

✧ *Chapter 6* ✧

CONSTRUCTING NATURE  
AS CONSTRUCTING SCIENCE:  
EXPERTISE, ACTIVIST SCIENCE,  
AND PUBLIC CONFLICT IN THE  
CHICAGO WILDERNESS

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In April 1996 an exciting new project was announced, an unprecedented conservation undertaking in one of the nation's most densely populated regions. Chicago Wilderness is a collaborative effort among the more than 90 organizations that make up the Chicago Region Biodiversity Council (CRBC) to protect, restore, and manage the region's natural landscapes while educating the public about the value of these lands and management activities. A central goal of Chicago Wilderness is the ecological restoration of landscapes that are considered degraded and no longer representative of their biodiverse, pre-European-settlement condition. The Volunteer Stewardship Network (VSN), working under The Nature Conservancy (TNC), a key member of the CRBC, has been actively restoring these "degraded," "overgrown" landscapes to prairies and open woodlands for as many as twenty years at some sites.

About a week before the official public announcement of the Chicago Wilderness project, a suburban resident of Cook County wrote a letter to her county commissioner expressing concerns with the limitations of the CRBC, which sought to coordinate the region's natural land management.

... I have no objections to the purported purposes of the Biodiversity Council but I do have serious concerns about the apparent exclusionary nature of its membership policy. If the purpose of this organization is to share information in order to coordinate land and wildlife management throughout the area, then it would appear that the broadest possible sphere of experience would be desirable. If, however, the purpose of the organization is to amass a number of organizations, all of whom share one limited vision of land and wildlife management and to exclude those organizations which do not share that viewpoint, then the "Biodiversity Council" could be fairly characterized as a *political action committee* [emphasis in original].<sup>1</sup>

Already, before it had officially begun, the CRBC was facing demands that it listen to alternative views on nature and its management. The land management activities of this coalition were now cast as more complex than just "efficiently saving nature" or "restoring ecosystems." Nature was being defined, ordered, and controlled. That, in part, is the work of conservation. The problem is, not everyone agrees on what needs to be counted or controlled. Even the naming of nature, like the simple act of identifying native and nonnative plants or defining community types, is potentially controversial. Chicago-area conservationists know this. The CRBC *is* a political action committee—a committee organized to establish the region's way of seeing, knowing, and living with its nature.

The letter writer was not alone in her sentiments. When the Chicago City Council called a hearing to review restoration practices, some members of the public expressed anger and confusion that trees were being cut down by "so-called experts" in the name of conservation. As the controversy grew, the matter was referred to the forest preserve board of Cook County, which alone includes more than one-third of the Chicago Wilderness lands. After a noisy public hearing, the board declared a moratorium on all restoration activities until the matter could be investigated. Thus, only a few months after the announcement of Chicago Wilderness, all restoration activities in Cook County were halted.

The moratorium meant an almost complete shutdown of the VSN and was a major setback for TNC and the other members of the CRBC. Meanwhile, new tree-protecting citizens groups had been organized to oppose Chicago Wilderness, and old opposition groups such as animal rights organizations, which opposed the killing of deer by land managers, had contributed their voices to the growing debate.

While the moratorium has now been largely lifted, a few sites still remain

closed to restoration activity, and the controversy continues. As I write this, a federal NEPA lawsuit and two Freedom of Information Act (FOIA) suits hang over the Forest Preserve District of Cook County (FPDCC), and a prominent Chicago newspaper columnist continues to publicly attack the concepts and practices of restoration. One group, Trees for Life, now boasts more than a hundred members and prints its own T-shirts and monthly newsletters. These critics of restoration can be found at Cook County Forest Preserve Board meetings, public hearings, and even restoration sites, wearing shirts boldly emblazoned “I am a tree hugger,” reminding restorationists that the “saving of nature” is a politically complex idea indeed. This chapter examines that complexity.

## The Constructivist Perspective

To understand the Chicago-area controversy over ecological restoration, one must, at least temporarily, suspend judgment on the value of restoration work. Unfortunately, many restorationists and restoration supporters, some of whom are journalists and scientists, have already decided that restoration is the answer for natural lands management and have come to understand the opposition as misguided, overly emotional, uneducated, unscientific, and NIMBYist. In the process, relatively little has been learned about the critics and their concerns.<sup>2</sup> Restoration groups continue to defend their work while failing to understand how anyone faced with the “evidence” could not see the natural world as they do.

### *Symmetry and Constructivist Inquiry*

How can we gain sociological insight into the views of people who think nature should be allowed to take its course when most conservationists are committed to its active management? One answer is to explore the debate symmetrically (Bloor 1976). This perspective lets us see personal and political motivations on both sides of the debate, not just science on one and emotion or politics on the other. It is an approach that asks us to suspend the everyday assumptions we use to make sense of the world. Its outcome is an account of familiar places and practices that lets us be strangers again—to see ourselves and our work reflexively. I think such “sociological strangers” (Schutz 1964) are needed in Chicago’s restoration community.

Symmetry of analysis is one of the cornerstones of constructivist inquiry. It means, in the case of the Chicago restoration controversy, that I subject both restorationists and critics of restoration to the same analyses. I make no assumptions as to who is expert and who is not. I do not assume I know what is best for a healthy ecosystem and what is not. I, like a stranger to conservation science and an outsider to the local practices of restoration, explore the

conflict without use of the assumptions that frame conflict participants' views of nature, each other, and their own actions in the world.

