Crucial to living in harmony with the natural world is the idea of reciprocity, of giving back to the Earth for all that it has provided. Reciprocity is integral to the rituals and customs of all native peoples, but it runs directly counter to notions of private ownership of the land and natural resources. In the highly urbanized contexts in which most of us live, how is it possible to give back? How can this gesture become part of our own healing? In his highly creative program, ecopsychology educator and consultant Elan Shapiro integrates the much-needed work of habitat restoration with group meetings that encompass ritual, psychological insight, and community building. The result is a full and lasting connection to the land being restored.

Environmental restoration work can spontaneously engender deep and lasting changes in people, including a sense of dignity and belonging, a tolerance for diversity, and a sustainable ecological sensibility. This art and science of helping the web of life in a particular place heal and renew itself can serve as a mirror and an impetus for individual and community renewal. Because of this inherent power, environmental restoration has become one of the key activities through which I practice ecopsychology.

The emerging field of ecopsychology explores the basic shifts in our patterns of identity and relationship that occur when we include our connection to the web of life around us as essential to human well-being. When I work with people—whether through outdoor activities such as gathering edible plants or as an institutional recycling consultant—I help them mend their ties to the other species and cultures that share the web with them, particularly in the place they call home. At the same...
time, I interweave this practice with the psychospiritual work of reclaiming the disowned parts of their inner world. Each process requires and enhances the other.

**Restoration and Spontaneous Personal Change**

A number of forces operate to link individual human and community healing with the process of habitat restoration. People experience deep pleasure and release from sweating together—feeling the elements of soil and water, rock and plant, while doing a common task with a visible positive outcome. The usually suppressed vision of living as part of an earthy, purposeful community becomes intensely tangible. Many people who usually work in isolation form spontaneous little teams. Activists who generally relate to "the environment" with tension and worry become giddy and exhilarated and invent songs to accompany the process. During site visits spread over the course of a year or two, the songs and the teamwork and the giddiness continue, but with an extra measure of dignity, confidence, and groundedness, as participants begin to notice signs of healing in the habitat they are restoring. How rare an experience of wholeness and accomplishment for those of us in the automated, "developed" world!

When doing restoration, people become involved with a place in a very active and embodied manner. As a result, they often "fall in love" with it with an intensity I have seen matched only on extended wilderness journeys. By thinking through and taking the steps that will help remove the destructive influences, stabilize the system, and support the forces of regeneration already present, they become imprinted by and identified with the place's different species and elements, and by their web of relationships.

Since the tasks involved in restoration work engage both mind and body in understanding and, to some extent, in mimicking the complex patterns of relationship in a healthy and diverse community, people naturally absorb the vitality and wisdom inherent in a place. We often start out with a single focus—an endangered species or a trashed creek—but may soon find ourselves inextricably linked to the trees and the loggers upslope, the chemical company and the air quality in the valley, or the families down the street. In attempting to help an ecosystem, we learn to think like that system and to reclaim our own biological wisdom.

Wilderness journeys, nature walks, and adventure sports, when sensitively undertaken, can catalyze an intense bonding with the Earth as a nurturing parent. Although this bonding serves as a powerful source of healing and transformation, participants are often left with a deep sense of powerlessness and depression upon returning to "normal" life. Adopting the bold stance involved in restoration work can catalyze a different kind of transformation. By becoming active partners in regenerating the health of their localities—and, in a less dramatic way, of the Earth as a whole—people start to reverse the soul-numbing patterns of exploiting and abusing the source of so many life-sustaining gifts. They also begin to release the often-repressed, but nonetheless crippling, emotions—guilt and shame, grief and despair, loneliness and powerlessness—associated with going along with the relentless machinery of corporate consumer culture.

Once we have bonded with the Earth, we cannot escape growing up and learning to treat this primal parent as partner, friend, and ally as well. Restoration work involves people as partners in a mature, collaborative relationship with the natural world. In such a relationship we naturally ask, "How can I give back as well as receive?" and, if we have been insensitive and hurtful, "How can I make amends?" In this process of cleaning up our mess with our first parent, with the very foundations of our existence, we set in motion a pattern of reciprocity, of sacred exchange. This pattern can reverberate through the ways we treat other humans and other cultures and the way we treat ourselves, promoting a "partnership way" of life.

