

EDITORIAL OPINION

Grieving for the Past and Hoping for the Future: Balancing Polarizing Perspectives in Conservation and Restoration

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Abstract

I consider the possibility that people engaged in conservation and management of species and ecosystems are experiencing grief related to ongoing loss of species, assemblages, ecosystem integrity, and so on. In human psychology, five stages of the grieving process have been identified, namely denial, anger, bargaining, depression, and acceptance. Although presented as a series of stages, it is recognized that the progression through them is not linear and people can move quickly among them or experience more than one at any one time. I then consider whether current polarized debates in conservation and restoration, for

instance in relation to non-native species and novel ecosystems, result in part from people operating from different places in the grief spectrum. Throughout the grieving process, hope remains a constant feature, and it is important to recognize the place of hope in motivating and sustaining people engaged in conservation and restoration. Although restoration provides great hope that losses can be minimized and, in some cases, reversed, this hope needs to be grounded in a realistic assessment of what is possible in a rapidly changing world.

Key words: grieving process, hope, polarized debate.

Introduction

After nearly 10 years as Editor-in-Chief of *Restoration Ecology*, I will be stepping down from the position in 2014. Ten years is long enough for any one person to be in charge, and it will be time for me to move on to other things and for fresh eyes and perspectives at the helm of the journal. As Editor-in-Chief, I have tried to maintain an open-door policy for the discussion of ideas and approaches in restoration, in the recognition that our young discipline is still consolidating its conceptual and practical underpinnings—while at the same time being challenged by the increasing rapidity of environmental change. In such a turbulent environment, it would be wrong to try to limit discussion of important issues or to impose particular orthodoxies. An editor should be a gatekeeper for quality but not act as the “thought police” (Orwell 1949). This can involve accepting for publication well-constructed papers that challenge existing ideas and also allowing well-reasoned responses that develop the discussion constructively. It also involves “parking” one’s own opinions so that these do not bias the overall coverage in the journal. This is not always easy, but I hope that *Restoration Ecology*’s opinion articles

over the last 10 years have been a vehicle for ensuring that differing voices are heard and discussion of important topics is encouraged.

Although lively debate on important issues is to be encouraged, I have been increasingly struck by how divisive some issues can be. For instance, in my own work, I have been involved recently in discussions on how best to confront the issue of non-native/invasive species (Davis et al. 2011; Simberloff 2011) and on the allied topic of novel ecosystems, or systems that develop as a response to altered biotic and abiotic conditions (Hobbs et al. 2006, 2009; Vince 2011).

In the case of non-native species, Davis et al. (2011) suggested that the management emphasis should be shifted from considering primarily a species’ origin to a focus on the impacts species have on the ecosystems in which they establish. Subsequent critiques of the paper revealed a degree of alarm, almost outrage, at the arguments presented.

Although there has not been the same degree of criticism of the concept of novel ecosystems in the literature to date, early attempts to publish the 2006 paper indicated a large amount of hostility to the idea on the part of reviewers. Similarly, at conferences where the topic is presented, concerns are aired that the concept will adversely affect restoration policy and practice, particularly by opening the way for less stringent targets. Such phrases as “slippery slope” and “lowering the bar” have been used in this context.

In both cases, there appear to be two very different sets of people with very different perspectives on the issues

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involved. One set holds firmly to established ideas and principles concerning invasive species and ecosystem management/restoration and thinks that any departure from the core set of ideas will be detrimental to efforts to maintain and restore species and ecosystems. The other set argues that, looking at the evidence of current patterns and trends, there has to be a move away from the more traditional perspectives toward one that recognizes the changing situation facing those aiming to manage and restore systems. Both sets of people have the same underlying backgrounds, training, and, probably, broad set of ethical underpinnings. Both are smart, dedicated groups of people who seek to inform and improve the ways in which the Earth's ecosystems and species are managed. And yet they now find themselves essentially "talking past each other" and in apparent stark disagreement.