### *Relativism and the Social Construction of Nature*

Because I am not guided by conflict participants' distinctions between expert/nonexpert or healthy/unhealthy ecosystems, for example, I leave open the possibility that many conceptualizations may be equally valid. Further, I assume that the criteria used to judge the validity of these concepts are flexible, socially contingent, and political in character. Relativism is the aspect of constructivist research that offends many social scientists, natural scientists, and environmentalists. Many of the restorationists in my study who came to understand my research approach found it necessary to demonstrate to me their firm understanding of "nature" and to cite the institutional and scientific research support for their views in order for our discussions to proceed. For these respondents, nature was not something to be socially constructed, and they believed my relativism would lead to some strange ideas about nature.

You can't have compromise on what nature is in northeastern Illinois. I think that's really the bottom line. We talk about restoration, that's a human concept. We talk about "let nature takes its course," that's a human concept. The natural community in this area is independent and above all that. It is what it is. That's not something we can change by talking about or by agreeing that "Well, yeah, we'll agree that in this case we're gonna compromise, nature is something different here." You can't do that because it is what it is!

There is a fear, as demonstrated in the restorationist's comments above and echoed by many critics, that such a perspective might oversocialize nature and leave nothing "real" to fight for, protect, or restore. For me, however, the value of the constructivist approach does not lie in its ability to posit the historically and socially contingent character of nature. Yes, nature is socially constructed, but the power of analyses informed by this commitment is their ability to reveal the social processes surrounding these constructions—the processes that form the social relationships that simultaneously result from and maintain these social constructions of nature. From this perspective, the social construction of nature is the construction of social structure.

Making nature is inevitably the making of social relationships. And this is why land managers, volunteer restorationists, and ecologists, to name a few, might want to listen to what social scientists have to say about nature, conservation practice, and, in particular, public conflict over these natures and practices. A constructivist analysis of the Chicago controversy will place upon conservationists a large part of the responsibility for the social relationships

formed through their discovery, definition, and restoration of the region's nature. In the Chicago-area conflict, it is these social relationships that need to be attended to as part of the scientific practices of saving and restoring nature.

### *Expertise and the Public Understanding of Science*

In this analysis, I concentrate on the social relationships and processes that I call expertise—the practices that define who will properly see nature, whose experience of nature will count, and what tools will best reveal nature's true disposition. We often see these practices as just science, but they are important political activities to be explored sociologically. These expert practices do not work in just one direction—from credentialed authority to the public. As the case of the Chicago controversy will show, expert practices are an interdependent process of negotiation, however contentious, that involves the critical lay public as unequal partner in the erection of the changing boundaries (Gieryn 1983, 1994) separating expert from nonexpert, science from politics, and healthy nature from unhealthy nature.

While concern with experts has long been an important focus of sociology, the growth of constructivist perspectives has renewed interest in exploring the means and practices by which expertise is maintained and the ways in which expert knowledges are produced and consumed. Attention to these issues from scientific experts and their institutions has also been renewed as concern about the public's lack of understanding of basic scientific knowledge has grown. This interest on the part of the scientific community is often predicated on the belief that the public is unable, or unwilling, to incorporate these scientific knowledges into its understandings of the world (Wolpert 1992). Assuming this failure on the part of the public, such scientists have called for better means of reaching and educating the layperson. Indeed, several restorationists spoke to me of the importance of the Chicago Wilderness project as a means to "educate" the "average citizen" about the importance and peril of the local forest preserves. As the controversy grew, calls for public outreach and education also grew.

In contrast to this deficit model of the public, several sociologists of science (Irwin 1995, Irwin and Wynne 1996) have pursued study of the Public Understanding of Science (PUS) informed by a constructivist perspective that assumes the public does understand science and the natural world in complex ways. Constructivist studies, as I have noted earlier in the discussion of symmetric analysis, try not to hold a priori assumptions as to what is real or proper scientific knowledge. This sociological approach problematizes both the public's understanding and valid scientific knowledge. It is a symmetric view of expertise. PUS studies reconstitute the public as a complex group of actors who interact with and judge scientific knowledges based on social factors—

factors broader than those assumed by the scientific community they come in contact with. The public may indeed need to be educated, but PUS studies remind us of the political meaning of such education.

It is the above understandings that I took with me into the field as I explored the restoration controversy ethnographically. I have spent two years as an ethnographer, videographer, and participant-observer in both camps of the debate. During this time, I volunteered many Saturday and Sunday mornings clearing buckthorn, pulling garlic mustard, spreading seed, and lopping brush as a VSN volunteer. I conducted in-depth interviews with twenty-two restorationists, eleven critics, and three individuals who considered themselves neutral. Most of the interviewees were open and honest and wanted to share with me their deeply held beliefs and experiences as players in the controversy. Some respondents were careful, almost calculated, in their discussions and attempted to enroll me as an ally. Others seemed to deliberately mislead me or avoid certain topics altogether. A few respondents refused to participate because they believed that their personal and professional lives might be too greatly affected by my use of their words, even if they were granted anonymity. It has been a difficult period for all of us, as we formed relationships in which I was frequently reminded of the responsibility I had in the future (re)presentation of my informants' words.