**Restoration and Cultural Transformation**

Not only individuals change—cultures can change as well. The Mattole River valley of Northern California, once a beautifully forested region, was stripped of 90 percent of its old-growth trees in forty years. The near extinction of the salmon in the river led a group of concerned people to

attempt to bring back its habitat. After learning how to catch some of the remaining salmon, extract eggs and sperm, release them, and hatch thousands of native fingerlings to restock the river, they discovered that this wasn't enough. The clear-cut and overgrazed slopes upstream were sliding into the river and filling the salmon's gravelly spawning areas with silt. To restore the salmon runs meant to restore the watershed—the whole area that drained into the river.

To restore the watershed, they first had to know it, not as a series of properties and abstract political boundaries, but as a living organism with its own integrity, however wounded. Teams were trained to walk the land and to survey and map its many patterns, including salmon habitat, old-growth distribution, and logging history. Doing this work required cultivating community consensus on goals and priorities. Years were spent building a working alliance of back-to-the-land bioregionalists, loggers, cattle ranchers, fishing people, and many other groups with widely varying agendas. As the alliance and its efforts have become more successful, community members have acted as consultants for other watershed alliances, developed a watershed-based school curriculum, and taken local players on the road to share their saga via a musical comedy. The challenges of coming to realize the boundaries of home together—initiated by the mysterious pull of one endangered species—helped to spawn a culture of restoration whose impact keeps spreading through the global network.

**Restoration Work**

Working on a restoration project as an ecopsychology educator/consultant involves me with students, clients, and volunteer groups in many different contexts. I may be leading an afternoon program at a conference, helping a school or business develop a positive long-term relationship with its natural surroundings, or teaching in a graduate program. Whatever the context, I begin with experiential exercises that enhance and integrate each person's awareness of her inner worlds, of the group, and of the place. But, most important, I let the place and the task be the primary teachers.


I invite people to walk unhurriedly and unintrusively through the place and to sit or lie down attentively, sensing its flavors and its presence. In this way, they begin to encounter the area—its contours, treasures, wounds, and mysteries—in an immediate way. As Malcolm Margolin suggests, one of the best ways to learn about erosion is to get out on a slope during a heavy rain, lie down on your belly, and simply watch what happens. You then can experience firsthand the profound contrast between raindrops hitting blades of grass and sliding gently to the ground, versus hitting bare earth and sending it splattering.

While providing a biological, cultural, and historical overview of the site, I describe the potential dangers of human intervention. If we intervene in hasty and overly manipulative ways, rather than patiently attending to the needs and rhythms of a particular place, we often find that we have created more problems than we have solved. Even the most thoughtful restoration project can have unintended consequences. By acknowledging the shadow side of restoration work at the outset, I create a space in which people can reflect on parallels to other forms of change work, both personal and social, where speediness and intrusiveness can undermine the healing process.

To clarify the ecological context, I demonstrate how climate, vegetation, wildlife, water, soil, geologic formations, and human cultures and structures work together at the site. Once this framework is established, the situation itself often helps participants discover the web of connections. An elementary-school science project in Northern California offers a good example of this kind of contextual learning.


In attempting to restore the habitat of an endangered shrimp species, children eagerly planted willows to help stabilize the eroded banks of a creek. Along the way, they encountered a rancher who, while having little interest in the life cycle of freshwater shrimp, acknowledged that the willows might help quail—which he had loved to hunt—return to the area. As the project continued, however, the youthful enthusiasm of the students drew the rancher into involvement not only with the shrimp, but also with the health of the watershed. His involvement eventually ignited the interest of other ranchers, who are also beginning to

5. Laurette Rogers, Brookside School, San Anselmo, California, personal communication.
work with the students on this project, seeing that the health of their individual properties depends on the health of the whole system.

