nondualism or strong dualism—might consider it a dark art, requiring a forked tongue. However, while the mystery of relationality certainly poses devilish challenges, these challenges lie at the heart of our creaturehood. Collectively, they constitute the burden and blessing of humankind, as wild animals with truly wild

powers of awareness. Of course, the real challenge is not merely to become cognitively proficient with the trick of paradox. It is not enough, after all, simply to *say* two things at once. We must, in the end, figure out how to live in the midst of this tension without being torn apart by it, to proceed in a way that respects and attends to this tension without becoming paralyzed by it. That is, we must find ways to reconcile this tension in our actions and through our engagement with the world. This active reconciliation is not only necessary for our own psychological, social, and spiritual wellbeing. It is also vital to the ecological wellbeing of the world, and is imperative to the work of restoration. As Jordan notes, action is the “language of nature” (Jordan 92). As such, our ability to communicate and collaborate with nature is contingent on our ability to learn and speak the language of action (that is, to *act*—and act rightly—toward and with nature):

It is precisely through action...that nature communicates with itself and that we communicate with nature at the deepest and most elemental level. It is action, the language of nature, that enables a practitioner such as a farmer, a hunter, a scientist—or a restorationist, whose work incorporates the experience of all three—to come closer to nature than a person can ever come through pure observation, or through words alone. (Jordan 92)

In short, successful restoration and authentic communion with nature will require us to contend with the challenge of relationality at all levels—in our thinking, our speech, and our actions. I have proposed that our religious traditions might offer valuable resources for helping us to understand and negotiate the challenge of relationality. Jordan, as we have seen, speaks to this possibility in his work as well. But nowhere in *The Sunflower Forest* does he offer an extended demonstration of the overlapping concerns of religion and restoration, or provide concrete examples of how religious ideas, stories, or practices might assist us in navigating the murky waters of relationship that surround and saturate the work of restoration. In the following chapter, I intend to test

this proposal directly by presenting an experimental (and likely controversial) interpretation of restoration through the lens of a widely known sacred narrative: the story of the incarnation, death, and resurrection of Jesus Christ.

## CHAPTER THREE

### RELIGION, RELATIONSHIP, AND ECOLOGICAL RESTORATION

What does religion have to do with restoration? How might an exploration of religious or spiritual traditions contribute to our understanding of the meaning and practice of restoration as a collaborative endeavor between human beings and wild nature, and as a means of reforming the relationships between human communities and ecological communities? Throughout much of human history, religion has served as a primary cultural mechanism through which human beings struggle to understand the nature of their relationship with one another and with the world at large. Indeed, in a general sense, religion might be defined as a cultural response to the mystery of relationality and the confounding dialectical tensions that arise from this mystery. Religious inquiry, broadly understood, is an attempt to deal with the existential challenge of “otherness,” and “the radical ambiguity that lies at the heart of relationship” (Jordan 68).

In the major Western theistic traditions, of course, the challenge of otherness is epitomized in the figure of God, the one whom Karl Barth described as “wholly other.” In Judaism, Christianity, and Islam, the relationship between God and creation functions as the prism through which all other relationships are understood. At first glance, it may be difficult to comprehend how religious conceptions of God—a figure that most people regard as explicitly and entirely “supernatural”—might have anything to do with human perspectives on nature. However, borrowing from Donald Worster’s writing about the

influence of Puritan Protestantism on American environmentalism, Jordan observes that: “a complex of assumptions, feelings, and ideas about relationships with God, and so about relationships in general that...helped shaped American thinking about nature and the environment...are clearly reflected in modern environmental thinking” (Jordan 153). Jordan’s argument here (via Worster) might easily be expanded to say that the ideas from *all* religious traditions about relationship with God or “the sacred” necessarily influence ideas about relationship in general, and thus also play a large role in shaping cultural perspectives on the human-nature relationship.

Curiously, in spite of the unequivocal and inviolable distinction between God and creation that is found in orthodox Christian, Jewish, and Islamic theology, the character of God bears a marked resemblance to many popular conceptions of nature, especially among those who advocate a strict categorical distinction between wild nature and human culture. The similarity is most striking with regard to the value of autonomy. Absolute freedom and independence are central to the identity of God as the supreme “Other,” according to the Western “religions of the book.” To suggest that God’s being or God’s actions are in any way dependent on human beings or human actions is anathema to orthodox theology. Claims of this sort violate the purity and perfection of the divine identity. In his analysis of Karl Barth’s theology, Eberhard Busch presents this view clearly:

[Barth] claimed that God does not need humanity in order to be God. We hear, for example, the following statements, in which he even uses the concept of an absoluteness of God: “God confronts all that is in supreme and utter independence, i.e., He would be no less and no different even if they all did not exist or existed differently...If they belong to Him and He to them, this dual relationship does not spring from any need of His eternal being. This would remain the same even if there were no such relationships...He would be who He is even without this connection” (CD II/I 350 = 311-312). (Busch 106)

While the nature/culture dualists may not go so far as to argue that wild nature would be “no different” were humankind not to exist, they do maintain an equally firm insistence that freedom and independence from human agency are central to the character and identity of pure nature. Nature, they posit, most certainly does not require the presence or activity of human beings to be natural. Were humans to disappear tomorrow, the whole panoply of species and dynamic ecological processes that makes up the nonhuman world would carry on just fine without us; indeed, it would thrive in our absence. Furthermore, the autonomy of nature is precisely what makes it nature. That is, the freedom of nature from human influence and control actually constitutes its wildness in the same way that God’s absolute independence from creation constitutes (in part) God’s divinity. Think back to Katz’s critique of restoration, or to Bill McKibben’s reflections on the ramifications of global climate change: “We have deprived nature of its independence, and that is fatal to its meaning. Nature’s independence *is* its meaning” (McKibben 58).

Incidentally, McKibben himself apprehends that associations between God and nature have been commonplace throughout human history and culture, and remain popular in contemporary environmental thinking: “as we have seen, nature is as much an idea as a fact. And in some way that idea is connected with God...Many people, including me, have overcome [the modern crisis of belief in religion] to a greater or lesser degree by locating God in nature” (McKibben 71). This move—identifying autonomous God with autonomous nature—is somewhat ironic, considering that theologians typically point to the doctrine of God’s absolute independence as a way of reinforcing the radical and essential distinction between Creator and creation. And as McKibben notes with

dismay, the close association also quickly leads to some dire implications for both God and nature when considering the deteriorating ecological conditions of the earth:

God has not stopped us [from ravaging the earth]. The possibilities—if there is or was any such thing as God, the eternal, the divine—include at least the following. God thoroughly approves of what we have done; it is our destiny. God doesn't approve, but is powerless to do anything about it, either because he is weak or because he has created us with free will. Or God is uninterested, or absent, or dead. (79)

In effect, McKibben is outlining here what religious thinkers refer to as “the problem of evil,” or the “problem of suffering,” as it pertains to human destruction of the natural environment, and that problem becomes significantly more complex if God and wild nature are understood to be one and the same, while humanity supposedly must have nothing to do with either. However, as McKibben acknowledges, the conclusions he has sketched out may not be the *only* possible responses to the conundrum of a suffering creation.

Rather than plunge directly into the cognitive rabbit hole that McKibben has introduced, let us begin by reframing the matter in light of the mystery of relationality as I earlier described it, for the “problem of suffering” is really an alternative iteration and extension of the challenge of otherness. And at this point, I wish to narrow our exploration somewhat, concentrating on the manner in which the challenge of otherness is addressed in the Christian tradition of theological reflection.

### *The Otherness of God, and the Purity of Nature*

Interestingly, regardless of whether one ascribes to McKibben's pantheistic nature/culture dualism or to the orthodox distinction between Creator and creation, the

problem for human beings is the same: how can we possibly relate to this mysterious Other, that which is the source and ground of our being, that which continually sustains us, but which also remains impossibly different than us, entirely independent of us, and seems astonishingly and terrifyingly ambivalent to us? In classic systematic theology, as reflected in the quote from Barth above, the first move that must be made is to affirm the irreducible “two-ness” of the relationship, the otherness that authentic relationship requires. If there is no substantial two-ness, there can be no proper relationship, because (as shall be elaborated upon later) relationships subsist and occur in the gap, the lacuna, the empty place of encounter that lies between others (Friskics 396). Christian theology establishes the requisite gap by asserting the unfathomable otherness of God, which is expressed in the doctrine of the divine “omni’s” (omnipotent, omniscient, infinite, unchanging, etc.) and elsewhere, like the hymn that begins: “Immortal, invisible, God only wise, In light inaccessible hid from our eyes.”

In a manner reminiscent of the Creator-creation distinction found in classic theology, those of the “pure nature” persuasion readily assent to and rigorously maintain the “two-ness” of the human-nature relationship. And we can find many parallels to religion in their defense of natural places. Wild Nature (now with a capital “n”) is sacred and generally ought only be admired from a distance, or on strictly limited terms and according to carefully proscribed rules of behavior. Wilderness is the *sanctum sanctorum*, and the guardians of pure wilderness (be they philosophers or rangers) are charged with maintaining its threshold and curtain. Those who dare enter, seeking unmediated encounter with Nature, do so with fear and trembling; at least they ought to, for their very presence in the sanctuary risks the desecration or loss of its wild and holy



spirit. Not to mention, as both the scriptures and the bulletins posted at trailheads remind us, one always risks annihilation in the presence of the holy. (Is there an ominous warning embedded in the exhortation to “leave no trace”? Shall we lace our boots tighter or remove them in reverence?)

Playful as it may be, I intend no jest in this characterization of dualistic wilderness advocacy. The preservationists recognize the vital and inescapable importance of difference and distinction in relationship, and accordingly seek to honor and defend the special otherness of the nonhuman world. For them, the precious few landscapes that remain relatively undisturbed by human intervention are regarded as sacred groves, places set apart from the heedless manipulation and exploitation that continually mar domesticated—or broken—landscapes. They mourn the loss of these places, as should we all, for a host of reasons. One such reason, the one McKibben emphasizes, is that the contamination of these “others” implies the loss of a particular kind of relationship, a particular mode of relating to Nature as that which is innocent, unfettered, whole unto itself, ancient and invulnerable—indeed, divine. The question is: does the destruction of the sacred groves mean, once and for all, the death of Wild Nature?

*The Universality of God, and the Unity of Nature*

Having professed the radical otherness of both God and Nature in relation to humankind, we turn now to the second of the two contradictory things that must be said as we confront the challenge of relationality. As the Zen philosophers instruct, we must say both “Not two!” and “Not one!” in the same breath. For while authentic relationship

requires otherness and difference, it also requires cohesion and communion. An affirmation of otherness, apart from a simultaneous declaration of interconnection, connotes nothing more than the absence of relationship. Hence, Christian theology does not only insist upon God's radical transcendence, but also God's radical immanence in creation. This idea is reflected in the concept of *panentheism*, which asserts that while the being of God is not in any way constituted or contained by the creation, God's being indwells and encompasses the whole of creation, such that all of creation subsides in God (Grenz et al. 88). In other words, God is deemed to be everywhere and at all times present in the world. Or as my beloved grandmother would put it: "God is as near to you as your next breath."

Upon closer examination, one discovers that the paradox of divine remove and nearness is actually embedded within the Christian doctrine of the "wholly other" God. As discussed above, authentic relationship requires authentic otherness to create the open meeting place—what I call the "grace space"—necessary for mutual exchange to occur. And the supreme otherness of God is articulated in the *omni-qualities* of divinity. However, these "omni's," in and of themselves, represent alternative iterations of the paradox of relationality. So, for instance, if God is wholly other by virtue of divine omnipresence, then there can be no place devoid of God. That means that there can be no gap, no open ground between God and God's creatures where God is not fully and eternally present. God fills all gaps, occupies all ground. Moreover, God permeates all that is and is not. The divine spirit universally inhabits the whole of creation. In effect, there can be no "other" that God does not inhere.

As we compare this view of God as suffusing and unifying all of creation with the nondualistic view of wild nature as all-inclusive and whole unto itself, we can almost hear the romantic nondualists crying “Amen!” while the “pure nature” dualists grimace. However, if one imagines that the affirmation of God’s all-pervasive presence somehow resolves the tension and ambiguity inherent in relationship, they are sorely mistaken. For in light of that truth, one must then confront the notion that God is wholly and entirely present not only in that which is beautiful and vivifying, but also in the monstrous dimensions of reality: a scandalous thought indeed. This probably helps to explain how, while delivering her aforementioned quote, the tone in my grandmother’s voice could seem both profoundly comforting and profoundly unsettling.

Those in the environmental community who blissfully proclaim that the spirit of the Wild inhabits all things—that everything (including human culture) is part of Nature, and that Nature is whole and perfect unto itself—are not wrong, *per se*. Their insistence on the connectivity, communicability, and commensurability of humankind and the natural world is vital to the promise of collaboration and communion. But something in their tone is routinely off. Something is missing. They fail to evoke the latent ambiguity that lurks within the doctrine of the unity of all creation, and the throbbing tensions that afflict all creaturely relationships. They have yet to “pass through the fire,” so to speak; that is, they have not come to grips with the harrowing and deeply troubling aspects of ecological relationality—the inexorable limitations, the irrefutable differences, the violence, the pain, the loss—that, scandalously, also render meaning, value, and beauty to Nature. They trivialize the “problem of suffering” that must be dealt with for communion to occur, and as a result, they miss out on much of this meaning, and value,

and beauty. And accordingly, they also fail to adequately respond to the inherent limitations and brokenness of relationship that characterizes the human-nature connection. Assiduously avoiding the valley of the shadow of death, they never quite arrive at the dwelling place of the Lord.