My concerns are, first of all, that you look kind of like a restorationist. [laughs] That's really silly. It's true. The first time I met you, you were sitting with the restorationists. You did a very disruptive interview behind me during the meeting, which you should not have done. So you are a bad person. [laughs] . . . My concern is where you're getting your money from, because the Forest Service has given a huge grant to [the FPDCC]. They have a lot at stake to make the program look good, for better or worse. I'm also afraid of being misquoted because they misquote us all the time. . . . I was not going to do this because I have these concerns. . . .

Trust, what some define as the basis of good ethnographic work, was not something I comfortably had. As the research progressed and participants on both sides developed personal views of what they thought I was about, I found the restorationists to be somewhat more careful and distant in our relations, while the critics became more trusting and some even began to count me among their own.<sup>3</sup> This made the research more difficult because I had to negotiate a public appearance that would not project an alliance with the critics. It is a balancing act I continue today as I speak, write, and edit video presentations about my experiences, while trying to maintain many of the relationships formed during the research.

## Asserting Expertise: Defining the Community of Experts and Nonexperts

This research is about social–political processes, not values. The Chicago restoration controversy is not simply a clash of values but a struggle over the social relationships that form the contexts in which these values are created and used. These social relations, not value orientations per se, are, in my view, the more important focus for sociological understandings of the conflict. Where many see value conflicts, conflicts about what nature is and should be in the county forest preserves, I see a particular sensitivity on the part of the critical public to its experiences of being on the consumptive end of expert practices. The critics have a keen awareness of the position they hold within the social structures that result from, and form the context of, local conservation practice.

. . . I got angry and I stood up and when I was finally called on I said, “What’s so special about prairies?!” [laughs] The young man next to me said, “Shut up and sit down! You don’t know what you’re talking about!” Well, that galvanized me! Nobody tells me to shut up and sit down. I am a citizen. I have a right to say what I feel. . . . I do not think the public is as stupid as [the FPDCC] think. At least they like to tell us we’re stupid and don’t know what we’re talking about, which is what got me into this. . . . They feel that the public is too dumb to understand how great this is.

The initial controversy may have begun over different visions for the future of the forest preserves near critics’ homes: a preference for dense woodlands over more open savannas or, perhaps, the critics’ philosophical commitment to “nature knows best.” However, it has grown into a conflict over the processes of negotiating nature and science in Cook County.

“How are these amateurs experts?! They have no formal training or credentials!” reads a small leaflet pinned to a display at a Trees for Life meeting. It is the same question asked about volunteer restorationists at an earlier time by the scientific–academic community. During that painful growth period, when the VSN attempted to establish themselves as expert “knowers” of the land, criticism was focused on just what made these lay volunteers favored members of the public who could create privileged stories about the local landscape’s condition and needs (Helford 1999). Restorationists countered those arguments by claiming to have developed an intimate knowledge of the flora that made up the ecological communities of the region and a long-term relationship with the sites where they practiced restoration—the type of knowledge and relationship that few members of the academic ecology community or

general public had achieved. While there is still some concern today within the scientific community over the place of volunteer restorationists, the harshest critiques now come from the lay public that has not embraced the grassroots recruitment efforts of their restorationist neighbors.

Defending themselves against these new lay critics, restorationists present impressive evidence of their scientific discoveries and examples of volunteers who have attained esoteric knowledge of nature. These stories attempt to demonstrate how the intimate relationships restorationists have with the landscape lead to a different yet more powerful expertise than that of the more formal scientist.

I certainly think that one of the interesting stories that I remember, for example, was at the restoration in Madison. They wanted to check on how their seeding was going and they had to go and get Ms. A., who was doing some early work in restoration and growing native plants, to come to check to see how the seeding was going because none of the academics knew what the plants looked like as seedlings! That is a very real difficulty. If you're focused on something very narrow, you probably know how all of the different chemicals cause the plant to grow this way or grow that way or bloom, but you may not know what the plant looks like when all it has is cotyledons. So, there is a different relationship with the plants. . . . I think that's the real difference. The difference is that you can take a volunteer and the volunteer can actually go out and collect the seed and cut the buckthorn and pull the weeds. Whereas we don't need the Ph.D. doing that. . . . I think that's actually one of the additional pieces of expertise that the volunteers can now bring back to the whole scene.

Establishing this relationship as part of the expert practice of volunteer restoration meant that citizens who didn't venture out on workdays and spend time with the landscape, as regular VSN members did, could not be expert knowers of the land or be in a position to justifiably pass judgment on restoration science. In the words of one prominent restorationist:

Just driving by in your car or riding the bike trails does not give you an understanding of these landscapes. They just don't know what is happening in here.

Restorationists' expertise appears to require weekend workdays and perhaps years of tending a site and learning to understand the complexities of these "recovering" ecosystems. It is the "getting inside the preserves" that many of

the restorationists spoke of that separates a knower of nature from other limited and distant observers.

That is, when you work with areas and you watch how plants respond to different treatments, y'know it's not scientific in the sense that we've taken detailed measurements and so forth, but you do see different responses in different species and responses to different kinds of management approaches. That's very valuable information.