I often convey this kind of ecological context through dramatic storytelling, sometimes with the help of other naturalists, restorationists, and involved community members. As we learn about a place as an ever-changing entity with a long history of human involvement—some of it respectful and sustainable, some of it short-sighted and abusive—we feel more grounded, humble, and receptive about the task we face, able to go beyond the superficial impulse simply to “fix it” by doing a great deal of planting.

Taking the dramatic mode a step further, I may encourage participants to enact, with movement, gesture, and vocalization, the roles of the animals, plants, elements, and people present in the place. In an urban creek restoration project, for example, some thirty of us played at being the whole watershed, evolving over time from its earlier, wilder phase, through its current degraded condition, to its future self-sustaining state. Among the roles people chose to enact were: baby plants on a stripped slope struggling to take root; soil particles either protected under the seedlings or washing into the creek; raindrops trickling or rushing through plants and soil and converging into the muddied creek; and humans altering the place over time in various benign or destructive ways. Together, through this environmental-education game, we playfully began to embody the contours, relationships, and patterns of transformation in a natural watershed community.

Paralleling the more “objective” natural and cultural orientation just described, I work “subjectively,” facilitating the psychological changes that enable a more spacious and inclusive sense of self. Drawing upon Depth Psychology, particularly the Jungian tradition, I explore, for example, the mysterious process by which our many layers of interrelatedness actually enhance the work of individuation. I also have adapted Winnicott’s concept of the “holding environment” as a way of working with situations that encourage a primal bonding with the natural world.

My practice derives, as well, from traditions such as Gestalt therapy, sensory awareness, somatic psychology, martial arts, and Buddhist meditation. Aspects of each of these traditions invite people to focus moment on being as present as possible to both inner experience and the situation or “other” they are contacting. In this way, they attempt to reawaken our inherent wisdom and self-healing abilities.

Many of the concepts and methods I use come from Gestalt therapy, since its initial assumptions (if not its contemporary practices) are among the most ecological and relational in Western psychology. Gestalt puts great trust in the biological wisdom of our organism and assumes that the organism and its environment form an inseparable unity. According to this tradition, a healthy person makes good contact and has complete and satisfying interactions with whatever emerges in the foreground of his awareness, without shutting out the surrounding field. By implication, a healthy self requires a healthy environment in which to function.

Much of Gestalt work focuses on how we split off and polarize both inner parts and self and world. It sees this fragmentation as both a cause and a symptom of contemporary pathology. Gestalt practitioners may suggest behavioral and awareness experiments to clients that help them discover, through focusing on the way they make contact in the present, their patterns of blocking and fragmenting. These discoveries may be augmented by creative and somatically based methods that help clients reintegrate disowned parts of themselves and that renew their capacity for unitary functioning with their environment.

**Balance of Attention**

Perhaps the simplest and most basic experiential method I use involves drawing attention to breathing as a process of continuous rhythmic contact and exchange with trees, birds, and other people, since air is the nurturing ocean within which we all live. Whether walking, sitting, stretching, or weeding, we attend both to the quality of our breathing and inner sensing and to the unique presences in our surroundings. We also focus on the boundaries through which these worlds come into contact and on the quality of the connection and exchange that is occurring. In this way, we embrace the entire continuum of inner and outer experience.


In helping people experiment with this shifting balance of attention, I may suggest that we move back and forth between having open and closed eyes during a period of perhaps fifteen or twenty minutes. Many people discover an unforced kind of meditation in this way, as a natural sense of concentration and engagement gradually emerges. Experiences with balance of attention can also provoke some combination of a “close encounter” with another species or element, a fresh opening to previously unconscious feelings or images, and a sense of more fluid and permeable boundaries through which a different quality of contact can occur.

The inclusive quality of perception encouraged by balance of attention can increase our tolerance for diversity, both within and outside ourselves. Certain aspects of restoration projects—such as removing large clusters of exotic plants that crowd out native species and reduce wildlife diversity—favor this process. In the San Francisco Bay Area, for example, we are often faced with weeding entire slopes covered with an invasive shrub, Scotch broom. Either at the outset of this kind of work, or partway through it, I have people hold one tall broom plant and breathe and sense and move with it. This offers them an opportunity to experience and honor the plant’s uniqueness and beauty, as well as their relationship with it, before uprooting it. For people who have prior experience in habitat restoration, this experiment may be either unsettling or refreshing. They generally have become accustomed to viewing broom plants in only one way—as the enemy, the immigrant dominators of the gender, more noble native plants.

