POLICY PERSPECTIVE

Ecological restoration and enabling behavior: a new metaphorical lens?

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Abstract

Ecological restoration practices are changing rapidly, dramatically, and in complex ways, with higher and higher stakes both for the restoration industries themselves and for the future of biodiversity and ecosystem services. Even as ecosystem degradation has accelerated, restoration has grown into a transnational, multibillion dollar industry. These changes create an imperative for correspondingly rapid and dramatic changes in the metaphoric lenses through which we view restoration projects. In this Policy Perspectives paper, we explore a metaphor that views ecological restoration through the lens of co-dependency theories about enabling behaviors in the lives of addicts. The metaphor raises questions about the nature of the relation between restoration practices and an industrial growth economy "addicted" to cheap fuel and consumer goods. It suggests some policy changes that might prevent development of co-dependencies between restoration industries and ecologically destructive practices.

The importance of metaphor in understanding restoration

In a time of accelerating environmental degradation and climate destabilization, the work of ecological restoration has taken on surpassing importance for conservation. Given the importance of ecological restoration, it is equally important that the work be clearly perceived. That necessity calls for creative dialogue about the metaphors through which we understand restoration practices.

Metaphors are a means by which we humans use what we know about one thing to gain understanding of another, putatively similar thing. Because they bring one set of facts into the context of another complex cultural meaning, metaphors shape our perceptions of reality; they "broker, what is made visible or invisible" (Larson 2011). They are lenses through which we see (Lakoff & Johnson 2003). In addition, just as metaphoric lenses shape human experience, they are shaped by human experience in a bi-directional process. Thus, the past experiences and perceptions of different individuals and groups can influence the interpretation of metaphors.

The metaphors that are currently used in reference to ecological restoration are commonly the languages of healing and repairing (Keulartz 2007). For example, when we speak of *prescription* burning or other *treatments* to *heal* a *world of wounds*, we are invited to see restoration in the social/moral context of the medical profession. The language of repairing—retaining all the *cogs and wheels* in order to *fix* a stream or *repair* a stream bank or *re-engineer* a wetland into *working condition*—views restoration as the work of a skilled mechanic. In each of these cases, the lens shapes our understanding of restoration by placing it in the context of familiar activities that are generally skillful, successful, small-scale, benevolent, and beneficent, carrying positive (sometimes positively cozy) associations with the kindly family doctor and the garage mechanic.

Metaphors evolve as perceptions and practices change. When a metaphor no longer "fits" the perceived circumstances, its usefulness breaks down, to be supplemented or replaced by others. Metaphoric lenses shape

what we see, but when these lenses present us a picture that does not match what we experience in other ways, we stumble—and then should begin looking for new lenses. So the fundamental question for any metaphor is whether the perception urged by the metaphor matches a cultural reality; in the language of logic, a metaphor is strong or weak depending on whether the claimed similarity between the two worlds is robust enough to support the inference. It follows that when a cultural reality or the human perception of it changes, the metaphors used to view it must change as well.

The recent past has seen dramatic changes in the scale and character of ecological restoration. Significant restoration continues to be accomplished on a small-scale by local people, often volunteers—a practice that Eric Higgs distinguishes as "focal restoration" (Higgs 2003). At the same time, what he calls "technological restoration" has taken a different path, growing into a global multibillion dollar industry. River restoration expenditures in the United States alone, for example, exceed $1 billion a year (Bernhardt *et al*. 2005). Moreover, degradation and restoration have become entangled in complex ways. Although it continues to be true that many projects restore areas degraded in the long past, increasingly industries are granted the right to damage an ecosystem, on the condition that the system is restored. Around the world, the funding of restoration practices is related in complex ways to laws and agencies that control permits for destructive practices, including policies under which habitats and habitat restoration become commodities that serve the interests of a global exchange market (Light & Higgs 1996; Lavendel 2002; Palmer & Filoso 2009).

The great financial investments in restoration have uncertain results. Only 10% of river restoration projects in the United States performed assessment (Bernhardt *et al*. 2005). For those projects that do assess, restoration effectiveness is questionable; a recent review of 78 stream restoration projects found that only two had the desired significant increase in invertebrate diversity (Palmer *et al*. 2010). A meta-analysis of restoration activities across the globe found that restored sites generally had higher biodiversity and ecosystem services than degraded sites, but these values in restored sites were approximately half those of intact reference ecosystems (Rey Benayas *et al*. 2009).

In this changing and far more diversified context, the usual metaphors have a tendency to break down. A metaphor breaks down when the characteristics suggested by the metaphor do not accurately describe the practice. The practice will then be mischaracterized, or misunderstood as less complex than it really is, or less morally and pragmatically nuanced. And under these conditions, policies based on a given (mis)understanding risk being misguided, failing to heed the warnings or to take advantage of the opportunities a more apt metaphor might provide.