One critic angrily told me of her

40 years of walking my dogs and taking my children in these woods. I can tell you when the trillium come up or how many more or less oak trees are here and which birds are declining. I know the woods. I have lived with these woods my whole life! Now these people come here and tell me I don't know what is going on in my forest preserve?!

Many of the critics shared with me similar concerns that their experience of the preserves didn't count for much. Yet their experiences were not restoration experiences. Most in the restoration community, while appreciative of the ways in which the critics have used and understood the preserves, do not recognize the critics' views as complete or necessarily useful when deciding the fate of the preserve's plants and animals. This seemingly simple point is critical for understanding the controversy.

Restoration is not simply the management activity required to recover the ecological health of a preserve; it is the ongoing development of an expertise based on a specific relationship to the land and the lay public. A volunteer cutting brush on Sunday morning doesn't see her work as establishing the boundaries of expertise for Chicago's community of expert knowers of nature. Few of us are ever forced to see the professional work we do as more than just the work itself. Yet the controversy brings these issues out clearly to the sociological observer. The everyday practice of restoration does establish for the restorationist an ideological framework for recognizing whose views of nature count and whose don't. None of the restorationists I spoke with saw this boundary work as part of their restoration activity. Some said "the political stuff" was done by others, usually leaders of the VSN or TNC, and wanted little to do with it. It was hard for them to see their work or their identity as restorationists as ideological. But for those outside the boundaries of expert or conservationist, it was a difficult political identity indeed. Many of the critics were painfully aware that these were "made" boundaries, boundaries they believed kept them from being participants in an important dialogue. Many

critics took this exclusion as a personal attack, and believed that they were being judged without any real understanding of who they were.

How do they know what my version of nature is? How do they know what books I've read, where I've been, where I have spent my entire life—which consists of the University of Illinois as an undergrad and also graduate school there at the U of I? What makes [someone] with a bachelor's degree better science than my science? My degree wasn't in biology, but why are his studies more accurate or more truthful than my science? Who's to say what is good . . . who can judge? How can you cast judgment on something when you don't know what my view of nature is?

In defending their privileged status, many volunteer restorationists employed traditional representations of expertise and authority. The members of the public are consumers, in this rhetoric, of what experts prepare for them.

. . . I think it is important to remember that we do not manage our public lands by majority vote. We also don't manage the National Gallery of Art by majority vote, and we don't manage Cook County Hospital by majority vote. Why not—why don't we put every acquisition at the National Gallery up for public referendum, or every procedure used at Cook County Hospital up for a vote? We are not dumb or incompetent people, we can learn about art and medicine and natural resources, but we can't all be experts. I love trees, but I am not schooled in tree biology or plant pathology. So I rely on the expertise, judgment, and experience of professionals. I have heard professionals say that our forest preserves are degraded and ill, even if they may not look that way to our unschooled eyes. I heard them say we need to use a variety of treatments to assist our precious natural heritage back to health. Of course, we should ask our professional land managers to tell us why they make such a diagnosis. But I don't think it is fair for us to second-guess or denigrate them.

For many critics of restoration, second-guessing experts is considered a central component of appropriate and effective political practice, especially when dealing with environmental concerns. Several of the critics I interviewed had been active in political challenges against the use of DDT nearly thirty years before the restoration conflict. These critics wondered why activity deemed "heroic" back then was not respected now in the case of restoration. The land management agencies and their experts, argued the critics, must not only answer the public whose land they manage in trust, but also listen to and incorporate

these public concerns. Many critics believed that public land use and management depended upon a set of social relationships under which the public was a nearly equal partner in the overall management of these lands. When these beliefs proved false, several critics angrily declared that the very meaning of the word public in the term “public land” was threatened as issues of land use were separated from management and policy by political boundaries of expertise.

Many critics responded to the restorationists’ rhetoric of expertise by describing different credentials that they believed were necessary to be eligible to comment on the future of nature in these public preserves. Some of these responses confused me at first because they were not defining scientific credentials; rather, these critics valued credentials that were more explicitly moral or political in character. Having used the public preserves, or even just having had the potential to have used them, was all the expertise that critics required to participate in the dialogue about management of the forest preserves. Here critics drew a much broader boundary that required a different sort of intimacy than that described by restorationists. Most importantly, these credentials were not defined by any special knowledge or ability to produce truths about the preserves. Simply put, the preserves are public spaces, so the public should govern them. It is the everyday use of them that entitles one to be a credible and welcome participant in their management. The following quote is not atypical of the responses to my question, “So who is qualified to decide what is best for the preserves?”

*Respondent:* It’s our land. It was set aside initially to be protected and preserved. Probably 90 percent of the people in Chicago believe it’s still being protected and preserved. They believe that when they have their union picnic out in Western Springs—that when they get there it’s gonna look the same as it did last year. They’re still gonna have a ball field, they’re still gonna have a forest, they’re still gonna have a river where the kids can go down and do what kids like to do. They really trusted their officials, unfortunately, that this area was going to be protected. They tell their children, as I did my children, “Don’t pick the flowers, don’t pull up the . . . don’t disturb it—just enjoy it.”

*Interviewer:* So there aren’t any credentials . . . just people who use it?

*Respondent:* Yeah, it’s our land!