Later, in the context of a process group, as I reflect on this experiment with the participants, some may uncover the roots of their need to categorize and distance from the other. For example, during an ongoing project, one person found himself grappling with his growing discomfort in feeling righteous and pure about his environmentalism. Another recognized how easy it is to hate and distance herself from the part of her that eats uncontrollably. Gradually, as we worked with the feelings and insights that were surfacing, we came to understand ecological awareness as more than just facts about ecosystems, but also as an inclusive sensibility, an embracing of both the diversity around us and the many selves within us, even if they are not all as noble and beautiful as we would like them to be. We all continued to pull out the broom plants with gusto when we returned to the slope, but with a balance of attention that increased our empathy and our sensitivity to the experience of taking their lives. In doing so, we were ever so gradually uprooting the mental patterns of polarizing and putting down that keep us split off from the deeper currents of restoration.

Metaphor and Mirroring

The metaphors that the restoration process suggests often resonate deeply with participants’ self-healing work. They can also bring up unexpected issues, for example, death and transformation. The concrete task of the situation, together with skillful facilitation, can also provide the medium for working through these issues. Julia, a participant in one of my projects on an Oakland college campus, hated cutting down the acacia and eucalyptus saplings that choked out native plant and animal diversity in a trashed and neglected ravine. Her feelings began to shift when we read aloud, from a book about native peoples’ lives in this area, descriptions of the varied vegetation and abundant wildlife that once shared this place with a more sustainable human culture. We also took the time to create a brief ritual honoring Julia’s identification and empathy with the life of these young, robust creatures. What helped her most of all was being in charge of one of the next phases of the project: using the cut saplings to make steps along a trail in a particularly steep area of the ravine. She proudly returned to finish the trail and committed herself to maintaining it.

Reflecting with me later, Julia said that uprooting the saplings enabled her to experience her fear of loss and death more fully. Being creatively involved in recycling these problematic parts of the ravine then helped her to trust more in the natural flow of her own life. The trail became a living symbol of a relatively nonintrusive way of navigating life’s unpredictable qualities. It also became a pathway to a lively partnership between her more culture-bound and her wilder parts.

Both cultural and personal issues can be brought up by the metaphorical aspects of working with native and immigrant species. Ramona, a participant in a project built into a weeklong conference, initially expressed misgivings about the value of pulling out a huge patch of Scotch broom. She suspected that the process merely served a privileged conservationist preoccupation with pristine environments. I didn’t dispute the validity of her concerns. But as we talked it became clear, in addition, that her own repetitive experiences of rejection and abuse, as a woman,
a lesbian, and a Chicana, had left her without much of a sense of hope, empowerment, or, for that matter, excitement about wiping out "problem" immigrants.

Once she became involved, however, Ramona acknowledged the strange pleasure she took in exterminating these rugged creatures, pulling them up by their deep roots. She also began discovering little native plants, often bent over or spindly, but still alive, under the slowly retreating horde of broom: live oak, tan oak, toyon, wild strawberry, honeysuckle, milkmaids. In less than an hour, we discovered twelve native species, some of them even flowering, basking in the light after their sudden release from the shroud of weeds.

Now glowing with excitement, Ramona asked me how long it would take before the hillside would be filled with this glorious diversity. I told her it could take years of follow-up weeding, seed gathering, and planting to ensure that the gentle, bent-over plants she had revealed would be strong enough to resist the persistent broom culture and evolve into a thriving community. Undaunted, she returned to the site with some of her teammates several times to clear more space and find even more varieties of rugged survivors.