It follows that changes in restoration practices call for an abundance of new ideas about metaphorical frameworks that have the potential to shape a more current and complex understanding, making visible what might otherwise be difficult to see. To that end, we here examine the psychological concepts of co-dependency and enabling behaviors in the lives of addicts, asking whether they might be a useful lens through which to view restoration.

Co-dependency and enabling behaviors in the lives of addicts

The "co-dependency" concept became part of the toolkit for social workers, addiction counselors, and marriage/family counselors in the United States during the 1980s. Although not without considerable controversy (e.g., Gomberg 1989), the central idea is that drug addicts and alcoholics sometimes depend on the enabling behaviors of their family or friends, behaviors that allow addicts to continue in their dependency (American Psychological Association 2007). Enablers might deny the severity of the addiction, making excuses for the addicts and justifying or rationalizing their irresponsible behavior. Enablers may pay the addicts' bills or bail them out of jail. They may hide the damage that addicts do and avoid talking about the addiction as a problem, pretending instead that this is normal behavior. In these ways, enablers help addicts avoid doing the one thing that has the best chance of ending the harmful acts—confronting their underlying cause, the addiction itself.

The endless "rescuing" is destructive to the addicts who, shielded by enablers from the negative consequences of their acts, continue in a downward destructive spiral. It is also harmful to the enabling families and friends, as their emotional and financial resources are depleted. In some cases, a co-dependency arises, in which enablers develop a psychological interest in the addiction as the basis of their identity and reason for being. When an enabler's days and nights are filled with efforts to fix the damage the addict has done, when this becomes the purpose of the enabler's life, when all her other social contributions have fallen away, what role will she have in the world if the addiction ends? Just as surely as the addict, her personal identity becomes dependent on the on-going addiction.

A possible new metaphoric lens

If co-dependency theory were to be used as a metaphoric lens, what might we see when we view the industrial

growth economy as a kind of addiction? Here's a possible perspective:

Consumers in an industrial growth economy are dependent on—one might say "addicted to" (e.g., Bush 2006)—cheap and abundant energy and goods. To feed this dependence, many industries have degraded air, rivers, biodiversity, climate stability, and so on, with associated costs to human well-being. Over-consumption is assumed to be normal behavior, with little significant harm to self or others. The jobs of repairing the damage are assigned to the environmental restoration specialists. Their efforts might sometimes enable the collective pretenses that ecological damage can always be undone, or that enhancements in one place can somehow cancel out damage in another. This allows society to discount the damage, and so to avoid confronting the addictions and ending the harmful behaviors. Thus the consumer/addicts may in some cases depend on the restorers to hide or minimize the mess, the restoration specialists may depend on the addicts for their identity and reason for being, and the destructive behaviors may continue.

Questions to ask of restoration activities

If a metaphor "brokers what is made visible or invisible," it does so in part by highlighting questions that one might ask of the practice one seeks to understand. In the case of ecological restoration, here are some questions that the co-dependency metaphor invites:

Does the restoration activity seem to undo the harm done while it fails to do so in fact, thus allowing damaging projects to continue? A common goal of enabling behavior is to make promises that seem to ameliorate destructive behavior, that "put a good face on things," so the addict can pretend to be a normally functioning adult. But the consequent failure to address the causes of the destructive behaviors makes it more likely that they will continue unabated. Are there restoration activities that function similarly, to make the degradation of a system look like it has no harmful consequences, whereas the functional degradation continues? For instance, the Canadian Fisheries Act and the US Clean Water Act allow destruction of aquatic habitats to occur if "compensatory" habitat is built (Quigley & Harper 2006). These policies enabled destructive developments that often did not achieve even the most basic goal of no net loss of productive habitat. For example, in Canada, the area of compensation was only suitable in 14% of reviewed cases and compliance with biological requirement only occurred in 58% of these cases (Quigley & Harper 2006). Remarkably, Canadian habitat protection policy has recently been further weakened (Favaro *et al*. 2012).

Does the activity have significant opportunity costs? As an addict's family invests money, time, and emotion in cleaning up after the addict, fewer resources are available for directly addressing the problem. This shifts some of the cost of the addiction from the addict to the family. What are the opportunity costs of restoration projects? Could some of the funds invested in restoration be put to more effective use in removing the cause of the degradation (Beechie *et al*. 2010; Fela 2012)? For example, Wilcox & Donlan (2007) proposed that fisheries bycatch of seabirds can be mitigated by removing invasive predators such as cats and rats from seabird breeding colonies. Although such predator removals can increase seabird abundance, there is concern that this proposal would reduce support for efforts to address the leading threat to marine vertebrates, namely bycatch in fisheries (Finkelstein *et al*. 2008).