It is interesting to consider these competing definitions of expertise and public involvement, especially when we take into account the specific history of the volunteer restorationist in Cook County. At one time it was these volunteers who challenged established authority in order to extend the value

and meaning of their work beyond simple management activity to that of scientific authority (Helford 1999). Employing this rather conservative notion of expert authority belies the historical grassroots, “citizen–scientist” ethos of the volunteer restorationist. The ways in which these conservationists describe and defend their work have changed as they have grown in authority and gained new political associations within the region’s conservation establishment.

### *Attempts at Educating a “Deficient” Public*

In response to initial complaints, some restorationists took Trees for Life members on tours of the preserves and invited them out to workdays to educate and immerse them in the contexts that these restorationists saw as necessary to understand the preserves accurately. For restoration stewards, recently burned woodlands are beautiful sites, “finally opened up so that the native understory could return.” For critics, they are “virtual wastelands where the soil is sterile and nothing but charred stumps remain.” For one group it is an exciting and promising sight; for the other it is a sad and scary portent of the future of the FPDCC land. It was commitments to these quite different views of nature that led restorationists to call for greater public education. In addition, these experiences introduced the possibility to the restorationists that the critics had another, perhaps even sinister agenda because they couldn’t be so stupid as to not “get it” after all the evidence of the value of restoration that they had been presented with.

*Respondent A:* I think there is some other agenda that I’m not aware of that’s going on. I know that there are people who have been taken out on trips and who have seen things and, I think, understand that a lot of what’s going on is good and right, and they’re still not budging.

*Respondent B:* There’s a political agenda. [laughs]

*Respondent A:* Right. There’s something else going on. I just know that there are people that I’ve taken out and shown what we’re doing, and they get it. On the other hand, I’ve taken out people like [a Trees for Life board member] who are very intelligent, and she *could* get it, but . . .

*Respondent B:* The other thing, actually, on the Community Advisory Council, there are three people there who have been exposed to all kinds of information, data, scientific studies—you name it, they’ve had it, had access to it. Yet they continue to make claims about what’s happening that are simply foundationless.

Attempts to “educate” critics were often painful failures. Some VSN site stewards told me that they felt “stabbed in the back” by critics whom they’d taken to their sites to show what restorationists really did—only to find their words turned into propaganda meant to make restoration look unsuccessful, unscientific, and dangerous. Only a few of the restorationists I spoke with felt uncomfortable with the idea of “educating” the critics. Most felt that the basis of the whole controversy was an uneducated citizenry, yet few reflected on what it meant to educate. I often posed the question “Where is the line between education and indoctrination?” to both sides of the debate. Rarely did restorationists see their education work as ideological. It was science for most—facts and basic ecological truths. Critics, on the other hand, were quite sensitive to any attempt at education. One educator and naturalist who was critical of restoration told me he viewed attempts to educate the “unenlightened” critics as advocacy, “plain and simple.”

Then it becomes an educational problem: “People aren’t educated.” I like to read that. So that’s why they send these [holding up restoration brochure] out to educate people. It’s not an educational process. It’s just not. So when somebody on either end of the spectrum says, “Well, what we have to do is educate people,” that’s their own demise too, because to educate people you have to educate yourself. To just say, “I am going to educate these people here” is such an ego trip. . . . As soon as you tell people you’re gonna teach them something, it’s advocacy.

Some restorationists saw the critics’ failure to accept the scientific evidence of restoration’s value as a sign that they rejected the scientific method altogether. Some portrayed the critics as people who couldn’t distinguish between real flaws in one’s understanding of nature and simple disagreements that happen along the way in the development of any good scientific theory or understanding. A few restorationists lumped critics in with other “anti-science” groups such as animal rights activists and creationists.

This is the single issue that has troubled me more than anything else in the whole restoration controversy. My anger about it isn’t about restoration per se, it’s about the [critics’] abuse of science and the scientific process. This is not a legitimate scientific disagreement that we’re having here. This is about people who want to sway opinions, sway policy, and they don’t care about the facts. It’s like the evolution debate. If you look at the type of evidence that was used in the evolution debate, every legitimate scientific disagreement was twisted to mean that evolution wasn’t really true. They’re arguing very much the way creationists argue against evolution.

In response, some critics tried to explain why more than just scientific information is needed to make decisions about the forest preserves.

It is at the very nature of what science is. A true scientist understands the tenuous hold on truth that science has—that it is no better or worse than any other system of truth finding. In fact, science is much better off if they stay away from “truth” and try to stick to the facts. They also know that their facts change. It’s the reliance on science as the only vehicle to find ultimate truth that allows something like [facts changing] to go on. . . . There are other values besides those of science. . . . People are attached to nature and have a broader view of nature than restorationists have.

## **Is It Science or a Social Movement?: The Complexities of an Activist Science**

The critics’ charges of advocacy as opposed to objective attempts at education lead us to another story about challenges to ecological restoration. It has to do with the dual identity of the VSN restorationist. Restorationists are not simply expert knowers of local nature preserves, nor are they just a collective of concerned citizens drawn from the grass roots. They are both. They scientifically define local ecological issues and educate the public about them, while at the same time they politically organize action to address the problems and physically attempt to solve them. Restorationists describe their work as urgent and warn of the dire consequences of losing plant and animal species forever. Restoration science can’t look like other basic scientific research, they claim, because it must save nature at the same time it strives to study it. Its immediate goals are moral, according to restorationists. Nature is dying and we need to do something now to save it.