Months later, Ramona wrote to tell me that working with those few hundred square feet of earth had given her the inspiration and courage to deal much more proactively with the sense of isolation caused by differences of race and sexual preference at her workplace. It had rekindled her vision of the very real, yet smothered, possibility of living in a rich, diverse, natural community.

A skilled facilitator can increase metaphorical learning through weaving relevant scientific information into stories. This method can be used, for example, when rehabilitating slopes stripped down by heavy logging or overgrazing. We usually need to put temporary physical barriers (such as brush mats) in place, in addition to planting appropriate vegetation, to prevent topsoil from eroding during heavy rains. If I can't find a rainstorm in which to immerse people (as in Malcolm Margolin's example), I might tell them about engineering studies showing that doubling the speed of water flow exponentially increases its erosional impact on topsoil. Raindrops that hit blades of grass first are dramatically slowed by the time they reach the earth. As we come back over time to monitor the project, we can sense how both the spreading roots and the canopy of leaves have begun to protect the thin film of soil that supports the life community on our slope. Eventually, the slope no longer requires the temporary barriers.

Processes such as these can naturally mirror the contemporary experience of being bombarded with the relentless overload of information, technology, and pollution, or of the repeated abuses suffered by victims of oppression. In order to have a respite from the destructive influences of society, we find we have to put short-term support systems in place to stabilize our situation. Staying isolated in our pain perpetuates the downhill slide. Gradually, though, for our soul's deep mending to occur, we need the more complex healing process like that of the diverse plant community, with its spreading roots and shoots. A healthy watershed needs a multistoried plant community to help it gently absorb heavy rains, so that the waters can be a source of vitality rather than ruin. So, too, our souls cry out for a rich inner life and for a grounded, diverse community to slow up the bruising pace of our lives, to create a holding environment in which we can turn our trials into sources of strength and integration.

Cultivating the Connected Self
Whenever I introduce a conscious psychospiritual dimension to restoration work, I acquaint people, implicitly or explicitly, with the ecopsychological concept of an "ecological" or "connected" self. Such a self expands beyond our human-centered conditioning and sense of being split off and separate, in order to engage intimately with other species, cultures, and people, as well as with places. To live in a relational way requires a gradual opening to broader, more permeable boundaries. The boundaries need to be clear enough that we can hold our own as creative, responsible partners, yet pliable enough that we can bond and identify not only with our immediate family and ethnic heritage, but also with the whole spectrum of beings around us. In my work, I attempt to facilitate this transition from the isolated individualistic self that our culture reinforces to one whose boundaries are fluid enough to allow for both creative individuation and intimate connection. As many people's experience will attest, this fluidity actually enhances, rather than diminishes, an individual's sense of her particularity and unique gifts.

Just as monocropping in agriculture destroys the rich diversity that healthy communities need, so does the splitting off of people by race and
class. Any work dealing with the shift from a fragmented to a more inclusive self needs to focus on the complex interrelationship between our crippling isolation from nature and from the different parts of the human community. Restoration offers a potent opportunity to join the issues of biological and cultural diversity with the work of creating a safe holding environment for our own abused and exploited parts. On a field trip with my students in a holistically oriented graduate program, we helped restore an eroded watershed burned in the 1991 Oakland firestorm. The East Bay Conservation Corps, a major force in local restoration work, has helped to implement this project to train young people, mostly inner-city African Americans and Hispanics, in restoration and leadership skills. Each of the trainees worked closely with a small group of my nearly all-white, relatively privileged students, for two hours, instructing and supervising them, sharing their skill in working with seedlings in a damaged watershed. The camaraderie and bonding that emerged were so strong that the two groups could hardly separate from each other when the corps members had to leave.

The rest of us then walked up the creek above the burned area to a spot in a small valley that felt relatively undisturbed and also very round and embracing. We sat quietly, listening to the creek and the birds, reflecting on both our immediate experience and the ideas we had discussed in an earlier class. We noticed how rooted we felt here after working with trees and how our sense of self felt wider and more porous, our boundaries more fluid. We had just, without even noticing, eased through layers of agonizing racial and class isolation. I drew people’s attention to the softer boundaries of this watershed as well, with its creek crossing through both Oakland and Berkeley and flowing through wealthy highlands and poverty-stricken flatlands alike. We also noticed how the holding environment created by this safe, round little basin nurtured us, enabling us to open ourselves to the feelings of fragility aroused by planting tender seedlings in this fire-swept place.