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In the preceding pages, I have sought to illustrate two points: 1) that the mystery of relationality is an overlapping and central concern for both religion and environmentalism; and 2) that philosophical and practical problems regarding the relationship between humankind and wild nature are in many ways mirrored by theological problems regarding the relationship between creation and its Creator. But the question remains: what are we to make of this vexing mystery, and what, pray tell, might it have to do with the meaning of ecological restoration?

If the discussion above seems overly esoteric, it should also underscore the value of sacred narrative. Religious traditions make use of a variety of tools to assist people in sorting out the complexities of relationship, and storytelling has always been one of the most reliable tools for this task. This certainly holds true for the Christian tradition, in which the story of the incarnation, crucifixion, and resurrection of Jesus Christ constitutes the hub for all theological reflection. The gospel narratives of the life, death, and new life of Christ provide a vehicle for understanding the true nature of communion.

In Christian theology, communion with the unfathomable, “wholly other” God is made possible through God’s act of self-revelation in the person of Jesus of Nazareth. Action, it seems, is not only the language of nature, as Jordan argued; it also constitutive

of the being and identity of God. As Barth writes, “the divine act...is the divine being” (CD II/I-28.2: 273) and “God is who He is in the act of His revelation” in Jesus Christ (CD II/I-28.1: 257). Jesus, as the particular, enfleshed Word of God, enables genuine dialogue—conversation—to take place between the creation and its Creator. Jesus, understood to be both fully God and fully human, manifests the requisite bridge over the requisite gap of otherness, allowing authentic relationship to occur. For this reason, Jesus is also given the name Immanuel, which is said to mean, “God with us.” In other words, Jesus Christ constitutes the place of encounter between God and creation. In Christ, the world encounters the living God, and God encounters the living world. As George Murphy writes: “God does not simply stand above the evolutionary process and make it happen. In the incarnation, God becomes a participant in that process...the *logos* lived a developing and changing human life from conception through death” (Murphy 375, 379). Moreover, as I have previously argued, it is important to stress that as God became a human being in the incarnation, God became an *ecological* being as well:

The divine Word did not only assume human nature in the incarnation, but the nature of the earthly realm itself—“nature’s nature.” That is, as the “Word made flesh,” God in Christ did not only live as a human being, but as an *organism*, and thus became party to all the ecological interconnections and vicissitudes of organic existence. In Jesus Christ, God lived as a carbon-based life form, joined the food web, consumed and recycled energy and nutrients, and participated in the interdependent life of his local ecosystems...in his incarnate existence as an organism, Christ’s life became wholly enmeshed in the lives of every created being, not through some divine alchemy, but because interrelatedness is the essence of earthly life. (Lohrmann 29)

For our purposes in this essay, it is worthwhile to reflect further on the meaning of incarnation: to incarnate, as Webster’s dictionary informs us, means “to give actual form to; make real” (720). Theologically, we say that the formless God takes form in Christ, that Christ makes God “real” *on behalf of us creatures of form*, who cannot hope to relate

to that which has no form. “For us and for our salvation, God came down from heaven,” as the Nicene Creed professes. Christ both embodies and fills the gap between the infinite, universal, intangible God and the finite, particularized, sensual creation. In effect, Christ manifests and *localizes* the open space between these irreconcilable others—the emptiness that, according to conventional rules of paradox, only an omnipresent being can inhabit—such that the abstract “grace space” becomes a “grace *place*”; the metaphorical “open ground” between others becomes earthly terrain.

This interpretation of incarnation, I believe, is pertinent for environmental thinkers contemplating the meaning and purpose of restoration as a way of reforming the relationship between humanity and nature. Just as human beings cannot hope to relate to an abstract divinity, nor can we relate to an abstract nature. True communion and authentic dialogue with nature can only occur through concrete engagement with particular landscapes. Shunryu Suzuki and other Zen teachers have taught us that, “wherever you are, enlightenment is there” (Suzuki 127). But the inverse of that statement may also be true: enlightenment occurs *where you are*. Enlightenment is always *somewhere*; it is always emplaced. This connotes a profound awareness and intimate engagement with one’s surroundings. Enlightenment is not attached to or dependent on particular places, of course, but it does mean being fully awake and alive to one’s particular environs. Suzuki says, “[This] is our way, to live fully in each moment of time” (Suzuki 5). To this I would add, “and in each place that we find ourselves.” The same holds true for both enlightenment and communion; that is, communion always *takes place in place*, to put it redundantly. Communion with the spirit of the wild emerges through the interactions of particular human communities with particular

ecological communities. The practice of restoration can serve as a means of fostering communion by inviting people to directly encounter and engage with the particular landscapes that surround and sustain them. Restoration draws people into concrete “*grace places*”—nature incarnate—where authentic relationship can occur.

Earlier, I noted that the incarnation of God in Jesus Christ entails God’s presence and participation in all the “vicissitudes of organic existence.” This point is crucial to the Christian theological tradition and cannot be overstressed, for here we see a forthright acknowledgement of the travail of creaturely life. Significantly, the story of God’s carnal manifestation in the world is not one of unmitigated tranquility, unity, and the flourishing of life, as one unfamiliar with this tale might expect. Rather, the incarnation of the divine Word implicates and plunges God headlong into the “scandal of creation” with all its tensions and ambiguities—including the vulnerability and limitations, violence and discord, and pain and suffering that are inevitable features of earthly existence. If nothing else, the gospel narratives constitute a disturbing testament to the precariousness of life, and the pernicious dimensions of both nature and human society. At the very beginning of the New Testament, the Matthean nativity scene indicates that Jesus was marked for death from the moment he entered the world, and his narrow escape from infanticide instigates the ruthless slaying of all male babies in the greater Bethlehem area—tidings of comfort and joy, indeed. As an adult, Jesus everywhere encounters poverty, affliction, and injustice. His teachings and actions draw suspicion and fear, sow controversy, and incite protest as often as they inspire. At one point, he is nearly thrown off a cliff; in another episode, he is banished from his hometown. His closest followers rarely seem to apprehend him, and later abandon him. He is characterized as

experiencing temptation, disappointment, anger, sorrow, and despair. Some might point to the tales of Jesus calming storms, multiplying loaves, healing lepers, and raising the dead, and ask what this figure can possibly know of the tragic limitations that define the natural world and disrupt human relationship. On the contrary, however, the miracle vignettes bring these limitations into even sharper focus. They lead us to ask, for every storm calmed, how many others went unabated? For every loaf multiplied and every disease healed, how many others were left hungry and debilitated? For every corpse raised, how many others were buried?

All of this is to say that the monstrous dimensions of creaturely life are unflinchingly displayed in the Christ narratives, and throughout the Bible as a whole. The reading and telling of these stories can provoke serious anxiety, while at the same time, the scriptures also contain a wealth of resources for dealing with this anxiety. In any case, the public sharing of these stories in worship services, devotional groups, and elsewhere provides an occasion for listeners to grapple with these issues collectively.

In the Christian tradition, the “scandal of creation” is epitomized in the story of the crucifixion of Jesus Christ, in which the incarnate Word of God undergoes the violence, suffering and death that are integral features of the matrix of creation. In other words, the “scandal of creation” is recapitulated in an ultimate sense in the “scandal of the cross.” Of course, in the passion narrative, conscious human beings inflict this violence and suffering on figure of Christ, which intensifies the shame of the act, just as the conscious participation of human beings in acts of ecological destruction intensifies the shame of destruction that is everywhere and always manifest in the natural world. But as we have already discussed, even apart from issues of self/other consciousness,



relationship is always a thorny matter. Christ on the cross signifies the terrible cost of life in relationship, and it is a cost that we must confront and cope with in order to avoid the traps of despair or disassociation, and achieve communion with our ecological kin. As creatures of the natural world, we must confront the reality that our existence and ongoing life necessarily entails the continual violation and loss of others, even as we might long for fellowship with those others. As Holmes Rolston, III has perceptively noted:

The secret of life is that it is a passion play. Things perish in tragedy...But things perish with a passing over in which the sacrificed individual also flows in the river of life. Each of the suffering creatures is delivered over as an innocent sacrificed to preserve a line, a blood sacrifice perishing that others may live...[All creatures] share the labor of the divinity. In their lives, beautiful, tragic, and perpetually incomplete, they speak for God; they prophesy as they participate in the divine pathos. All have "borne our griefs and carried our sorrows." (Rolston, "Does Nature," 219-220)

We fail to honor the sacrifice of our ecological brethren when the violation of our ecological fellows is conducted thoughtlessly, maliciously, or selfishly. It is at this point, we might say, where existential shame or anxiety becomes conflated with guilt.

Ecological restoration may certainly function as a response to the feelings of guilt that we as human beings bear as a result of our thoughtless exploitation and destruction of natural landscapes and creatures. On the surface, at least, it would seem to be an attempt at repentance and atonement for the damage that we have inflicted on the earth. However, it is vitally important (and, I believe, conceptually imperative) that we recall the ways in which restoration actually represents a continuation of the sacrifice or death saga of wild nature. As earlier noted, many aspects of the restoration process—the intrusiveness, the manipulation, the killing—would seem to locate participants among the crowds at the foot of the cross, while the landscape remains bound, wounded and broken.

For example, think of the work that goes into the restoration of a degraded, channelized river. Existing vegetation is stripped away; heavy equipment is used to gouge out a new path for the water; the trampled and muddy banks are draped with mulch and fibrous cloth to hold them in place, wire or plastic fencing surrounds the new saplings to guard them from animal browse...all of this may be unavoidable and necessary in order to effectuate a new relationship with the landscape. But for all intents and purposes, the land still looks very much like a bruised corpse. Rather than deny the accusations of critics who say that restoration still represents a kind of violent or aggressive domination of wild nature, perhaps we should confess our complicity in its demise, and join the mourners. After all, repentance begins with confession, and the transgression is real. Just as the resurrected Christ still bears the marks of the nails and spear, the restored landscape will always bear the scars of human intentionality.

But perhaps, considering the profound love and devotion that many restorationists have for the lands they steward, it is too devastating to depict the work of restoration only as a continuation of the crucifixion of wild nature, even if the wounds are real. Let me offer an alternative interpretation: instead of the violence of the soldiers and the malevolence of the crowd, perhaps the practice of restoration more closely recalls the solemn devotion of Joseph of Arimathea, who was “waiting expectantly for the kingdom of God,” and who took upon himself the responsibility of tending to the body of Jesus after his death (Luke 24:50-53). Perhaps restorationists more closely resemble the women who followed Jesus, who wailed at his death, and prepared ointments and spices to take to his tomb (Luke 24:48, 55-56); or Nicodemus, who carefully wrapped Jesus’ body in linens with a hundred pounds of myrrh and aloes (John 19:40). These followers

recognized that the best—the only—thing to be done in the wake of this traumatic loss was to care for the broken place of grace, the body of Christ. In the end, what is restoration but the tender love and care for dead places?

Of course, the disciples who affectionately prepared Jesus' body for burial did not realize that the story was not quite over yet. If my interpretation of restoration as funeral preparation seems oppressively bleak, we ought remember that we have the good fortune of knowing how this tale really ends. Significantly, the resurrection of Jesus did not happen instantaneously upon his death. Time had to elapse. His followers prepared the corpse of Christ as best they could, planted the body, and then had to walk away in order to honor the Sabbath time of rest. For Christians, the intermediate time between Good Friday and Easter morning—the Easter vigil—represents a time of quiet waiting, patience, expectation, and longing. This latent period, too, witnesses to some truths regarding the practice of restoration. After the best effort has been made to clean up the mess, to carefully arrange the site, to prepare the soil and plant the seeds; after all the work has been completed, the restorationist must simply walk away. Say a prayer, walk away, and plan to check in again some time soon. Once the human work has been done, the restorationist must hand the project over to nature, and trust that nature will see to it that the *real* work—the actual reemergence of the dead ecosystem—occurs as hoped for. Just as the miraculous resurrection of Christ is attributed to the life-giving power of God, we must ultimately attribute the resurrection of a beloved landscape to the chthonic, healing powers of the earth itself. Holmes Rolston compares this healing process to the work of medical doctors and midwives:

In the days before high-tech medicine, many physicians who were congratulated on their cures used to say, modestly, “Really, I just treated you, and nature healed

you.” When a doctor sets a broken arm, he just holds the pieces in place with a splint and nature does the rest. He is not really to be congratulated for his skills at creating arms. He arranges for the cure to happen naturally. One does not complain, thereafter, that he has an artificial limb. Likewise with restoration: It is more like being a midwife than being an artist or engineer. You arrange the raw materials back on site, and place them where they can do their thing...The point is that restorations do not fake so much as facilitate nature...nature [does] for itself. (Rolston, “Restoration,” 129-130).

Similarly, the disciples who cleaned the crucified body of Christ and laid it in the tomb were not responsible for Christ’s resurrection; as unwitting midwives to Christ’s rebirth, they simply placed his body where God could do God’s thing.