I would say that science—that monitoring, the studying, the research—has always been very important, but given limited resources there’s always a struggle between where do you devote your resources. And if you see the system going down the tubes, research is not going to save it in the short run. . . . I think the difficulty with not just restoration but conservation is [that] you’re not gonna have all the questions answered, but you have to do something. You reach a point where you look at the land and you see everything dying and the soil washing away and you don’t know everything at that point, but you know you have to do something.

The VSN is a social movement, and in this controversy it has proven difficult to present the politics of this movement as separate from the unbiased work of their science (see also Hull and Robertson in this volume). Critics are aware of this, and for some of them it is the most frightening aspect of the ecological restoration in Cook County. David Takacs (1996), in his book *The Idea of Biodiversity: Philosophies of Paradise*, describes the beauty and danger of this dual identity:

Science is commonly thought of by the public and portrayed by its practitioners as an objective, cold, nonpartisan, value-neutral enterprise. Scientists discover facts, mediate truths about nature: on this image their prosperity is thought to ride. Yet a group of biologists have been as partisan as can be in their attempts to preserve biodiversity. . . . They weave sensuous word tapestries in books meant to seduce readers to love biodiversity and therefore join biologists in their attempts to sculpt the political, physical, and normative landscapes to its needs. They profess to be experts on an array of economic, ecological and even aesthetic and spiritual values of biodiversity that would seem to stretch the limits of what we normally consider to lie within scientists' expertise. Hence the tension: biologists jeopardize the societal trust that allows them to speak for nature in the first place (3-4).

The controversy has been difficult for many restorationists because they now see a separation of their ecological work from the politics of its promotion. Many have described to me their feelings of loss due to the controversy.

It no longer has the purity it once had. I don't have the same joy in doing it that I used to. I have to think now before I cut a sapling and wonder if I am making a mistake or if someone is watching me.

A certain confidence in the rightness of their work has been damaged. I have been moved during interviews as I watched these restorationists pause, often looking down or holding their face in their hands, as they recount the experiences of the controversy that have forever tarnished the joy and simplicity of doing their restoration work. This sense of loss speaks to the importance of the concepts of purity and good science for the identity of restorationists as restoration activists.

A lot of people got into this because they didn't like the political end of the environmental movement. I got so tired of the "pollution du jour." I've terminated my membership in a num-

ber of environmental organizations because of that, because of bad science.

Restoration simply and purely serves the natural communities of the FPDCC, restorationists argue. Critics, of course, see restoration work very differently. For them it is clearly a social movement, and they have had to confront it as such. The VSN's ability to mobilize hundreds of people to attend public hearings and support its work stands out in the minds of many critics. Claimed one critic when she tried to explain how the VSN outnumbered the critics at public hearings by as much as six to one:

They are a well-oiled machine. They've had twenty years to create this movement. . . . I was raised Catholic. I used to have to go to catechism class. "Who made us?" "God made us." "Ecological restoration facts." [reads pamphlet] "Why do some trees get cut or girdled during restoration?" Paragraph of a fact. This is so they can hand these out to all their stewards and [the stewards will] give the same reply. When I went to the hearings for the [FPDCC] I was amazed. . . . They all said the same thing because they had read their little fact sheet. . . . I'm not criticizing it that much, but the clear-cut way it's going to be a fact. . . . In that aspect there is an evangelicalism. It's a movement. It's a religion.

The possible danger of public mistrust of scientific authority that Takacs (1996) warned about proved to be reality in the Chicago restoration controversy. The work of seamlessly blending science and ideology in the activist restoration of the VSN no longer served to maintain the authority of restorationists in this debate as the seams began to split. The critics, in seeing restoration as an ideological movement based more on moral commitment than on impartial scientific analysis, have pursued the scientific evidence with an eye for the faddish, the misinterpretation of results, and the hiding of research unbecoming to the goals of the VSN. It was noted earlier that some restorationists dismissed the critics' attacks on "legitimate scientific disagreements" as anti-science. However, I think the critics' challenges are best understood as reasonable responses to the unraveling of the two strands of the restoration movement, strands that critics believe must be kept separate if truth about nature is to be found. It is not an anti-science sentiment but a commitment to a very traditional notion of science that informs the critics' exploration of every disagreement or unclear finding.

. . . what is going on in Chicago is going on at such a break-neck speed without careful evaluation of the feedback we're

getting on it. If it turns out to be something that the scientific community is going to agree maybe we shouldn't be pursuing, there's going to be a tremendous amount of damage done . . . and I heard the term zealots used . . . they feel as though Chicago is going too hard, too fast, and trying to do too much, without really putting in the necessary safeguards—the checks and balances. . . . The problem is . . . you come up with a theory, and then you need to be really objective enough to be able to alter your theory based on the results you're seeing.

Another critic of restoration added,

You come out against Chicago Wilderness right now and if you're a restoration manager, I think you can probably forget about getting another job. So they start talking about science? No, that's politics. They start talking about science? There's values.