Why?

This led me to ask why this might be the case. Why am I now apparently at odds with some of my colleagues and collaborators? Why are there such visceral responses to literature that suggests we need to start thinking differently about topics such as invasive species and restoration goals? One potential explanation started forming from an unusual source, and I present this here as an opinion piece for discussion.

Over the past couple of years, both my wife and I have lost our mothers—both lived long, happy lives and died in their late 80s. Of course, both deaths were significant losses to our family and came with expected feelings of grief. Bereavement is an extreme form of loss, but losses of any kind can result in the need to grieve—the death of a friend or relative, the loss of a family pet, loss of personal possessions because of fire or theft, losing one's job, and loss of mental or physical abilities. Such losses are anticipated and experienced with sadness and a mixture of other emotions.

It struck me quite forcibly at the International Conference for Conservation Biology in Auckland in 2011 that people researching and managing the fate of species and ecosystems in today's world are constantly faced with loss. Aldo Leopold wrote: "One of the penalties of an ecological education is that one lives alone in a world of wounds" (Leopold 1949). Whether it is a local and personal loss such as the destruction of a piece of local woodland or a species that was once abundant now being scarce or nonexistent, or whether it is loss on a grander and more general scale, such as the destruction of rainforest, the extinction of Australian marsupials, or the decline of the Arctic ice sheet, people with an interest in species, ecosystems, and the environment in general are constantly assailed with accounts of past or impending loss. The loss may also not relate to actual physical disappearance but may be more to do with the loss of local uniqueness, historical fidelity, intactness, integrity, or naturalness—all complex ideas that mean different things to different people but are prone to disruption in the face of multiple environmental changes. Indeed, change itself represents a loss of what was

there before. Not everyone shares this view, but those who study or appreciate nature are aware of loss.

This is the subject matter of applied ecology, environmental science, and particularly conservation biology—investigating past, current, and future losses and how to understand, predict, and, ultimately, halt or reverse them. However, getting to this last phase is often difficult and time-consuming and requires observation and understanding of the processes involved. It could be argued that most ecologists and conservation biologists live mostly in a world characterized by loss, and hence are either wittingly or unwittingly in a constant state of grief. This has been discussed only rarely in the literature, and scientists and practitioners rarely talk about the emotional aspects of what they do. However, Windle (1992) talked candidly about her grief over declining dogwood trees in her neighborhood and suggested, "Scientists and resource managers usually do not speak freely about this aspect of our feelings for the places and organisms that are part of our work any more than of our love for nature."

Windle (1992) pointed out that grief and mourning have "certain recognized (if disorderly and chaotic) phases" starting with initial shock and numbness followed by yearning and disorientation and ultimately a period of internal and external reorganization. Further, "At first, acceptance of death is intellectual. The later steps are often more difficult but just as critical to recovery. These include emotional acceptance and reshaping of oneself and the outer world to reflect the new reality." The process of grieving has been explored in depth in psychology, perhaps most famously by Kubler-Ross (1969) and Kubler-Ross and Kessler (2007), initially from the perspective of the dying patient and later in relation to grieving friends and relatives. Kubler-Ross proposed a five-stage process of grieving that is now well known: stages of denial, anger, bargaining, depression, and acceptance. The initial phase, denial, is seen as a temporary defense mechanism as a buffer against unpleasant news or events. This may be replaced by feelings of anger, envy, or resentment that may be directed at particular people, the medical profession, or the world in general. Bargaining takes the form of attempting to postpone the inevitable by negotiating or pleading with doctors, or with God. Depression results from the recognition of what has been, or is about to be, lost. Acceptance is the final recognition of, and preparation for, the inevitable finality of death, which need not, however, be viewed as resigned and hopeless giving-up.