At this point in the story, the mood may really start to lighten, in part because no matter how certain the restorationist may feel about the outcome of a project, there is always an element of uncertainty, wonder and surprise regarding the actual appearance of the “resurrected” landscape. Here also one may find resonances with the gospel narratives. In the Gospel of John, the resurrection sequence contains a downright comical moment: Mary, distraught after having discovered Jesus’ body missing, is sobbing outside the tomb when Jesus himself strolls right up to her and asks, “What’s the matter?” But, for some reason, Mary has no idea who he is. She assumes he’s a gardener and begins pleading with him to tell her where the body is. At that point, Jesus relents, and upon uttering her name, she instantly recognizes him as her deceased teacher, now alive and kicking (John 20:11-16).

The story reminds me of a particularly magical moment during our OHV trail restoration projects last year. I returned to one of our project locations to monitor the growth of the native grasses we had seeded before covering the trail with fallen branches and debris. After hiking alongside the trail for about a mile or so, I absentmindedly looked up, and realized that I had no idea where the trail had gone. From where I stood I

could not detect where the old path was; it had seemingly disappeared into the forest floor. I was perplexed and delighted at the same time: I had assumed that the ground beneath me was just the work of the “gardener”—that is, *me*—when in fact, wild nature was miraculously appearing right in front of my eyes. It was only after several minutes of backtracking and close observation that I finally relocated the path.

In Christian theology, we say that humans only “set up the joke,” so to speak, through our worship and devotional practices, scriptural study, theological reflection, and so forth. It is God who finally delivers the “punch-line,” the delightful surprise: namely, the actual, transformative moment of grace and divine presence, experienced and embodied in our lives. Similarly, in the human work of restoration, we only set the stage for the renewal of a degraded landscape. It is nature, finally, that effects the renewal. The resurrected landscape will invariably surprise us to some degree, just as we laugh at the results of a well-designed prank. Even when we are “in on the joke,” even if we have participated in its preparation and witnessed its performance before, we are never quite sure how it will play out and how it will be received, and therein lies the giddy comedy of both the encounter with God and the encounter with wild nature.

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After considering the ideas set forth in the paragraphs above, careful readers might detect a problematic discrepancy between the underlying claims of this thesis and the theologically inspired interpretation of restoration that I have presented in this chapter. In this thesis, I have argued that restoration must be understood and practiced as a collaborative endeavor between human beings and natural landscapes. However, in

many Christian theological traditions—especially the Lutheran tradition with which I am most familiar—the whole notion of redemptive collaboration is highly suspect, if not downright blasphemous. Redemption, like the resurrection of Christ, is considered to be the work of God alone. Human beings may receive and give witness to the redemptive work of God in their lives, but they cannot in any way *contribute* to this redemption. People do not “collaborate with God,” or assist in their own salvation by following the Ten Commandments, modeling Christ-like behavior, performing benevolent works, and so forth. To suggest otherwise is actually to negate the significance of the cross and empty tomb of Jesus Christ. Instead, these positive actions are viewed as the spiritual fruits of the gift of faith, the natural *outcomes* of the transformative power of God’s grace, bestowed as a gift through Christ’s incarnation, death, and resurrection.

Accordingly, my comparison of the restoration of degraded landscapes to the resurrection of Christ would seem to suggest that humans cannot positively contribute to the redemption of wild places. Ultimately, the resurrection of ecosystems must be “all nature” (that is, nonhuman nature), just as the resurrection of Christ is “all God.” If indeed this is the case, we must ask what role humans can or ought to play in the healing and redemption of ecological communities, or whether they can play any role at all. Is authentic collaboration between people and wild places actually possible if wild nature is understood to be the “real” agent of transformation in the process of restoration? If nonhuman nature finally acts as its own healer, then why should human communities bother with this difficult work at all? In the end, Mother Nature will see to it that everything turns out well, right? Interestingly, Christian theologians routinely find themselves facing a similar set of questions about the proper role of human beings in

God's redemption of the world. If we cannot accomplish reconciliation with God through our personal behaviors and dispositions, then why should we try to modify them? If God will set all things right in the end, why bother with the difficult work of discipleship and stewardship?

The Christian scriptures actually present a nuanced understanding of the conundrum of collaboration. For while Christ alone manifests and enacts the reconciliation and renewal of the world, Christ also calls his followers to embody and reflect this renewal in their own lives and in their dealings with others. Christ beckons his disciples to follow him, and informs his disciples that "the cup that I drink you will drink; and with the baptism with which I am baptized, you will be baptized" (Mark 10:39). It is a disconcerting summons, for it constitutes an invitation—a sentence, really—to share in the suffering of the whole creation, as Christ does on the cross. However, it is also an invitation to experience and participate in the transformation of this suffering to the joy of new life and new relationship. In light of Christ's death and resurrection, the "scandal of creation" is transfigured; the monstrous travail of earthly life now comes to resemble the strain and exertion of childbirth, and we see that "the whole creation has been groaning in labor pains until now" (Romans 8:22-23). Christ's followers are to serve as midwives (not mothers) to the new creation: assuaging the pain and anguish of the process; standing watch in anxious anticipation of the disarming cry that signals the beginning of new life; and finally, introducing that new being to her mother, placing her in the bosom of the one that conceived and carried her. To enable his followers to serve in this capacity, the resurrected Christ equips his disciples with a sacred emollient, the divine power of reconciliation: that is, the forgiveness of sins (John 20:22-23). Endowed

with this gift, Christ's followers are empowered to be vessels of God and thus to participate in the emergence of the new creation, whereby God in Christ, "in [whom] all things hold together...reconcile[s] to himself all things, whether on earth or in heaven" (Colossians 1:17, 20).

According to Christian theology, the redemption of the world is the work of God alone. But Christians also proclaim that God loves, and inheres, and works through creaturely "things"—that is, tangible matter, the stuff of life. As discussed earlier, the whole premise of the Christian faith begins with the revelation of God in the incarnation of the Word—the person of Jesus. And we dare not forget those elemental, carnal "means of grace" through which God's creatures continue to receive, experience, and share the healing presence of Christ: namely, the sacramental waters of baptism, and the bread and wine of holy communion. And beyond the sacraments, Christians assert that God can work through God's own creatures, including the vessel of humanity, to accomplish the divine work of restoring broken relationships and renewing the life of the world. In this way, people, too, can serve as "means of grace"; as midwives and heralds of the new creation, human beings might be said to collaborate in God's work of redemption. It is a sacred calling.

Restorationists, too, may serve as vessels through which the spirit of wild nature works to rejuvenate the life of natural ecosystems and renew the relationship between humanity and the more-than-human world. And, like those who have received the gift of forgiveness and recognize the power of the sacraments, restorationists are equipped with a variety of potent means for reconciliation. Thus far, however, restorationists have tended to prefer only a select few of the implements at their disposal, and as a result, the



efficacy of their efforts at encouraging a new communion and fresh modes of collaboration between human cultures and natural landscapes has been somewhat uneven. The favored tools of the trade—the science of ecology, the technologies of design, the machines of land management, the familiar utensils of landscaping and gardening—are undisputedly crucial to the work of restoration. But other vital cultural tools for the renewal of relationship—like storytelling, sacrament, ceremony and ritual—have been all but untouched by restorationists. In this chapter, I have sought to explore how the work of restoration resonates with many aspects of the Christian story of the incarnation, death, and resurrection of Jesus, as well as with the vocation of discipleship. In the following chapter, I will suggest ways that religious rituals might offer creative inspiration for the development of restoration as a collaborative and reconciliatory practice between people and landscapes.

## CHAPTER FOUR

### ETHICS AND RITUAL IN ECOLOGICAL RESTORATION

I will conclude the body of this essay with a brief case study in restoration ethics. With this investigation, I intend to illustrate how the philosophical perspectives outlined in Chapter 2 relate to practical and moral dilemmas that routinely surface in the work of restoration. As the “real world” scenario described below will illustrate, the ethical formulations that we develop in response to these dilemmas cannot, in and of themselves, resolve the inherent tensions and ambiguities present in work of restoration, or absolve us of the disruption, violence, and loss that restoration necessarily entails. I aim to demonstrate how religious themes and practices can provide inspiration as we work to develop the means necessary to deal with these ethical limitations.

As I hinted toward the end of Chapter 2, it is not finally sufficient for restorationists merely to understand and acknowledge the intrinsic tensions embedded within the human-nature relationship. Rather, we must find ways to openly confront and actively deal with these tensions as we carry out our ecological interventions. It is one thing to *conceptualize* restoration as a collaborative and reconciliatory endeavor between human beings and wild nature; it is quite another to consciously and meaningfully *conduct* restoration as the scandalous and redemptive enterprise that it is. The most sophisticated theory of restoration means nothing if we cannot concretely perceive and receive the reconciliation that restoration promises, just as the most refined theological schematics guarantee nothing about the depth and vitality of one’s actual, living

relationship to God and the world. In other words, eventually we must move from philosophy to practice, from reflection to ritual (while recognizing, of course, the recursive nature of this movement). As Jordan notes, ritual “is the means by which humans generate, recreate, and renew transcendent values such as community, meaning, beauty, love, and the sacred, on which both ethics and morality depend” (Jordan 5). As such, ceremony and ritual can play a critical role in our movement *through* the scandal of restoration and toward the emergence of authentic communion between people and wild places. With these ideas in mind, let us consider a recent debate over trout restoration in Montana’s Bob Marshall Wilderness.

#### *The Bob Marshall Wilderness Lake Restoration Project*

The decline of Westslope cutthroat trout (WCT) populations is a major cause of worry for many in Montana and elsewhere. The WCT is the state fish of Montana and is native to the area. And as indicated on Montana’s official state website, the Montana Fish, Wildlife, & Parks agency has also designated this fish as a “species of concern” (mt.gov). For decades, WCT have faced threats from stream degradation and loss of suitable habitat. In addition to these threats, the genetic purity of many WCT populations in the northern Rocky Mountains has been compromised due to hybridization with nonnative species of fish (especially rainbow trout) that were introduced to many Montana streams and lakes in the first half of the 20<sup>th</sup> century. As a result, the future survival of WCT as a genetically distinct fish species is now in jeopardy. (Grisak and Marotz 2-3)

In order to address this serious issue, federal, state, and tribal agencies partnered with the Bonneville Power Administration (BPA) in the mid-2000's to develop the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program. The agencies involved in the creation of the program include the United States Fish & Wildlife Service (USFWS), the United States Forest Service (USFS), and Montana Fish, Wildlife & Parks (MFWP). The BPA's primary role in the program is that of financial sponsor. The company is responsible for mitigating ecological degradation related to its hydropower operation on the Hungry Horse Dam, which is located on the South Fork Flathead River. The WTC project would theoretically satisfy a portion of BPA's legal obligations for ecological mitigation (a fact that, by itself, is likely to discomfort some restorationists). (Colbeck et al. 1, 7)

A large-scale lake and stream restoration project in the South Fork Flathead River watershed comprises the central component of the WCT Conservation Program. The Flathead watershed has long been a stronghold of WCT. However, nonnative fish that hybridize with WCT (including Yellowstone cutthroat trout and rainbow trout) now populate many of the mountain lakes and streams in the area. The restoration plan entails removal of these nonnatives from 21 alpine lakes (and their corresponding outflow streams) through the use of piscicides (Rotenone and antimycin). After the removal has been completed and the piscicides have been neutralized, the lakes would then be restocked with genetically pure WCT that have been raised in a hatchery. Topography, as well as the presence of existing natural and human-built barriers, would make the probability of subsequent nonnative fish migration to the restored lakes unlikely,

although illegal re-introduction of nonnative fish species by humans would remain a threat. (USDA Forest Service, “SFFWWCTCP: Record of Decision,” 1-2)

### *Controversial Elements & Ethical Considerations Related to the Project*

The WCT restoration project has generated a significant amount of public debate. Much of the controversy stems from the fact that many of the lakes included in the project are located within the boundaries of the Bob Marshall Wilderness Complex, and as such, are subject to management restrictions set forth in the Wilderness Act of 1964. The Wilderness Act mandates that the relevant agencies manage these designated lands so as to preserve their “wilderness character.” Four qualities identified in the Act are regarded as definitive in assessing “wilderness character”; these landscapes are to remain: 1) “untrammeled,” 2) “natural,” 3) “undeveloped,” and 4) they are to provide “outstanding opportunities for solitude or a primitive and unconfined type of recreation” (Landres et al., qtd. in MFWP, “Statement of Reasons,” 1). These qualities represent keystone values for many who are striving to develop a robust *wilderness ethic*. However, these values in and of themselves give rise to a bevy of serious philosophical and pragmatic problems for wilderness managers.

Simple as it may seem, the 1964 Wilderness Act does not provide clear direction for decision-makers confronting scenarios in which one or more of these wilderness values comes into conflict with the others. This is precisely the dilemma facing the designers of the Bob Marshall WCT restoration project. In this case, nonnative species of fish have come to dominate waterways in which fish were historically not present, thereby degrading the “natural” or “original” conditions of the wilderness area. The

removal of these fish would seem to be an obvious benefit to the wild landscape, as it would enhance the “natural” character of these ecosystems.