Especially disconcerting for critics is the use of promotional literature and language to discuss the supposedly scientific work of ecological conservation and restoration. The work of TNC and the CRBC in promoting the Chicago Wilderness project and restoration involves the production of brochures, posters, magazines, and public events. Public and private funds must be obtained, individual contributions are courted, and new partners in the CRBC are solicited to maintain the work of Chicago Wilderness. It is a political and financial reality that this work must continue around the activities of the restorationists and land managers. For all of the restorationists I talked to, this work was easily separated from their work on the landscape, even though they may participate in both activities.

They were composing a publicity piece, and one of the species that was on the preserve we were promoting was called the prairie dandelion. Well, no one is going to get too excited about the conservation of a dandelion, even though this was a rare species. They changed the name to "prairie lion's tooth" to avoid it sounding like a weed. We just laughed about it. It doesn't really make a difference for anything.

Critics, however, do not make the distinction between the fund-raising and promotional efforts of the CRBC organizations and the scientific and management work of the VSN in Cook County. Brochures describing restoration work in terms designed to appeal to the general public appear as just public relations "spin" to critics, who see the two activities as inextricably connected in the restoration movement. Many critics believe that the "sugar-

coated” descriptions of restoration work and its benefits are designed to hide what the public would consider abhorrent practices.

I think there has been a concerted effort to spin this in a certain way without telling people the nuts and bolts of what is actually going on. For instance, it sounds wonderful to say, “We’re going to restore these woodlands,” and call things “degraded woodlands.” Restoration doesn’t sound like “We are going out to cut down 158 black cherry trees.” . . . Most people wouldn’t interpret that as that. So the people . . . the public needs to know, “This is what we’re calling it, but here is how we are going to accomplish it. It includes girdling trees. It includes cutting trees. It includes burns that create pollution. It includes the loss of some wildlife from those burns. It includes herbicides that you may be exposed to. It includes a lot of things that are going to directly affect your life.”

Other critics of restoration point to the glossy magazines and the beautiful pictures of the forest preserves as misleading advertisements that give a false view of nature. Surprisingly, these critics don’t wish for the “Bambi-like” nature stories that many restorationists accuse them of preferring over reality.

It’s that massive aesthetic view of what restorationists have. It’s the aesthetic view. I’m so tired of *The Nature Conservancy* magazines, and in *Chicago Wilderness* publications now you see this fantasy view of what nature looks like: four or five neatly spaced trees, and you’ve got every possible wildflower growing. It’s a proverbial Garden of Eden! Isn’t nature nice! You can walk through and just smell the flowers. Boy, this is beautiful! Part of the nature experience is getting stuck by the hawthorn patch. It’s like they didn’t exist before? Thorn Creek Woods was named by settlers—I think there were thorns in there. Thorn Grove? Thornton? It sounds to me that thorns were part of the presettlement conditions also.

### *Contextualizing Science and Nature*

At public hearings and meetings, critics have paid much attention to the ways in which restorationists define ecosystems and native and nonnative plants, and the ways in which concepts such as canopy cover, for example, are interpreted and used. The critics believe that restorationists leave themselves room to “fudge” in their scientific definitions so they can cover themselves when they are wrong or to prevent critical outside examination of their work.

One of the biggest problems I have with the restoration effort is that they have a tendency to define things and make new definitions for old words and define things in their meaning of the term. Savanna: if you look it up in the dictionary, it says “treeless plain,” but they’re using it to mean 10 percent to 70 percent tree coverage. Well, that’s fine except . . . scientifically, if you say it means 10 percent to 70 percent . . . that’s not a description at all. There is so much room in that description that you are describing something from a heavy woodland all the way down to something that really resembles a prairie.

Restorationists deny this, and heated discussions occur between critics and restorationists over seemingly minute details of how a land management plan is worded or how community types are described.

The problem stems, in part, from the very different contexts within which each group makes sense of these definitions. As described earlier, restorationists view their restoration activities as urgent. There is a need for flexible definitions and understandings that make sense in the changing realities of the field. These definitions are based on restoration practice, the on-the-ground physical activities of cutting, burning, and seeding. Most words and ideas used come from traditional ecological science, but some are transformed in use by the restorationists. Admittedly, say restorationists, they make mistakes and change ideas about community types and their floral makeup or alter management techniques as they watch a site respond. But, they argue, that is the normal process of discovery required in the saving of native species by restoration.

The critics, on the other hand, see the manipulation of definitions and concepts as the political process of restoration as a social movement. Critics demand a more mature, precise science that restoration ecology is not. Most critics have difficulty understanding the context of restoration practice, in which these apparently fuzzy definitions and classifications make sense and are appropriate. Operating from expectations based on very traditional notions of science, critics have trouble accepting that restorationists would dare present these fuzzy definitions and flexible classifications publicly to describe and defend their work. Restorationists often struggle to translate why they know what they are saying is “right,” and such struggles confirm for the critics that these people are untruthful, defensive, and not sure of what they are doing. Neither side can step outside the limits of its commitments to differing concepts of appropriate science. Such failures of self-reflection on both sides have so escalated the debate that in this region, the future of restoration as both a social movement and an applied science is in doubt.