Kubler-Ross presented five distinct stages, but made it clear that these were not necessarily sequential and, indeed, individuals could flip backward and forward from one to another or experience more than one simultaneously. Her approach has been often criticized as being too prescriptive, as misrepresenting how people actually grieve, and as being too readily applied by health professionals (e.g. Cross 2010; Konigsberg 2011). Nevertheless, the five stages are recognized even by critics as "handles or points of entry to comprehend what before was enigmatic even chaotic" (Churchill 1979).

Grief in Conservation and Restoration

If we accept that, when assailed constantly with accounts of loss of species, habitats, historical fidelity, and so on, many ecologists and conservation biologists may be suffering from chronic or acute grief, can an understanding of the grieving process be useful? When considering particular perspectives (including one's own) and the rationale behind various conservation/restoration decisions, it may be worthwhile examining the underlying basis for this rationale in terms of whether it stems from one particular stage of the grieving process versus another.

In relation to the polarized debates in ecology and conservation discussed earlier, one can ask whether they might at least partially be rooted in the different stages of grieving that people (and even whole organizations) find themselves at. Table 1 lists Kubler-Ross's five stages and typical reactions of dying patients or those close to them. Applying the five stages to conservation losses, an equivalent set of reactions from concerned parties can be suggested, together with the associated tools and concepts relevant to each stage.

Denial in this context does not relate to the type of vested-interest denial that characterizes one side of the public and political discourse on climate change. I would contend that there is a different type of denial to be found within the conservation community that relates more to an inability or unwillingness to recognize or accept ongoing changes in species distributions, abundances and interactions, and/or the increasing likelihood that some of these changes cannot be reversed. Unlike climate change denial, this type of denial leads to demands for more, not less, action—and also leads people to reject suggestions that the time may have come to look at things differently and to find alternative solutions and ways of working. Anger is another common response to conservation issues and challenges, particularly in the face of government or societal inaction or, worse, continued activity that leads to ongoing loss of things of value. Bargaining, on

the other hand, encapsulates the set of ideas and activities surrounding decision making, priority setting, and trade-offs—there is an implicit recognition that it will be impossible to do everything and hence some negotiated decisions have to be made. Depression appears to be a constant possibility for people working in conservation as they face ongoing declines of species and habitats or as they contemplate the immensity of the tasks ahead. Finally, acceptance perhaps represents a state of mind in which some degree of reconciliation has taken place regarding past losses and a recognition that, despite change, there is still much to value and to strive to protect or restore. At the same time, acceptance is often mistakenly taken for acquiescence, that one must accept the state of affairs resulting from change. Acceptance relates more to living with a particular loss, and adjusting one's own life from the lessons that came from the loss. Thus, one can continue to mourn the loss, and yet not fully accept the conditions that brought it about. Similarly, one can perhaps “come to terms” with directional ecosystem or biodiversity change without “accepting” the conditions that give rise to it.

Hope

Obviously, there are marked differences between a response to the loss of a loved one and individual and collective responses to conservation losses. In particular, although death is a clear end point, conservation losses are often diffuse, chronic, and uncertain—often characterized by incomplete evidence and contradictory claims and interpretations of the data available. Another important feature is that conservation losses are sometimes reversible, and there have been many examples of spectacular conservation success, given the right set of circumstances and opportunities. This is where restoration comes to the fore, and provides the possibility of reversing past damage—in other words, turning loss into gain. Kubler-Ross's treatment of the grieving process included the observation that

Table 1. Kubler-Ross's stages of grief in relation to death or bereavement, with representative responses at each stage, and suggested equivalent responses to conservation losses and possible links to management/policy approaches.