However, critics of this view point out that the actual implementation of the restoration plan may represent a violation of the 1<sup>st</sup> and 4<sup>th</sup> defining elements of officially designated wilderness areas, namely, that they must remain largely “untrammeled” and offer “opportunities for solitude” and primitive recreation. The project designers determined that effective and total removal of nonnative fish would require the use of chemical fish poisons, thereby necessitating the transportation of motorboats, pumps, testing kits, and a variety of other equipment to the project sites. In order to accomplish this efficiently, several teams of workers and horses would be needed; in some cases, helicopters would have to be used to access these remote alpine locations. The entire procedure would thus involve a certain measure of “trammeling,” and an interruption of the solitude and primitive quality of experience that one would expect to find in a designated wilderness. A strong contingent of critics argues that this kind of activity is unacceptable (if not illegal) in places like the Bob Marshall complex. (MFWP, “Statement of Reasons”)

In short, the question is: which of the wilderness characteristics identified above should take precedence here? Advocates of the wilderness ethic roughly break into two camps on this point—those committed to a *natural wilderness* (the “pre-disturbance ecosystem”) and those committed to an *untrammeled wilderness* (the “let it be” folks) (Landres, Brunson, and Merigliano 77-78). Can these multiple wilderness values be reconciled, or are they mutually exclusive in this situation? This question, I believe, highlights the tensions embedded within the “pure nature” dualism school of thought. As

earlier noted, most wilderness advocates gravitate toward a somewhat dualistic view of the human-nature relationship, insisting that we maintain the integrity and autonomy of wild nature. But a variety of problems arise when this philosophical position is translated into ethical formulations regarding specific wild landscapes. For example, what are we to do when we discover that one of our designated wilderness areas—the holiest sanctuaries of nature—is not entirely natural, but rather a product of human intervention (e.g. the introduction of trout to the alpine aquatic ecosystems)? Should we seek to remedy the situation, and thus further violate the autonomy and independence of these landscapes? Should we respectfully decline to involve ourselves further in the shape of these ecosystems, and thereby accept the earlier “contamination” of the wild integrity of these places? Furthermore, how can we so vociferously defend the “untrammelled” qualities of these landscapes while simultaneously requesting that we ourselves be allowed to recreate in them? Or is that the game—to allow just enough trammeling to suit our own private recreational interests?

The question becomes even more complex when considering the option of restocking the lakes with WCT. Studies suggest that the particular alpine lakes slated for restoration likely contained no fish at all prior to the 1920’s (Grisak and Marotz 2-3). This fact would seem to put advocates of the “natural wilderness” or “historic ecosystem” at odds with the project coordinators. However, some would argue that, given the significant length of time that fish *have* been present (approaching a century now), there are sufficient ecological and cultural arguments for keeping some fish in these lakes: the alpine ecosystems have thoroughly adapted to the presence of fish in these waters, and

fish have become important characters in the historical and ongoing human “narrative” of these places.

Others expand this line of argument by pointing out the significance of the Westslope cutthroat trout to the watershed as a whole. Regardless of whether WCT were present in these particular lakes in earlier centuries, they *are* native to the area. It is enough, these people assert, to observe that the WCT is a natural and critical part of the larger ecosystem, and that its historical value for the people of this region is well established. Some might even go so far as to say that given the precarious status of the WCT, we should not overly concern ourselves with questions of historical fidelity in this case; the highest priority (indeed, our moral obligation) should be ensuring that this species does not disappear altogether. Adherents to this position might be said to hold an *individual species ethic*, inasmuch as the wellbeing of a particular species (the WCT) takes priority over other ecological concerns within this framework (Colbeck et al. 6-8).

Those arguing in favor of bolstering the WCT population through this restoration project would appear to lean toward the philosophical position of the “romantic nondualists.” The nondualists are, in general, less fretful about direct human engagement with natural landscapes than the dualists are. Especially in this context, where the intervention is designed to alleviate the suffering of one of our fellows in the web of life, the nondualists are likely to view the project as an expression of humanity’s fundamental kinship with all of creation, and humanity’s moral obligation to support the wellbeing of our ecological brethren. The question, however, is whether these backers of the project can adequately appreciate the severe trauma that will be inflicted on these ecosystems in course of restoring them. It is worth remembering that this project would entail the total



annihilation of all fish in 21 different mountain lakes, and would likely impact a host of others species that have become adapted to or dependent on the presence of these fish in these waterways. The toxins and testing, the horses and helicopters, the ecological disruptions, the mass suffering and death: how, precisely, do these elements reflect the harmonious interconnection of all creatures? Conversely, the nondualists might argue that the existing status of the lakes is perfectly fine as it is, and see no reason to intervene. The people who originally introduced the nonnative trout to the lakes did not ruin or destroy them; they simply *changed* them, just like all creatures change their environments. Of course, this view lands us right back where we started: the proliferation of those nonnative trout throughout the watershed are driving the WCT toward extinction. How do we cope with our complicity in that travesty?

Many people involved in this restoration project do not align themselves wholly with either the “natural” or “untrammeled” wilderness ethic, nor do they regard the wellbeing of the WCT as the sole issue of importance in this situation. The governmental and tribal agencies who developed the restoration plan seem to have largely adopted the more expansive understanding of “natural” and “historic” outlined above. That is, they recognize the importance of limiting human impacts in designated wilderness areas, but are not opposed to making temporary exceptions for trammeling if they feel it is in long-term interest of the majority of “stakeholders.” Theirs is the language of pragmatism, efficiency, balancing interests and mandates, and managing for best possible outcomes.

The catch-all term for perspectives that emphasize the various human interests in the land is the *resource ethic* (Colbeck et al. 7-8). This term is somewhat imprecise; however, it does indicate much about the North American institutional view of the value

of wild landscapes: namely, that they contain a variety of valuable resources for human use and enjoyment. The resource ethic thus exhibits both utilitarianism and anthropocentrism. The challenge for agency personnel operating within this ethical framework is to identify and maintain the multiple resources of wild landscapes in perpetuity. In any given management situation, concerns about the quality of one resource may be temporarily set aside in order to preserve or enhance the quality or quantity of another. With regard to the Bob Marshall restoration project, the coordinators sought to preserve and enhance the quality and quantity of threatened WCT populations, perhaps at the expense of other wilderness resources such as “primitive recreation.”

An additional ethical category may be delineated to clarify the interests and actions of the BPA in the Bob Marshall WCT project. The BPA is operating with the understanding that in the interest of producing a valuable commodity (hydroelectric power), some measure of ecological degradation in the affected area may be excusable as long as the company assists in the ecological recovery of a comparable area. Some have referred to this position as a *mitigation ethic*, as it largely represents the American legal framework for mitigating ecological and economic losses caused by industrial development (Colbeck et al. 7). Not surprisingly, many environmentalists regard this ethical framework as highly suspect, in that it places few serious restrictions on industrial expansion, and seems to use restoration to justify the exploitation of wild landscapes. Andrew Light characterizes these commercial mitigation projects as “malicious restoration” in order to differentiate them from restoration projects undertaken for largely non-utilitarian ends, which he terms “benevolent restoration” (Light 54). Light’s distinction may be helpful for guarding against those who would co-opt the language and

practice of restoration for exploitative purposes. But what are the implications of his distinction for the WCT project? Should it be scrapped altogether because it was originally proposed by an energy company with a checkered environmental record? Those who say “yes” would do well to examine their own electric meter. And what are the implications of his terminology for the people who have designed this project, and for those who would carry it out? How are they to regard themselves? How can they reckon with their participation in this “malicious” work?

It is important to recognize that agencies, organizations, and individuals involved with this project may not exclusively hold to one set of ethical principles. Overlapping ethical concerns are routinely voiced in scenarios like the Bob Marshall WCT project. For example, anglers may express anxiety about the negative impact that toxins, mechanical equipment, and helicopters will have on the quiet backcountry environment that they treasure. This concern would seem to locate them squarely in the “untrammelled wilderness” realm of ethical consideration. At the same time, however, the anglers may discuss the extraordinary opportunities for fishing in these areas as a valuable resource that must be protected. This language is obviously more suggestive of the resource ethic. Some of these same individuals may be particularly distressed about the increasing rarity of the WCT in their favorite trout streams, and feel that it is wrong to sit idly by while an entire species faces extinction. The individual species ethic thus comes into play here as well. In short, the ethical positions outlined in the previous section (the *natural wilderness ethic*, the *untrammelled wilderness ethic*, the *resource ethic*, the *individual species ethic*, and the *mitigation ethic*) do not represent rigid categories that stand in isolation from one another. Rather, they commonly overlap and interact with one

another, both in the minds of individuals and in the discussions that take place among interested parties.

In the end, however—and this is the key point—each of these ethical positions, along with their philosophical underpinnings, ultimately fails to resolve the relational tensions embedded within this scenario. Every possible course of action in this situation—whether the project is implemented, amended, or abandoned—will necessarily implicate those involved in a number of serious ecological losses. Each course of action will necessarily involve some measure of violence, destruction, and loss. If the project is carried out as planned, the restorationists will have the innocent blood of thousands of fish and countless other living organisms on their hands. These creatures will be lethally eliminated from their ecosystemic homes—places that *we* had earlier determined they should occupy—and their toxified bodies will be regarded as ecological waste. Conversely, failure to remove the nonnatives would entail our tacit approval of, and ongoing complicity in, the destruction of the “pure” wild ecosystem that began many years ago with the introduction of those exotic fish. In other words, the original transgression will continue to define the landscape; that which was lost will not be returned. Of course, this will also be the case if WCT are stocked in the lakes, in systems they did not originally occupy. However, a decision to *not* restock the lakes with genetically pure WCT would diminish the value of the project as a means of alleviating the plight of this species, whose perilous status is also the direct result of our previous ecologically ignorant or insensitive behavior.

In short, at every turn this scenario illuminates the ever-present spectre of ambiguity that haunts our dealings with the natural world, and demonstrates the

incapacity of restorationists to design unequivocally positive responses to the problem of ecological degradation. The project highlights the limitations, discriminations, sacrifices, and losses that accompany every attempt to restore damaged landscapes. In this situation at least, it appears as though the ominous biblical warning holds true: the iniquity of the fathers is visited upon the children and grandchildren for generations, in spite and in the midst of the efforts of the grandchildren to redress that iniquity.

### *Restoration and Ritual*

So where does this leave us? Can we ever hope to make peace with the disruptive and deadly elements of restoration? Can we ever hope to be truly reconciled to the ecosystems we have compromised? Jordan believes we can, but only if these “monstrous” features of restoration are openly confronted and creatively processed by the community. Instead of trying to mask the scandalous, tragic aspects of restoration, Jordan exhorts us to recognize and treat them for what they are: a damned shame—literally—in need of redemption.

[There] will be the moments when the restorationist most clearly confronts shame—in the making of the copy; in the knowledge that the copy is imperfect; in the complicity in destruction implicit in restoration; and in the manipulation and killing that restoration always entails. It is these aspects of restoration that are most likely to be controversial, but they also underlie those strong moments that are inherently expressive and dramatic and that serve as the starting points for ritualization. (Jordan 187)

It is through ritual that human communities publicly address the limitations, transience, and brokenness of relationship that invariably accompany our collective journey through life, and transform these moments of anxiety and sorrow into opportunities for the reconciliation and rejuvenation of relationship. So, too, must restorationists find ways of

harnessing the cultural power of ritual to transform those destructive and distressing acts of restoration into events that serve to deepen and revitalize the ecocultural relationships between human communities and natural landscapes: “it is the restorationist’s responsibility, then, to take advantage of [the] link with myth, to ritualize the process of restoration in order to turn it into an occasion for figurative and subjective—as well as literal and objective—world renewal” (Jordan 72).

Our religious traditions can be of service to restorationists in this endeavor, for they offer templates—in story, song, and sacrament, in ceremony and liturgy—for developing communal activities that accomplish the difficult work of reconciliation. At the same time, the practice of restoration might recursively serve to re-contextualize and re-enliven traditional rituals that have, until now, seemed to offer little in the way of assistance with regard to the task of reforming the relationship between humankind and the natural world. I am certainly not the first to suggest this link between religion, ritual, and restoration. Regarding the religious tradition that has been the focus of this essay, Jordan himself writes: “If Christianity has tended to underemphasize the natural world in favor of the otherworldly, perhaps what is called for is a kind of greening of the sacraments, or a spinning off of new ones, to allow us to explore our relationship with the rest of creation” (192). It is an interesting proposal, but what might these new sacraments or ceremonies actually look like? How exactly would they be incorporated into actual restoration projects like the proposed Bob Marshall Wilderness trout restoration plan?

Let me offer a few experimental suggestions specific to our case study. Suppose that the proposal is approved, and the nonnative fish in those alpine lakes are condemned to be removed. Clearly, this mass killing will upset many in the community, and for

good reason: the sacrifice is real and is truly horrific. Few, however, will be more heartbroken than the anglers, who for years—some since their childhood—have made the long, arduous hike to those remote lakes to enjoy the flash and gleam of rainbow trout leaping after flies in the cool dusk. The rainbows have been a part of their life, a part of their story, and now they will be gone from the anglers’ most treasured landscapes. What can be done to mark this passing, to honor these innocent, aquatic “others” and the suffering they are about to endure, to process the violence, waste, and grief that is to come?

It would seem that a ceremony is in order. Perhaps a community group could be formed—old anglers and children, tribal elders and religious leaders, restorationists and whomever, really—to make one final pilgrimage to the lakes. Stories might be told, blessings offered, prayers spoken, and confession made for the death that is approaching. Perhaps someone could read that “big fish” tale from the end of the gospel of John, where the resurrected Jesus helps his stunned disciples take in a record catch and they all enjoy a campfire breakfast on the beach. And then, our own fishing would commence. No toss-backs, no catch-limit this time. Just hands-on, hook-and-line hauling until the creels are filled. The fish would provide the sacred fare for a kind of modified communion service: a fish fry, held at the lakes or perhaps back in town where more people could participate.