Pitfalls and Promises

Those who would like to integrate restoration into their psychological or educational work—perhaps by prescribing it for themselves or their clients or by using it to ground an elementary-school science curriculum—need to be aware of certain pitfalls and limitations within the

Environmental restoration is all too often the outcome of agreements made between developers and government agencies to rehabilitate an isolated and degraded habitat while they proceed to destroy a mature, existing one. Just as focusing solely on specific stress-related symptoms doesn’t heal the fragmentation of our psychic life, creating a patchwork of little restoration sites fails to deal with the fragmentation of habitats. Without spacious and interconnected habitats, wildlife extinction accelerates.

Environmental restoration, inspiring as it is for occasional volunteers, can be exhausting and low-paying work for those who labor regularly in this field. Ensuring people’s and institutions’ ongoing commitment to this slow, long-term process is not easy in a rootless society. The profound psychological and cultural issues this work brings up are rarely explored in the course of most projects. Finally, some projects, reflecting our deep-seated conditioning to control and to go for the quick fix, undermine the inherently regenerative powers of the places they are supposed to be helping.

These concerns are serious enough. We could also ask whether a few thousand restoration projects around the globe can make much of a difference in the face of the loss or paving over of tens of billions of tons of topsoil every year. In fact, however, environmental restoration, though only a small part of the movement to create a just and sustainable world, provides both a positive vision of a healthier world for all and a felt experience of working together with the immense regenerative powers of the natural world. Restoration can also generate meaningful work, as well as personal and community renewal, in areas suffering from unemployment and social breakdown. And an idea or movement whose time has come can shift rapidly from the edges of society’s attention to a position of much greater impact.

The Psychology of Sustainability

There are broader ways to think of environmental restoration that are equally relevant to a contemporary understanding of psychological health. In the sustainable-agriculture movement, including commu-
nity and backyard organic gardening, people turn monoculturally exploited farmland or trashed city lots back into complex plant communities, involving humans and places in cycles of mutual long-term benefit. This helps people experience, at the primal level of feeding, that meeting our basic needs can be done in caring rather than depleting ways. Psychologist Cathy Sneed’s Garden Project, for example, has helped hardened criminals from the San Bruno, California, jails find a sense of dignity and worth as nurturers of life who can come back to their inner-city communities with vital survival and entrepreneurial skills.8

In fact, any activity that helps realign our lives from more exploitative to more collaborative ways of interacting with our world can be seen as restorative of our “environment,” both inner and outer. Walking or bicycling instead of driving gets us sensuously circulating in the world while it also eases the burden on the atmosphere needed by owls, oaks, and people alike. Teaming up with neighbors to stop toxic emissions in our neighborhoods builds a sense of belonging and community while protecting soil, water, and air. Reusing or recycling scrap materials in our homes and workplaces helps bring a sense of coherence and wholeness to our fragmented and wasteful ways of being, while slowing the pace at which we deplete Earth’s treasures. Educational work that encourages children to hold snakes and hug trees, and community-healing work that helps people embrace their common struggles while honoring their differences, are equally significant restoration activities that also cultivate the connected self.

Each time we settle into our breathing, feeling our biological presence, sensing the changes in the weather and the wildflowers, we experience in our bones the immense creativity of the web of life.

Each time we embrace our fragments and our integrity, letting our boundaries soften, we are helping to reweave the tattered fabric of our souls.

Each time we open to the quality of our present connection, we become bridges between cultures and between species, between a root-


9. I wish to thank my editor and collaborator, Lisa Orlando, for her invaluable contribution to the development of this piece. If not for her reluctance, I would list her as co-author. I am also indebted to my colleagues Robin Freeman, Ed Grumbine, Stephanie Kaza, and John Thelen-Steele, whose frank and detailed feedback midway through the writing process made it a truly collaborative effort.