<i>Phase of Grief</i>	<i>Responses to Death, Bereavement</i>	<i>Responses to Conservation Losses</i>	<i>Examples of Management/Policy Approaches</i>
Denial	“I feel fine”; “This can't be happening, not to me”	“We can get things back the way they were”; “Our view will prevail in the end”	Traditional protected areas and hands-off approaches
Anger	“Why me? It's not fair!”; “How can this happen to me?”; “Who is to blame?”	“How can they let this happen?”; “Who is to blame?”; “Let's protest to the minister”	Advocacy and protest
Bargaining	“I'll do anything for a few more years”; “I will give my life savings if . . .”	“We'll trade off this species/area for that species/area over there”	Optimization tools
Depression	“I'm so sad, why bother with anything?”; “I'm going to die soon so what's the point?”; “I miss my loved one, why go on?”	“Species and ecosystems are being overwhelmed”; “We've lost the battle”; “Invasive species are everywhere”	Very good malt whisky
Acceptance	“It's going to be okay.”; “I can't fight it, I may as well prepare for it.”	“Sure things are changing, but there are still things to value”; “We can still make a big difference” “Choose my battles”	Intervention, novel ecosystems, and reconciliation ecology

throughout the process, hope generally remains, regardless of what else is happening. Restoration certainly provides hope for the future and has been embraced from local to global levels—as Eric Higgs suggests “ecological restoration is synonymous with the restoration of hope” (Higgs 2003). The provision of hope was one of the reasons I got into restoration ecology. When I started teaching a third-year undergraduate unit in restoration about 10 years ago, I had students coming to me after a few lectures saying how great it was to hear about something positive that could be done, after being browbeaten by 2 years of apparently intractable environmental problems. Indeed, some recent commentators have called for a reinstatement of hope in the culture of conservation biology (Swaigood & Sheppard 2010, 2011)—but they suggest that, “This is hope with its sleeves rolled up—not as an emotional buffer against cold hard facts but as a stoic, clear-eyed, and utilitarian alternative to apathy, inaction, and despair” (Swaigood & Sheppard 2011). Restoration certainly has an important place in this endeavor.

The hope provided by restoration does, however, have to be realistic, and to be based on the reality of the situation. A favorite quote is “Hope is not blind optimism; it recognises the depth of the problem and refuses to accept defeat. It is not a feeling – it is a choice” (Newman & Kenworthy 1999). Blind optimism can lead to false promises, wasted effort, and poor outcomes, particularly if expectations exceed capabilities (e.g. Maron et al. 2012; Mentz et al. 2013). Restoration ecology itself is wrestling with these issues (Hobbs et al. 2011; Allison 2012). The title of Cross’s (2010) book, “A new normal: Learning to live with grief,” is mirrored in the title of a discussion session at the 2012 European Conference on Ecological Restoration in the Czech Republic “Novel ecosystems: New normal or red herring?” To increasing numbers of observers, empirical evidence suggests that we are indeed heading toward, or are already in, an ecological “new normal,” but others prefer to deny this and continue to believe that changes are reversible—or are angry that some others are pointing to the evidence to suggest that we need to find new ways of working. Those others have perhaps cycled faster through the grief process and have come to accept the inevitability of change and are trying to work on ways forward in the new circumstances in which we find ourselves (note again that acceptance does not mean that one has to actually like the situation). Hence, clashes occur, not because different people have different ethical stances or values, but because they differ in the phase of the grieving process they are operating in. These people all seek to conserve the world’s biodiversity and restore ecosystems: they may simply be operating from different perspectives arising from their particular intellectual and emotional journey.

Perhaps, therefore, ideas about grief can help explain, at least partially, some of the discordant debates and disagreements in conservation and restoration. As a final note, it is also important to note that loss can result in new opportunities—for instance, people who have lost their jobs find they have the opportunity to develop new skills and follow different interests, or people who have lost limbs

who go on to excel as para-olympians. Loss in ecological terms may sometimes result in new but still worthwhile assemblages: “Loss is nothing else but change, and change is Nature’s delight” (Marcus Aurelius: *The Meditations*, Book 9). Effective intervention in the form of conservation or restoration can also help prevent further loss or in some cases reverse past losses—if we can get to grips with how this can be achieved in our rapidly changing world. In lamenting what is lost, it is also important to remember to rejoice in what is still here—or what could be there in the future.

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