In the Christian sacrament of communion, the bread and wine function as the tangible, incarnate presence of Christ. Just as the infinite love and grace of God became localized and embodied for us in the scandal of the crucified Christ, so now in the sacrament of communion, the grace and love of the crucified Christ is localized and

embodied in the breaking of bread and the pouring of wine. Imbibing these elements, the love and grace of God is localized and embodied in us. Jordan, borrowing from Aldo Leopold, notes that rituals of this sort reflect the terrible beauty of relational life; that is, the reality of life in “a world of wounds”:

[The rituals are needed] to transmute the violence and shame of killing into an occasion for communion... communion is achieved in the act of eating, in which we encounter in an especially immediate and vivid way the inextricable link between life and death, and in so doing achieve a state of grace. (Jordan 174)

In a ritualized eating of the rainbow trout, we grieve their suffering and death, we confront and confess our complicity in that death, and we receive and give thanks for the life that they provide for us. Moreover, we celebrate and give thanks for the new life that their suffering and death will provide for another species that is suffering—the Westslope cutthroat trout that will take their place in the alpine lakes.

What might be done with that occasion—the restocking of the lakes with WCT? Any number of ceremonies might be created, of course, but I detect strong resonances with the sacrament of baptism, in that the event represents a renewal of life facilitated by the sacrifice of another. In the Christian tradition, the aquatic immersion entails baptism *into* Christ’s death and resurrection. So too, as the WCT are introduced to the lakes of the Bob Marshall Wilderness, they are slipping into waters of death—the ongoing death of the pre-disturbance ecosystem, as well as the death of the native and nonnative creatures that perished on their behalf through the poisoning of the lakes. At the same time, the lakes constitute waters of new life, where the WCT can thrive and persist into the future with their genetic identity intact.

It should also be stressed that at baptismal ceremonies, the community of witnesses promises to nurture and care for the baptized in their new life. In other words,



as the baptized are welcomed into their new home, the community also takes on the responsibility of ensuring their wellbeing. The new communion carries with it new obligations. This point, I think, is pertinent to the promise of restoration as well. Ultimately, restorationists place their trust in that primal power—the spirit of the wild—to realize the resurrection that they hope for. We place the fish in the water, say a blessing, and walk away, trusting that nature will sustain them. At the same time, those involved take on the long-term vocational responsibility of looking after the restored landscapes, of monitoring their progress, of protecting them from further degradation. We place our faith in the wild while still recognizing our relational duty to care for our landscapes, in the same way that a person might convey a profound trust in God, but will also strive to protect and provide for her loved ones in whatever capacities she possesses. It may be that the best way to protect some restored landscapes is to let them be; other landscapes may require more regular involvement. That is where discernment comes into play; the collaboration will look different in each scenario.

If by grace the WCT do well enough, the coming years might also bring a resurrection of sorts to the cultural losses that were incurred through the removal of the nonnative fish. Anglers might return to these sites more thrilled than ever at having the opportunity to pursue a fish whose very existence seemed uncertain at one time. Parents will bring their children to the lakes to provide them opportunities for intimate encounter with a totem animal of this bioregion. Perhaps years down the road, another communion fish fry might occur, this time with the now abundant WCT that flourish in the frigid Bob Marshall streams and lakes.

The suggestions for resto-ritual offered here are just that: suggestions. The experimental ideas for ritualization I have presented are reflective of the Christian faith, consistent with my earlier explorations of Christian theology, and in keeping with my goal in this thesis of providing a more particularized, in-depth investigation of the potential connections between restoration and religion. I am also attempting here to persuade members of Christian communities to explore overlooked resonances between their cherished liturgies and sacraments and the work of restoration, and to consider the possibility that restoration might be a powerful eco-spiritual practice. But obviously, any of the manifold religious and spiritual traditions might offer inspiration for the rituals we develop around the practice of restoration. Or, these new rituals might arise more spontaneously and innovatively from the practice of restoration itself. In all likelihood, both will occur: restorationists will, consciously or unconsciously, draw inspiration from established traditions while also developing fresh ideas for ritualizing their work.

In the end, however, I have presented this discussion in order to demonstrate that our religious traditions can offer valuable resources, not only for thinking through the relational meaning of restoration, but also for actually *practicing* restoration as a collaborative, reverent endeavor that respects the power of the wild, and as a means of cultivating reciprocally supportive relationships between people and wild places. Careful ethical analysis will always be crucial as we struggle to determine the best course of action for restoring particular landscapes. But ritual provides something that our pragmatic and ethical deliberations by themselves cannot: namely, a way to face and move through the fearsome realities of limitation and loss, and suffering and death that

inevitably arise in the process of restoring damaged landscapes. More than that, ritual provides a framework for concretely and meaningfully *enacting* the reconciliation and redemption that restoration promises.

Finally, before closing this section, I should acknowledge that some restorationists will be uncomfortable with my use of the term or idea of ritual in relation to restoration. There is good reason for their apprehension, just as there is good reason to be suspicious of religion. In the absence of regular, critical examination, rituals can become entrenched, exclusionary, deceptive, and repressive. They can become sentimentalized, manipulative, misused, or just plain tedious. Like anything that offers comfort and meaning to people, rituals also run the risk of becoming objects of worship in and of themselves, instead of serving as a *means* to reconciliation and redemption; if the means are not fulfilling that purpose, then they need to be re-assessed.

Eric Higgs presents a thoughtful critique of ritualized restoration in *Nature by Design*, and I quote him at length in appreciation of his concerns:

The primary difficulty with ritual, in my estimation, concerns orthodoxy, authority, and control...What is most important at the bottom of this is that coercion be avoided in restoration. People have and will find myriad ways of expressing their relations to a place, and some of these will end up being quietly or openly spiritual. Some will be religious. A principle of open expression is needed that allows everyone to find a congenial way of practicing restoration. If it turns out otherwise, that people begin to feel that their background or beliefs are unwelcome or incompatible, restoration will be alienating. (Higgs 254)

Higgs is, of course, absolutely right. And formalized ritual, especially ritual that is subtly or overtly connected to particular religious traditions, simply may not be appropriate for some restoration organizations or for certain restoration projects. For these reasons, Higgs, building on Albert Borgmann's philosophy of technology, advocates for the language of "focal restoration" as opposed to "ritualized restoration" when it comes to

developing restorative practices that meaningfully draw human communities into reciprocal relationship with natural landscapes. Focal restoration entails:

practices that create a stronger relationship between people and natural processes, a bond reinforced by communal experience. A focal restoration is one that centers the world of the restorationist, expresses the commanding presence of nature, and demonstrates continuity between the particular act of restoration and other activities on the landscape. Focal restoration is mindful restoration. (Higgs 242)

I am attracted to the way in which Higgs' vision for focal restoration offers avenues for connecting human culture and wild nature. I also fully appreciate Higgs' skepticism about the power dynamics that can undermine religious and quasi-religious practice, and his desire to find an alternative to the culturally laden language of ritual. However, I am not sure that his conception of focal restoration adequately addresses the deepest problems of relationship—the violence, manipulation, and destruction—that haunt even the best efforts of the restorationist. Mindfulness is undoubtedly vital to good restoration, but we will also finally need mechanisms for making peace with all those troubling ecological and social losses that we are trying to be mindful of. In the end, whichever language we use—ritual, focality, or something else altogether—the ecocultural practices that we develop to accompany the work of restoration must account for these darker aspects of restoration in order for authentic concord and communion to emerge between human beings and the ecosystems we hope to see resurrected.

## CONCLUDING REMARKS

### MOURNING AND DANCING IN THE RESTORATION AGE

Esteemed ecotheologian Thomas Berry boldly proclaimed that a new chapter of the earth story is being authored in our time. The Cenozoic Era, he argued, is drawing to a close, largely as a result of the disproportionate and devastating ecological influence of the human species on the rest of the earth community. At the same time, however, the contours of an extraordinary period of ecological and societal renewal—the “Ecozoic Era”—are appearing on the horizon (Berry x). Already, the defining features of this new ecocultural terrain are beginning to fill our collective consciousness and shape our vision of the future. For example, the recent surge of popular interest in ecologically responsible living systems—including sustainable agriculture, renewable energy, green building, and the like—reflects a rising social awareness of this momentous turning point in the global narrative. Growing advocacy and participation in the development of these and other “eco-friendly” practices and technologies suggests that, at least in most places, human societies are ready and willing to take on the enormous task that the Ecozoic era presents: namely, the challenge of transforming the connection between humanity and the nonhuman world from a relationship of exploitation to a relationship of mutual enrichment.

Effecting this transformation, Berry claimed, will be the most difficult and most noble endeavor that human beings will undertake in the coming age. It is fitting, then, that he referred to this challenge as the “Great Work”: “The Great Work now, as we

move into a new millennium, is to carry out the transition from a period of human devastation of the Earth to a period when humans would be present to the planet in a mutually beneficial manner” (Berry 3). The key word in that sentence is “mutual.” Significantly, Berry recognized that the Great Work could not belong to or be shouldered by humanity alone. Whereas the decline of the Cenozoic Era continues to be defined by human domination and disregard for the beyond-human world, the emerging Ecozoic Era will be a time in which humankind awakens to the interconnected, interdependent nature of our earthly existence, and entrusts the forces of nonhuman nature to take an active and guiding role in governing the shape of our communal life: “The accomplishment of the Great Work is the task not simply of the human community but of the entire planet Earth. Even beyond Earth, it is the Great Work of the universe itself” (195). The Great Work, in other words, must be a reciprocal and collaborative endeavor, including all parts and members of the wild earth and the wild cosmos. Apart from this mutualistic understanding of the human-earth relationship, the Great Work will devolve into the Great Geoengineering Project, and the Ecozoic Era will become the Biotech Era.

Restoration will undoubtedly be a central component of the Great Work in the coming years, not only because of the obvious ecological benefits it offers, but also because of the important relational implications of restoration work. Organic farming, clean energy, green construction, and other efforts toward environmentally enlightened and sustainable societies will certainly be indispensable as well. However, more than any of these necessary and commendable practices, restoration constitutes a human effort to engage deeply, reciprocally, and supportively with natural landscapes, *irrespective of any extractive or consumptive value that those landscapes might offer*. The ecocultural

experience of interacting with landscapes in this manner, I believe, is essential to the task of nurturing loving relationships between human communities and wild nature.

To understand why this is the case, we need only consider the manner in which human beings work to establish and maintain loving, reciprocal relationships with one another. In the context of a loving marriage or friendship, for example, one does not ask, “How can I get as much as I can out of this relationship without compromising my own security?” Rather, one asks, “How can I best contribute to the security and flourishing of this one whom I love?” The personal rewards of participating in a relationship of this nature are great indeed, but these benefits are received as gifts, rather than taken as plunder. Of course, sacrifice, tension, limitation, and loss are inherent features of every human relationship as well. However, when these experiences are embedded within a larger context of love and commitment, these moments of anxiety and sorrow can be confronted openly and, by grace, transformed into moments of reconciliation that ultimately serve to foster a deeper sense of appreciation and stronger commitment to the other. Ecological restoration, I contend, presents crucial opportunities for human beings to engage with natural landscapes in a loving manner, to confront the inherent tensions within the human-nature relationship as well as the unnecessary ecological wrongs that we have committed, and in so doing, to nurture reconciled and revitalized relationships with our ecological communities. In this respect, restoration is vital to the transformative ecocultural mission of the Great Work. In the end, the Ecozoic Era might also come to be known as the Restoration Age.

Thomas Berry proposed that the dramatic time in which we are living constitutes “one of those moments of transformation that can be considered as a cosmological, as

well as a historical and religious moment of grace” (Berry 196). In the midst of the transition from the Cenozoic Era to the Ecozoic Era, religious communities around the globe are facing a corresponding period of upheaval, renewal, and ecological awakening. Mary Evelyn Tucker, cofounder of the Forum on Religion and Ecology, has suggested that religions traditions the world over “are now entering their ecological phase and finding their planetary expression” (Tucker 9). Dovetailing nicely with Berry’s vision for the future (and with the larger aims of the restoration movement), Tucker argues:

The challenge for religions is both to revision our role as citizens of the universe and to reinvent our niche as members of the Earth community...The question for religious traditions, then, is how can they assist these processes [of ecological revitalization] and encourage humans to become a healing presence on the planet...From a concentration on God-human relations and human-human relations, they are being invited to reconfigure human-Earth relations. (7,9)

In other words, the manifold religious and spiritual traditions that have shaped human cultures for millennia have a critical role to play in this period of ecocultural rejuvenation, the Great Work of our time. In order to serve effectively in this capacity, however, students and adherents of these traditions must explore and explain how the spiritual wisdom expressed in their theologies, sacred narratives, and rituals pertain to the ecological and societal transformations that the present moment demands. As I have sought to demonstrate in this essay, such explorations may yield valuable insights into the fundamental, relational roots of the ecological challenges facing the world today. In particular, I have attempted to show that our religious traditions might offer helpful interpretive and practical tools for negotiating the most troubling dimensions of the human-nature relationship, including the disturbing realities of difference, limitation, suffering, and violence that significantly challenge our vision of harmony with the nonhuman world.