Does the activity create co-dependency? As an addict's dependency deepens, the enablers may become dependent also; the enabling behaviors may become part of their identities, their life work. In some cases, neither the addict nor the enabler has an interest in ending the destructive behavior. If ecological restoration is defined as "assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed" (SERI 2004), then it's true by definition that degraded environments are a necessary condition for the existence of ecological restoration. To the extent that it contracts to clean up environmental damage, any given company has a de facto financial interest in the damage (e.g., Lavendel 2002). The greater the destruction, the more numerous are the occasions for jobs and lucrative contracts. The longer the work goes on, the greater the economic ties between degradation and restoration. And the less effective the work is, the longer it must go on. Thus this question has overriding importance: If restorers have a financial stake in destructive activity, how should they deal with the potential conflict of interest? When the destruction to be remedied occurred in the past, as when a project replants gold-mine tailings from the 1800s, this is unlikely to create a conflict of interest. But when the restoration contracts are signed as a condition for future destruction, there is a risk that a conflict of interest might change a restoration industry's behavior—perhaps, for instance, by overstating their ability to restore following degradation.

Does the activity conceal the truth? Enabling behaviors depend on implicit or explicit deceit. The enablers may lie to others about the addiction and work hard to convince themselves that the addiction is not harmful; or if it is, that the harms can all be repaired; or if they can't be repaired, that other functions can take their place (Elliot 1982). The deceptions block meaningful action to remove the addiction itself. Although active deceit is rare in

science, does restoration science assume answers to questions that are still unresolved? Is it possible to fix any harm without removing its cause (Beechie *et al*. 2010)? Can a degraded ecosystem be restored with no loss of value (Katz 2012)? What more does it take to restore cultural and spiritual values and a moral relation with nature (Light & Higgs 1996; Light 2003)? Is it possible to undo a harm in one place, by doing good in another (Hale & Grundy 2009)? Who should monitor the success of a restoration project, and who should bear the burden of proof? And how can the freedom to ask hard questions and tell hard truths be guaranteed to those working on restoration contracts, public or private?

Does the activity offer misplaced hope? Addicts and enablers can prolong addiction by repeatedly reassuring themselves that things will be better this time around. Does the hope for ecological recovery that is offered by restoration represent real progress toward sustainable bio-cultural thriving? Or is it a fragile substitute for the challenging work of imagining how we might stop the destruction that requires repair, making decisions that fully weigh the ecological costs of our acts? If restoration activities mask the true costs of environmental harm, do they undercut the potential reforming power of outrage and deny the wisdom of grief?

Possible policy implications

As a metaphor brings these complex questions into focus, it also suggests some ways in which restoration practices might be improved. Some ideas that come into view:

The metaphor highlights the importance of truth-telling—honestly confronting the damage that the addiction to cheap energy and consumer goods is causing. This suggests that rather than trying to restore or at least hide all damage, it might be useful to leave some raw, unhealed places where people can directly encounter the damage that their decisions have caused. If grief is a measure of love, then an invitation to places of ritual grieving might be an invitation to love more fully, defending the beautiful, beloved places.

The importance of truth-telling suggests also that in restoration science, as in all science, there is no place for secret work, for sealed results, for proprietary findings. Science depends on the exchange of ideas. A condition of contracts for restoration work should be a guarantee of the right of scientists to tell the truth in public, no matter who signs their paychecks.

The metaphor highlights the importance of setting restoration goals and timelines and then holding the restorers to account by evaluating the work against the goals. It may be useful to set up independent review boards for this purpose.

The metaphor points to the importance of de-normalizing destructive, addictive behavior. It is not normal to desecrate one's own home. It is not normal to destroy the material conditions of one's own thriving. It is not normal to satisfy one's own cravings at terrible cost to others. Destruction is profitable and quick; restoration is expensive, sometimes ineffective, and endless. A rational system therefore, would choose to prevent rather than repair damage. An example of this re-imagining comes from Ecuador: instead of courting oil industries and associated restoration industries, the government of Ecuador is currently seeking investors to support the protection of the Yasumi National Park that lies over a rich oil field (Fela 2012).

Finally, this metaphor points to the importance of a creative, open-ended search for new metaphors that empower new ways of seeing. Different metaphors bring different aspects of a practice into view. Not all metaphors fit all cultural realities. For instance, it is likely that the enabling metaphor does not apply to some types of restoration. The more varied the practices are—in scale, in history, in motivation, etc.—the greater the need for a variety of angles of perception. The more varied the people involved in the practice—practitioners, industries, scientists, policy-makers, citizens—the more robust the metaphorical imagination will need to be.

Biologist E.O. Wilson wrote that "the next century will, I believe, be the era of restoration in ecology" (Wilson 1992). Indeed, as it has many times in the past, restoration will be an important means to increase the biodiversity and ecosystem services of damaged systems. The global importance of that work, and the variety of its forms, testifies to the importance of looking at it from many different, perhaps even unconventional, perspectives.

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