These perplexing elements of relationality are present in even our most well-intentioned efforts to restore the ecological integrity and wellbeing of natural landscapes. Occasional miscommunications or mistranslations will inevitably occur during our “conversation” with the land in the work of restoration. The dialogue will break down from time to time, as it routinely does in inter-human discussions. Sometimes, despite our technical skill and our mindful designs, our attempts to mend the ecological damage we have inflicted will receive a tepid response, or even outright rejection, from the ecosystems we are seeking to help. At times, the radical otherness of the nonhuman world will seem to overwhelm our understanding of the fundamental interconnectedness and unity of nature. Even more distressing: our fervent efforts to heal natural landscapes may implicate us, directly or indirectly, in the harming and loss of some of the current inhabitants of those landscapes. In light of these vexing limitations and losses, we may find ourselves asking whether the “Great Work” of the Restoration Age is really that great after all.

In the end, however, these disconcerting aspects of restoration—aspects that are also intrinsic to the human-nature relationship in general—do not preclude the possibility of reconciliation and communion between human societies and wild nature. Nevertheless, these painful and frustrating realities must be dealt with in order for authentic and joyful communion to occur. It is my contention that our religious traditions—though their stories, meditations, theological teachings, rituals, songs, and liturgies—may offer powerful ideas and frameworks for practices that can help people to work through the most difficult dimensions of restoration and realize the promise of ecocultural renewal that restorationists so ardently proclaim. The work of restoration, no

less than the ecological travesties that necessitate this work, will indeed present occasions for mourning the limitation and brokenness of relationship that exists between people and natural places. However, in the midst of that uncertainty and anguish, we remember that in the process of restoration, the power of wild nature encounters the wild power of love. The collaboration of these two sacred and mysterious powers offers ample reason for hope that in the coming Restoration Age, our mourning will be turned into dancing. It is with this hope in our hearts that we pick up our shovels and seeds, our fire rakes and field notes, and take up the great work of restoration as a sacred vocation.



*(Photo by A. Lohrmann)*

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APPENDIX

# **Front/Backcountry Ranger Report**

**Superior Ranger District,**

**Lolo National Forest**

**Summer 2010**

**Report Prepared By: Adam Lohrmann (Front/Backcountry Ranger)**  
**Report Supervised By: Allen Byrd (Recreation Planner)**  
**Report Submitted: September 30, 2010**

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## INTRODUCTION

The following report provides a summary of the work conducted and data collected by the seasonal Front/Backcountry Ranger for the Superior Ranger District, Lolo National Forest, during the summer of 2010. This report is written and presented by Adam Lohrmann (Front/Backcountry Ranger and Restoration Coordinator Assistant), working under the supervision of Allen Byrd (Recreation Planner). The information contained herein pertains to the dates spanning 05/24/2010 and 09/30/2010.

In the Superior Ranger District, the responsibilities of the Front/Backcountry Ranger include: monitoring and data collection pertaining to public use of district lands and waters; conducting routine vehicle and foot patrols, making public contacts, providing education and information to users, assisting in the management of backcountry lakes and dispersed campsites, inventory of noxious weeds, facility repair and maintenance, and a variety of other duties. A number of additional job responsibilities are associated with the position of Restoration Coordinator Assistant. These responsibilities include: assisting with project site planning and preparation, participation in pre-work meetings with private contractors and government contract officers/representatives, equipment inspections, monitoring and inspection of work completed by contractors/operators, maintaining daily project logs/journals, and manually assisting in the restoration work itself. A rough breakdown of the time dedicated to completing these various tasks and responsibilities during the 2010 summer season is presented below:

**Summary of Dedicated Work Time for the Seasonal Front/Backcountry Ranger:  
(Summer, 2010)**

<b>Total Days Worked:</b> -----	82 days
<b>Week Days Worked:</b> -----	66 days (80%)
<b>Weekend Days Worked:</b> -----	16 days (20%)
<b>Vehicle/Foot Patrols:</b> -----	19 days (23%)
<b>Restoration Projects:</b> -----	29 days (35%)
<b>Training:</b> -----	12 days (15%)
<b>Resource Advising Committee (RAC) Projects:</b> -----	8 days (10%)
<b>Other (Weed Inventory, Report Preparation, etc.):</b> -----	14 days (17%)

(\*It should be noted that these numbers represent an imperfect approximation of the time allotted to fulfilling the various duties of the Front/Backcountry Ranger position. For example, a ranger can conduct a significant amount of conventional patrol work while simultaneously monitoring restoration projects, surveying noxious weeds, etc.)

Subsequent sections of this report offer a detailed presentation and analysis of data related to public use, as well as an assessment of the restoration projects completed over the course of the summer season. The first section, entitled “Trends in Public Use,” presents a compilation of data regarding motorized and non-motorized use of National



Forest lands in this district, obtained during routine patrols and recorded in the form of Daily Trip Reports. Use-related data was also collected in the field during the performance of restoration work, as the sites selected for restoration typically receive high levels of motorized use. Regarding illegal activity, common violations and problems involving both motorized and non-motorized use are identified.

The next section, “Restoration Project Assessment,” includes an explanation of the warrants and goals for the projects, a description of the work completed, an explication of the need for ongoing maintenance and monitoring of the project sites, and comments/recommendations for further improving restoration work conducted in the Superior Ranger District. In addition, several locations throughout the district are identified as candidates for future restoration work.

The third section of the report, “Front/Backcountry Challenges & Priorities,” describes ongoing challenges and strategies pertaining to resource management and public use in the frontcountry-backcountry interface of the Superior Ranger District. Effective enforcement and user education continue to be primary goals for achieving sustainable motorized recreation in this area. The restoration projects completed in 2010 will undoubtedly present unique challenges and opportunities in both of these areas. An attempt is made to suggest geographical areas of the district where a greater allocation of resources and a stronger Forest Service “presence” may be beneficial to achieving management goals.

The report concludes with some general remarks on the 2010 summer season in the Superior Ranger District. The attached Appendix presents a complete compilation of data and information regarding public use, documented throughout the summer by the seasonal Front/Backcountry Ranger.

## **TRENDS IN PUBLIC USE**

### *Background Information*

The data presented in this section pertain to public use of national forest lands in the Superior Ranger District. These figures represent a distillation of user data collected and documented in Daily Trip Reports by the seasonal Front/Backcountry Ranger (Adam Lohrmann) throughout the 2010 summer season. User data recorded in the Daily Trip Reports was then compiled and summarized in spreadsheet format; this database is presented in its entirety in the Appendix to this report.

#### Important points regarding terminology and interpretation of data:

- “Encounter” refers to an instance in which the ranger observes and/or interacts with a public user. Where multiple users are observed together, each individual in the party is counted as a separate encounter. Thus, “total ranger encounters” refers to the total

number of public users observed and documented by the ranger during the course of the 2010 summer season.

- “Reported Encounters” refer to instances in which Forest Service personnel other than the Front/Backcountry Ranger (Adam Lohrmann) observed or interacted with public users. User data related to these encounters was then submitted to the ranger for documentation. These figures are relatively low, as Forest Service personnel in the Superior Ranger District do not regularly report routine encounters with public users.
- Instances in which the ranger observed *evidence* of use but did not observe the individual users are not documented as “encounters.” For example, if the ranger observed a pickup parked alongside a stream, but could not locate the user(s), no encounter is recorded. However, some documentation of this type can be found in the Daily Trip Reports.
- “Use Type” refers to the various resource uses and recreational activities of public users on National Forest land. These include hiking, camping, fishing, firewood cutting, and recreational OHV riding. The activities presented here do not constitute an exhaustive list of public uses of national forest lands. Other uses may include bird-watching, trapping, swimming, wildlife observation, etc. However, these uses were not documented by the ranger.
- In many cases, public users encountered by the ranger engaged in variety of activities. For example, a user may engage in hiking, camping, and fishing during a visit to a backcountry lake. Wherever possible, the ranger documented these multiple uses, and each use is counted separately in the “Use Type” data table. However, given the natural limitations involved with field observation and monitoring of use, this data must be regarded as indicative of general use trends, rather than a precise tally of public uses. For example, a ranger may observe a party of ATV riders on a front country road, and document their use type as “OHV riding.” However, the ranger has no way of determining if this group is on their way to a preferred fishing location, or heading out to a trailhead to do some hiking, etc. The limitations of this data should thus be taken into consideration.
- In many cases, “Place of Origin” could not be determined for the public user(s) encountered by the ranger (e.g. OHV riders might only be observed in transit).

*Public Use Data*

**Total Ranger Encounters:**-----183

**Total Reported Encounters:**-----34

**Total Encounters:**-----217

(\*These figures do not include the significant number of public users who participated in two major events sponsored by local ATV clubs during the summer. When these participants are included in the figures, the number of **Total Ranger Encounters** increases to ~363, and the number of **Total Reported Encounters** increases to ~59.)

**User Place of Origin:**

**Percent of Total Encounters:**

<b>MT:-----</b>	<b>89</b>	<b>41%</b>
<b>WA:-----</b>	<b>34</b>	<b>16%</b>
<b>ID:-----</b>	<b>28</b>	<b>13%</b>
<b>Other:-----</b>	<b>8</b>	<b>4%</b>
<b>Unknown:-----</b>	<b>58</b>	<b>26%</b>

(\*These numbers include data from Reported Encounters)

**Encounters/Use By Area:**

**Percent of Total Encounters:**

<b>Heart Lake/Hoodoo Pass:-----</b>	<b>75</b>	<b>35%</b>
<b>Randolph Crk./Mullan Pass:-----</b>	<b>31</b>	<b>14%</b>
<b>Copper Gulch/St. Regis Basin:-----</b>	<b>29</b>	<b>13%</b>
<b>Deer Crk./Big Crk.:-----</b>	<b>25</b>	<b>12%</b>
<b>Taft/Hiawatha/Stateline:-----</b>	<b>20</b>	<b>9%</b>
<b>Silver Lake:-----</b>	<b>9</b>	<b>4%</b>
<b>Other Areas:-----</b>	<b>28</b>	<b>13%</b>

(\*These numbers include data from Reported Encounters)

**Use Type/User Activities:**

<b>OHV Riding:-----</b>	<b>104 (34% of total use)</b>	<b>Fishing:-----</b>	<b>20 (6%)</b>
<b>Hiking:-----</b>	<b>81 (26%)</b>	<b>Target Shooting:-----</b>	<b>7 (2%)</b>
<b>Camping:-----</b>	<b>78 (25%)</b>	<b>Cutting Firewood:-----</b>	<b>4 (1%)</b>
<b>Other:-----</b>	<b>14 (5%)</b>		

(\*These numbers include data from Reported Encounters)

### *Analysis & Commentary on Public Use Data*

The data presented above do not necessarily offer a complete picture of public use of national forest lands in the Superior Ranger District. Nevertheless, several major trends regarding public use may be identified from the information contained therein. A number of these trends are discussed below:

Places of Origin: Montanans by far constitute the largest number of documented users in the Superior Ranger District. As indicated by the more detailed compilation of user data presented in the Appendix, local residents comprise a major subset of the public users in this area. This suggests that local user education efforts and the building of cooperative relationships with local user groups may positively contribute to the protection of natural resources in the district.

Significant numbers of public users also come from Idaho and Washington. As the number of out-of-state visitors to the district continues to rise, more resources may need to be dedicated to the monitoring and protection of natural resources in both front- and backcountry areas. For example, evidence suggests that OHV traffic may be increasing on **state line route 391**, including the colonization of noxious weeds and the development of unplanned, user-created dispersed campsites. Some of this resource damage may originate with users accessing the district from backcountry roads in Idaho. However, relatively little monitoring or management of use currently takes place along that route, and signage is minimal.

Encounters/Use by Area: In many respects, the data pertaining to popular areas of public use may indicate as much about the “priority locations” of the Front/Backcountry Ranger as they do about the patterns of public use. The figures in this table partly reflect the amount of time the Front/Backcountry Ranger spent patrolling and working in certain areas. For example, the **Randolph Crk./Mullan Pass area** not only encompasses a semi-regular patrol route; it also includes one of our restoration project sites. Thus the ranger was afforded many opportunities for encountering public users in this area. The same might be said for the **Deer Crk./Big Crk. areas**. Nevertheless, many of these areas do seem to constitute local “hotspots” of public use, especially **the Copper Gulch/St. Regis Basin**, the **Randolph Crk. drainage** and **BPA Powerline area**, and the **Deer Crk./Big Crk. drainages**.

The **Heart Lake/Hoodoo Pass area** (and the entirety of the **Trout Crk. drainage**) receives perhaps the highest concentration of public use in the SE quadrant of the district. The relatively high number of encounters presented in the data table thus accurately indicates the level of use occurring there. Heart Lake (and nearby Pearl Lake) is becoming an increasingly popular weekend destination for hikers and backpackers from Missoula and elsewhere. Regular monitoring will be necessary to gauge the impact of sustained use and guard against the degradation of natural resources in this area.

The **Taft/Hiawatha/East Portal area** receives exceptionally heavy use (both motorized and non-motorized) from local residents and visitors, although this fact is not as clearly

reflected in the numbers. This may be due in part to the sheer volume of users in this area. High traffic in the **Rainy Crk. drainage** can make it prohibitively difficult for the ranger on duty to effectively monitor and document the number and activities of users present at any one time. Rainy Crk. may be particularly vulnerable to resource degradation, suggesting that additional monitoring may be necessary here.

Additional comments/recommendations on monitoring and patrol priorities will be offered in the third major section of this report, “Front/Backcountry Challenges & Priorities.”

Use Type/User Activities: The data indicates that the Superior Ranger District receives a high degree of “mixed use.” OHV recreation is particularly popular in this area. In addition to frequenting unrestricted public roads, users have created many unauthorized OHV trails throughout the district. Some of these trails may be used to facilitate other uses, such as hunting and camping. Others may have been created for “adventure riding” or to gain access to restricted Forest Service roads.

Non-motorized use is also prevalent in the district. Day-hiking, camping, and fishing are popular recreational activities, especially in the southern half of the district, between the state line and the Clark Fork/St. Regis rivers. Backcountry lakes near the state line appear to be preferred destinations for backpackers and other non-motorized users.

Multiple use occurring in these areas indicates that difficult management decisions may be required in the near future. For example, OHV enthusiasts clearly enjoy access to high country destinations such as **Diamond Lake** and **Silver Lake**, and desire more access to backcountry areas like the **St. Regis Basin** and **Copper Ridge**. However, motorized use may preclude or degrade the quality of non-motorized recreation in these same popular locations, in addition to impacting other natural resources, such as freshwater stream habitat for protected trout species.

Additional comments/recommendations regarding the challenges of public use will be offered in the third section of this report, “Front/Backcountry Challenges & Priorities.”

### *Violations & Illegal User Activity*

During the 2010 summer season, relatively few instances occurred in which the seasonal Front/Backcountry Ranger encountered public users actively engaging in illegal behavior. In two or three cases, users were found to be cutting firewood or harvesting plants with expired permits, and were instructed to obtain current permits from the Superior Ranger District station. In other instances, users were preemptively advised to comply with national forest regulations and Leave No Trace practices (e.g. to extinguish campfires, to pack out all garbage, to operate off-highway vehicles only on authorized routes, to refrain from operating ATVs while intoxicated, etc.).

Common violations observed often pertain to illegal OHV activity. These include double-riding on single-seat ATVs, riding with a child, and riding without a license plate/sticker. In these cases, users were routinely informed and advised to comply with Montana OHV laws. However, user education and enforcement of these laws remains challenging, as many of these behaviors (especially double-riding, and riding with children) are both popular and common, and laws regarding OHV use may vary from state to state.

While direct observation of egregious violations rarely occurred, the Front/Backcountry Ranger observed significant evidence of various illegal activities throughout the district. Evidence of common violations include: littering; damage or theft of Forest Service gates and signage; damage to Forest Service facilities (e.g. latrines shot or vandalized); development and use of unauthorized OHV trails; motorized circumvention of Forest Service gates on restricted roads; vandalism and circumvention of Forest Service barricades (e.g. removal of boulders and slash); operation of OHVs while intoxicated (e.g. countless beer cans along Forest Service roads); unattended smoldering campfires; and damage to green vegetation (e.g. branches cut for kindling, grasses cut for ground cover under tents, etc.).

Evidence of one or more of these and other illegal activities was found in nearly every area patrolled by the Front/Backcountry Ranger, highlighting the need for a robust Forest Service “presence” in both front- and backcountry areas. Greater allocation of resources and personnel dedicated to monitoring and patrol may be required to achieve a reduction in violations of this nature.

## **RESTORATION PROJECT ASSESSMENT**

### *Background Information*

Prior to the start of the 2010 summer season, the Recreation Planner for the Superior Ranger District, Allen Byrd, identified and secured funding for the restoration of several unauthorized OHV trails located throughout the district. These projects were conducted in association with the Legacy Roads and Trails Restoration Initiative (Legacy Roads), with funding obtained through the American Recovery and Reinvestment Act of 2009 and through federal Indefinite Delivery, Indefinite Quantity (IDIQ) contracts. Private contractors performed the majority of the restoration work, in cooperation with and under the guidance of the Contract Officer Representative (C.O.R.), Allen Byrd, and the Designated Inspector (D.I.), Adam Lohrmann.

Eight restoration projects were originally planned at the beginning of the summer: **1) Meadow Mountain, 2) Deer Creek, 3) Hemlock Mountain, 4) Packer Creek Ford, 5) Chimney Rock, 6) Copper Ridge, 7) Sunrise Mountain, and 8) Thompson Creek.** (Project titles correspond to the names of the dominant geographical features in the vicinity of the unauthorized OHV trails slated for restoration.) Projects 1-7 were

successfully completed by the end of the 2010 season, while the 8<sup>th</sup> (Thompson Creek) was temporarily set aside for further evaluation because of logistical concerns (specifically, access for heavy equipment).

*General Characteristics of the Project Sites &  
Explanation of the Warrants for Restoration*

Each restoration site presented a unique set of characteristics and challenges. However, the projects shared a number of major features in common. Physically, each project site followed the route of one or more single- or double-track OHV trails, between 0.5 and 3.0 miles in total length, traversing forested areas designated as off-limits to motorized use. These trails were created and maintained primarily by users riding ATVs, motorbikes, or other off-highway vehicles (although non-motorized use may also be presumed). The trails were likely created by users for a variety of purposes, including: access to gated Forest Service roads designated as off-limits to motorized use year-round, or during certain months of the year; establishment of connective routes between other OHV trails; access to favored hunting grounds or camping areas; “adventure riding” or general recreation.

In every case, illegal motorized recreation had resulted in the degradation or damage of forest resources and impairment of one or multiple forest uses. Degradation and damage includes a variety of negative impacts to forest resources. Motorized use can greatly contribute to the colonization and spread of noxious weeds (knapweed, St. Johnswort, sulfur cinquefoil, oxeye daisy, and non-native hawkweed are especially prevalent in the Superior Ranger District). Noxious weeds were found to be present along every one of the project routes prior to restoration. Motorized use may also result in loss or damage to native vegetation and inhibition of future vegetative growth.

Closely related to vegetation issues, OHV traffic may significantly damage forest soils through compaction and erosion (contributing to loss of topsoil and mineral nutrient leaching). Dust and runoff from OHV trails often finds its way into nearby waterways, contributing to sedimentation in streambeds and loss of habitat for trout and other aquatic species. Many of the unauthorized trails restored this year were located near waterways; in the case of one project (Packer Creek Ford), the trail passed directly through a major stream, necessitating stream bank remediation. All of the trails selected for obliteration exhibited erosion and vegetation loss prior to restoration.

Other negative impacts to wildlife may also occur. For example, elk security was a central motivating factor in the selection of several unauthorized OHV trails restored this year, with special consideration given to maintaining adequately sized roadless areas for primary migration and feeding routes.

Impairment of forest uses also encompasses a variety of concerns, including water quality, habitat loss, and recreational considerations. Unauthorized OHV trails may have a negative impact on water resources, used by both local residents and visitors for

drinking water, swimming/floating, and fishing. The noise generated by illegal motorized traffic may also impair the quality of non-motorized recreation opportunities, as such as hiking, horseback-riding, bird watching and wildlife observation. Excess noise and disturbance to wildlife may also be of special concern to hunters.

The above paragraphs do not constitute an exhaustive definition of degradation/damage and impairment, but represent some of the primary factors taken into consideration by the restoration coordinators with regard to the projects completed in the Superior Ranger District in 2010.



*Unauthorized OHV trail prior to restoration (Chimney Rock)*



### *Description of the Restoration Work Completed*

Each restoration project completed during the 2010 summer season followed a similar multi-stage work plan. The basic steps of the restoration process are listed below, followed by a narrative description of the projects. The narrative description is intended only to provide a kind of generic account or summary of the work conducted at each of the seven restoration projects completed. In actuality, certain variations of this restoration plan naturally occurred as a result of site-specific complications, unforeseen challenges, and other factors. A number of these complications and challenges will be discussed in the subsequent portion of this section.

#### General OHV Trail Restoration Project Plan:

Step #1: Scouting & Assessment/Work Plan

Step #2: Noxious Weed Treatment

Step #3: Decompaction/Scarification & Erosion Control

Step #4: Application of Slash

Step #5: Application of Seed, Fertilizer, & Mulch

Step #6: Installation of Boulders, Slash, & Vegetative Transplant Barricades

Step #7: Installation of Signposts & Signs

Step #8: Inspection & Regular, Ongoing Monitoring

#### General OHV Trail Restoration Project (Narrative Account):

Step #1: In the first stage, the project site was scouted and assessed by the C.O.R. (Allen Byrd), the Designated Inspector/Restoration Assistant (Adam Lohrmann), or both. A work plan was then formulated, taking the various particularities of the project site into consideration (noxious weed concerns, erosion control measures/water bar placement, decompaction and slashing specifications, seeding and mulching requirements, barricade strategies, etc.). In most cases, the private contractor or operator hired for the project also accompanied the Forest Service project coordinators on these scouting/planning excursions, and provided feedback on the work plan.

Step #2: Noxious weed eradication measures were then taken. A licensed applicator provided by the contractor treated the project area with chemical herbicides (using either a backpack sprayer or an ATV-mounted broadcast sprayer, depending on the severity of the weed infestation). Several days after chemical application, the D. I. walked the entirety of the project route to obtain visual confirmation of adequate weed treatment.

Step #3: Prior to mobilization, the contractor/operator washed all heavy equipment and the C.O.R. or D.I. inspected the equipment in accordance with the noxious weed mitigation requirements. The operator then transported the heavy equipment (a large or small excavator, depending on the width of the trail to be obliterated) to the project site, and began decompaction/scarification of the route. All compacted trail surfaces were scarified to a depth of 2-4". Wherever significant slope was observed along the route, erosion control features were installed, in the form of low water bars or "drain dips."



*Decompaction, Erosion Control, and Slash Application (Chimney Rock)*

Step #4: While decompacting, the operator also used the excavator to apply slash along the project route. Slash consists of any dead or downed native material (dead trees, shrubs, branches, and tree stumps) within reach of the excavator's arm & bucket. Varying quantities of slash were applied depending on location (usually heavier applications on slopes and near the route access points) and availability of dead/downed material. The slash is intended to serve multiple purposes, including: serving as a visual and physical barrier to potential motorized use; erosion control; shade, moisture retention, and protection for seed and native vegetation; reconstruction of habitat; and blending or "naturalizing" the route to mimic the surrounding forest floor.

Step #5: Following decompaction and application of slash, either the contractor/operator or one of the Forest Service project coordinators (the C.O.R. or D.I.) applied a terrain-specific mix of native seed to the project route. One mix (Seed Mix A) was applied in dry & warm or relatively dry & cool sites in low-mid elevation areas. Another mix (Seed Mix B) was used for moist & cooler-cold sites in mid-high elevation areas. A third mix (Seed Mix C) was designated for dry & warm sites in lower elevation areas. On certain projects (those with exceptionally degraded, eroded, or rocky slopes) a fertilizer was also applied with the seed. Finally, certified weed free vegetative mulch (identified by blue & red candy-striped baling twine) was uniformly applied to all areas that received seed, with the exception of several stretches of trail in which the transportation of straw bales was prohibitively difficult or time-consuming due to distance. Along those stretches, care was taken to apply additional slash for moisture retention and protection of seed.

Step #6: At all major access points, the operator used the excavator to install boulders, slash, vegetative transplants, or a combination of all three to serve as a physical barricade and visual deterrent to future motorized use. Boulders were obtained either from local caches in the district or from a quarry in Missoula. For the most part, selected boulders were 2' x 3' x 3' or larger, and were installed no more than 45" apart (ATV width) and buried to a depth equaling 1/3 the height of the installed boulder. Typically, access points received heavier applications of slash to function as an additional barrier. Where available and likely to thrive, native shrubs (usually alder) in the immediate vicinity of the project site were transplanted into the route near the access points to serve primarily as a visual deterrent.

Step #7: After the barricades were installed at the access points, either the contractor/operator or one of the Forest Service project coordinators (the C.O.R. or D.I.) installed a wooden or metal signpost and informational sign approximately 5-10' behind each barricade. The signs indicate to users that the route is closed for restoration, and include contact information for the Superior Ranger District station.

Step #8: Throughout the implementation of each restoration project, either the C.O.R. or D.I. periodically monitored and inspected the work of the contractors/operators to ensure that the contractors' work satisfactorily met the minimum requirements of the project as specified in the work order. In many cases, the D.I. was present at the job site for the entire duration of the project, observing the work as it was completed, and providing direction and assistance as necessary (manually applying additional slash, applying seed & mulch, installing signs, etc.). Upon completion of the projects, final inspections were conducted, and the C.O.R. or D.I. followed up with periodic visits to the project sites (in large part to investigate for any signs of human disturbance or damage to the completed projects). Regular, ongoing monitoring of the project sites will be necessary, as will be discussed in the following section.



*Boulder Barricade and Mulch (Sunrise Mt.)*

### *Comments & Recommendations for Future Restoration Work*

The following comments and recommendations are intended to identify positive aspects of the restoration work completed in the 2010 summer season, as well as indicate potential areas for improving the efficiency and quality of future restoration projects in the Superior Ranger District.

Contracts & Contractors: In all major respects, the contracts drawn up for the projects adequately provided for the services required to achieve our restoration goals. Several minor recommendations might be considered by way of further refining the contracts:

1) Minimum boulder size increased.

The IDIQ contracts specified that boulders installed as barricades shall be at least 10 cubic feet in size. When the first load of boulders ordered by the contractors arrived at the staging area for the **Deer Creek** project, many of the rocks met this minimum size requirement; a few did not. Many of the boulders delivered were approximately 2' x 2' x 3' in size. Upon inspection, it became questionable whether a boulder of this size could serve as an effective barrier to off-highway vehicles, especially after buried to a depth of

1/3 its size. Even when properly installed, boulders of this size would seem to be fairly easy to remove with the aid of a rock bar or winch (tactics that have been employed by OHV users in the past). With these concerns in mind, it may be beneficial to increase the minimum boulder size specified in the contract to 3' x 3' x 3' or larger, provided boulders of size may be readily obtained. (A number of larger boulders were subsequently delivered and installed at the Deer Creek restoration project).

2) General slashing guidelines described, including the potential need for manual application of slash.

In general, the private contractors hired to conduct the restoration work applied adequate quantities of slash to the routes being obliterated. However, in a few cases, relatively lengthy stretches of trail received little to no slash. In some areas, thin applications may be acceptable, either because little dead/downed material is available, or because a heavy application simply is not necessary for successful restoration. However, at some project sites (at **Packer Creek Ford** and **Copper Ridge**, in particular), it appears as though the contractors neglected to apply slash in places where native material was in fact available near the project site, but not easily maneuverable by the heavy equipment. It may be beneficial to specify in the contract that some degree of manual slash application may be necessary in areas where the excavators cannot efficiently or effectively perform the required task.

Project Site Scouting and Preparation: Time set aside for pre-work scouting and assessment of the project sites by the C.O.R. and D.I. proved to be extremely valuable in the formulation of work plans and the identification of site-specific complications. All manner of issues were covered during these visits, from water bar placement to slash densities to barricade strategies. This detailed analysis enabled the Forest Service personnel involved to develop a clear understanding of the goals and challenges of each project before the contractors arrived to begin work.

One additional item ought to be included in this pre-work site preparation: the placement of mulching material along the portions of the routes slated for seeding prior to decompaction. This may be accomplished either with the assistance of the contractor/operator(s), or by Forest Service restoration personnel in the days prior to beginning formal work on the project. This strategy was employed by the Restoration Assistant/Designated Inspector during the implementation of the last two projects (**Chimney Rock** and **Sunrise Mt.**), and was found to be effective in reducing the total amount of hours spent on the project and preserving the quality of decompaction along the restoration routes. After a trail has been scarified and slashed, it can be time-consuming to transport mulching materials over or around the route. Often, the route is subjected to a certain degree of re-compaction due to the heavy foot traffic required to move bales around the project site. Strategic placement of bales before commencement of scarification, slashing, and seeding reduces these impacts.

Vegetative Transplants: Transplantation of trees and shrubs into the project route may in fact provide an effective visual and/or physical barrier to further motorized use of

restored trails. However, vegetative transplants performed by the private contractors this summer in most if not all cases resulted in the non-viability of the transplanted tree or shrub, either due to improper technique, inappropriate specimen selection, or poor transplant conditions. While the dead transplants may continue to serve as a visual deterrent, further study or training in proper transplantation technique may be beneficial if this restoration strategy is to be continued.



*Alders that failed to survive transplantation (Hemlock Mt.)*

The Need for Regular, Ongoing Monitoring: Above all, consideration ought be given to the view that the process of restoration only *begins* with the kind of physical and mechanical work accomplished this summer. In actuality, it will be some time before the results of our recent efforts can be evaluated. The relative success or failure of these projects depends on a variety of long-term outcomes, including the recovery of degraded soils, the continued exclusion of noxious weeds, the reestablishment of native vegetation, the health and stability of fish and wildlife populations, and other conditions. These desired outcomes are not guaranteed by initial herbicide applications, installation of barricades, etc.

Given the popularity of these areas for motorized use, it is fair to assume that the project sites remain vulnerable to future degradation and damage by users. Some evidence of this vulnerability already exists. For example, a new informational sign installed at the

**Deer Creek** restoration site was stolen by users several weeks after the project was completed. In another instance of illegal activity, motorized users removed a boulder installed as a barricade in order to gain access to the **Copper Ridge** restoration site. Slash was removed from the restored route, informational signs were stolen, and the signposts were damaged. At the SW access point of the site, vegetation along the route was damaged and soil was re-compacted by users driving their ATVs around the boulder barricade.



*Users removed a boulder (far right) and informational sign to gain motorized access to the restored route (Copper Ridge)*

Regular, ongoing monitoring of the restoration project sites will thus be necessary, not only to ensure that the sites are not being vandalized by users, but also to observe any positive or negative “natural” developments in the restoration process (e.g., the reoccurrence of noxious weeds, drainage/erosion problems, etc.). Possible corrective actions may then be implemented to facilitate the emergence of desired outcomes. Following the principles of adaptive management, regular monitoring also affords the personnel involved the opportunity to experiment with a variety of restoration practices and methods, and identify those methods that are most effective at achieving desired outcomes.

### Future Sites for Restoration:

Any number of unauthorized OHV trails throughout the district may be considered candidates for future restoration projects. Four such areas are discussed below, identified by access road number and dominant geographical feature:

**1) 7783/7789 (Lower Meadow Creek):** This unauthorized, double-track OHV trail begins on private property adjacent to Meadow Creek on 7783 (unrestricted gravel road), crosses into Forest Service land, and intersects with 7789 (unrestricted gravel road). The steep grade and vertical directionality of the route contributes to substantial soil degradation, erosion, and loss of vegetation. Noxious weeds (especially hawkweed) can be found along the route. 7789 can be readily and legally accessed from 7783, such that the unauthorized route may be considered a particularly unnecessary contributor to resource damage. Landowner education/cooperation may be a valuable component to the success of this project. This route has been GPSd.

**2) 7798 (Chimney-Van Ness):** A number of unauthorized, double- and single-track OHV trails can be found along 7798 (unrestricted road) between Chimney Rock and Van Ness Point. In all likelihood, users created these routes to gain access to a network of restricted Forest Service roads crisscrossing the high country in this area, including 18576 and 18580 (A closures). The extent of the resource damage has not yet been assessed, but resource concerns include soil and vegetation loss, water quality, wildlife disturbance, erosion, and noxious weed colonization. Elk security may also be a primary concern here. GPS waypoints have been taken at some access points, but the routes have not been GPSd in their entirety.

**3) 706 (Big Creek):** This unauthorized, double-track OHV trail can be accessed via 706 (unrestricted dirt road). The ~1/3 mi. trail climbs steeply to intersect with 3822 (A-closure), allowing motorized users access to a large network of restricted Forest Service roads in the **Gilt Edge Crk.**, **Storm Crk.**, and **Big Crk.** areas. Resource concerns include soil and vegetation loss, water quality, wildlife disturbance, erosion, and noxious weed colonization. Elk security may also be a primary concern here. 706 crosses private property at several points, so landowner education/cooperation may be a valuable component to the success of this project. This route has been GPSd.

**4) 236/269 (Crystal Lake):** 269 is a restricted foot trail (A closure) running from 236 to Crystal Lake to the state line. At the trailhead (junction of 236/269), users have widened the access point, and a double-track OHV route now exists. The extent of the resource damage has not yet been assessed, but resource concerns include soil and vegetation loss, water quality, wildlife disturbance, erosion, and noxious weed colonization. Elk security may also be a primary concern here. Evidence of OHV use at the trailhead has been photo-documented, but the route has not been GPSd.





*Users have developed an unauthorized OHV trail on 269 (Crystal Lake)*

## FRONT/BACKCOUNTRY CHALLENGES & PRIORITIES

### *Recreation & Resource Management Challenges*

The Superior Ranger District contains an abundance of natural resources and numerous opportunities for public use. Partly as a consequence of this natural wealth, the district also faces a variety of challenges related to public use and natural resources management.

Many of these challenges revolve around motorized recreation, or motorized recreation in combination with other uses, such as hunting. The Forest Service recognizes motorized recreation as a legitimate use of public lands. As with other legitimate public uses, the Forest Service is mandated to manage its lands for this use. This means providing opportunities for OHV recreation while guarding against the degradation of natural resources, and preserving opportunities for other forms of recreation and human use. These twin obligations—protecting resources and balancing multiple uses—represent the primary management challenges for the frontcountry-backcountry interface.

Based on monitoring data and field observation conducted by the seasonal Front/Backcountry Ranger during the 2010 summer season, it is reasonable to assert that the majority of OHV users in this district abide by Forest Service regulations, and follow riding practices that minimize the negative impacts of motorized use (i.e. riding only on open, public routes, refraining from off-road travel, refraining from littering, etc.). However, some OHV users do not follow these regulations and practices, and the impacts of their activity can be significant.

As previously indicated, negative impacts of OHV use on natural resources may include: soil degradation and mineral nutrient loss, erosion, colonization of noxious weeds, damage to native vegetation, sedimentation and degradation of water quality, damage to stream banks, disturbance to wildlife, loss of terrestrial and aquatic habitat, air pollution, noise pollution, and other impacts.

In addition to these impacts, motorized recreation may also, in certain places, preclude or degrade the quality of other forms recreation or public use. For example, streams impacted by heavy OHV traffic may exhibit degradation or loss of trout habitat, reducing opportunities for fishing. Areas of motorized use supporting elk populations may exhibit degradation of secure bedding and calving areas, or a disruption of preferred feeding and migration routes; such impacts may negatively affect hunting opportunities in the district. One final example: many non-motorized users visit the district to experience the solitude and quiet of backcountry areas. Noise generated by off-highway vehicles in these areas may degrade the quality of these experiences.

### *Current Management Strategies*

The Recreation Planner for the Superior Ranger District, Allen Byrd, has adopted a multi-pronged management strategy to provide ample opportunities for motorized

recreation while mitigating the negative impacts of OHV traffic on natural resources and non-motorized human uses.

One primary component of this strategy involves identifying areas where motorized use may have the least impact on natural resources. Typically, these are forested front-country areas with an existing network of maintained Forest Service roads. In most cases, these roads do not pass through streams or sensitive wildlife habitats. Examples of such areas in the Superior Ranger District include the **Packer Loop** and **Randolph Warming Hut-BPA Powerline** roads. Working in cooperation with local ATV clubs, OHV recreation is encouraged on these roads. Popular unauthorized, user-created trails may also be converted to legitimate OHV roads if these routes can be shown to pose relatively low risk to natural resources.

A second major component of this management strategy is to identify areas in which motorized recreation has significantly degraded natural resources and/or negatively impacted other human uses. Unauthorized, user-created OHV trails in these areas may then be considered candidates for obliteration, restoration, and closure to future motorized use. Examples of these areas include the completed and recommended restoration project sites discussed in detail in the previous section of this report, such as the **Deer Crk.** restoration site and the **Crystal Lake** trail (269).

### *Management Priorities*

The implementation of this management plan remains in its early stages. At this time, in order to better facilitate desired outcomes, priority must be given to supporting certain critical aspects of the strategy. Recommended areas of priority include the following:

- **Identification and legitimization of additional routes for managed OHV recreation.** Given the popularity of motorized recreation in the district, the authorization of appropriate, minimal impact routes for legal OHV travel may help to secure a greater level of cooperation and assistance from the motorized recreation community in implementing the management strategy.
- **Preservation and restoration of backcountry areas closed to motorized use.** Non-motorized recreation, including day-hiking and backpacking, is becoming increasingly common in the district. As this trend continues, popular destinations such as Heart Lake may exhibit greater levels of user impact and degradation. The preservation or restoration of alternative backcountry trails and destinations, such as **Crystal Lake** or the **Oregon Lakes**, may play an important role in mitigating these impacts by presenting other opportunities and locations for non-motorized recreation. The maintenance of viable, non-motorized backcountry areas will require vigilant monitoring to ensure that these areas remain closed to OHV traffic.
- **User education and cooperation.** Given the size of the district and limited enforcement capabilities of Forest Service personnel, user education and cooperation

are critical to the success of the current motorized recreation management program. Additional attention and resources ought to be allocated in support of these aims.

- **Regular, ongoing monitoring of restoration project sites.** The need for regular monitoring of completed restoration projects was addressed in some detail in the previous section of this report. Ongoing observation is necessary in order to accurately assess whether or not the desired outcomes of the projects are being achieved. User-response to restoration work and shifts in use trends may be especially important to monitor in areas that receive high levels of “mixed use,” such as the **Copper Gulch/St. Regis Basin** area.
- **Routine Monitoring & Patrol.** Successful implementation of the recreation management strategies described above will require a more visible Forest Service “presence” throughout the district. To that end, a greater allocation of resources ought to be dedicated to district-wide monitoring and patrols, especially on weekends. Patrolling serves a variety of purposes, including user education, enforcement of regulations, and the gathering of data pertinent to a host of management concerns. Currently, the highest levels of public use occur during times when the fewest Forest Service personnel are out in the field: on weekends. More routine weekend patrols will especially contribute to user-awareness of the Forest Service, and the building of rapport with both local and out-of-state users. While user “hotspots” may dictate the primary patrol routes, less frequented areas of the district should be patrolled at least once or twice every summer to observe any shifts in use trends, such as the development of user-created OHV trails in restricted areas.

## CONCLUDING REMARKS

By way of conclusion, the author of this report would like to express his respect and appreciation for the fine work done by all of the Forest Service personnel at the Superior Ranger District, Superior, MT. In particular, I would like to thank Sharon Sweeney (District Ranger) and Carole Johnson (Recreation Specialist) for the support they provided to my work this past summer. Finally, special thanks to Allen Byrd (Recreation Planner) for his strong guidance and encouragement, and for giving me the opportunity to work in one of our finest national forests.