## Conclusion: Restoration as a Reflexive Practice

One of the founders of the Chicago-area restoration movement once said to me that the value of ecological restoration was not only in its ability to restore the region's native flora but also in the way it could initiate public dialogue about nature. He believed that restoration challenged traditional ways of thinking about nature and engaged people in discussion about what nature is and what relationship humans should have with it (see also the philosophical discussion about this topic in the first section of this book). I thought the restoration controversy was going to be that dialogue. I had hoped that the initial anger and mistrust would be replaced by attempts at listening and discussion. Instead, there is just more anger and mistrust. The controversy has spawned an all-out war to win on both sides. Restorationists and their critics have failed to learn enough about each other, and themselves, for dialogue to begin. According to the critics, this is because the restorationists never really wanted a dialogue. They wanted to persuade the public and teach but not listen. For the restorationists, the failure of a public discussion is due to the critics' dishonest refusal to accept the region's ecological peril and their desire to destroy the restoration movement with exaggeration and lies on behalf of some unrelated political agenda. It is unfortunate that these small segments of Cook County's population, both of whom actively concern themselves with the ecological health of the forest preserves, continue to fight over whose concern is best.

In this chapter, I have sought to demonstrate that the work of ecological restoration is political. Restoration gains broader political meaning in its reception by the larger public. The example of the Chicago restoration controversy clearly demonstrates that the response of land-managing authorities to such public definitions, even ones they disagree with or don't understand, further defines the politics of their conservation practices. The social and political meaning of restoration is defined not only by the changes in the floral composition of a particular site but also by the ways in which restoration practices establish the place of restorationists and their knowledge in relation to the public. Restoration activities carry with them assumptions about the best way to see and interact with the landscape. These assumptions privilege certain understandings of nature and, as is the case in Cook County, draw boundaries that exclude many of the lay public's experiences as invalid, inappropriate for contributing to a dialogue on the management and care of the public preserves.

Certainly, we must have criteria to determine the best course for the management of public natural areas, but we must carefully reflect on the ways in which these criteria are determined and the meaning they may have for those beyond the circle of experts who create them. This is especially important

when conservationists are dealing with public lands and are reliant on the public to support their work (see Ryan, this volume).

The concept of the volunteer restorationist that was developed on the FPDCC lands may be one of the great success stories of U.S. grassroots environmentalism and conservation. The VSN is recognized as having set the standard for the organization of citizen participation in the work and science of ecological restoration. The VSN is a successful social movement, but can it also be a successful scientific authority in the eyes of the nonrestorationist public? In the Chicago controversy, the VSN struggles with maintaining this dual identity. It is this struggle that has made attempts to resolve the conflict by use of the restorationists' own scientific evidence so difficult. Restorationists can't be trusted, say critics, to do the unbiased scientific study necessary to prove the value of their work. This is a most difficult problem to solve. Some have argued that eventually our culture's notion of science will change and allow the seeming contradictions of restoration science to be understood as good science (Jordan 1997, Siewers 1998). I don't think restoration in the Chicago area is really about reconstructing the whole society's views of objectivity and authority. The political work of the volunteers I spoke with is much more parochial and immediate.

I hope that the experience of the Chicago-area restorationists encourages local conservationists to begin considering a new practice of ecological restoration—a practice that recognizes rebuilding natural systems on local preserves as necessarily the rebuilding of local social relationships as well. These relationships must be as important a responsibility to restorationists as is the responsibility already assumed for the alterations made upon the natural communities they restore. But let me be clear about which social relationships I am referring to. Certainly, they include those created through the recruitment and training of volunteers, the cultivation of support from local politicians and landowners, and the development of financial support from public and private sources. They may also include those social relationships affected by the broader project of redefining the human relationship with nature. These are some of the key activities of ecological restoration as a social movement and are changes in social relationships that are openly acknowledged by restorationists. But it is the subtle structuring of the social relationships of power that goes unrecognized by many restorationists. It is these relationships that position restoration as an objective science and privileged practice on public preserves designed for multiple use and interpretation. Restorationists involved in Chicago Wilderness often fail to take responsibility for establishing these relationships—relationships that structure how the preserves and their natural components will be valued, interpreted, and acted upon by the local community.

This active concern for how one's scientific practice creates the social arrangements that support the political agenda of its practitioners, often at the expense of competing agendas, is what social scientists call reflexivity. Reflexive practice for me requires that I pay careful attention not only to the biases I bring to the research as an individual but also to those inherent in the seemingly objective practices of sociological data collection and analysis, theoretical reflection, and writing. This chapter has elements that reveal my attempt to reflexively pursue this analysis of the Chicago restoration controversy. Not only have I tried to explain the theoretical agenda that guides my perception of the controversy, but I have also allowed the reader a glimpse of the politics and problems of doing and presenting the research itself. My assumptions, and those inherent to the sociological practices I employed, were pointed out rather forcefully by many of the people I interviewed. These challenges proved to be important data with which I improved and altered my later practice and analysis. The challenges of restoration critics could serve as similar data for ecological restorationists. But it will require listening and learning about one's own practice and politics through the experiences and sometimes angry voices of others. Of course, restoration is not ethnography, and it probably shouldn't be. Yet restoration can be, and in my opinion should be, a reflexive conservation practice.

Before the conflict in Chicago can become a productive dialogue between restorationists and their critics, there will need to be a dialogue among restorationists. The controversy provides a critical opportunity for the restoration community to explore the ways in which reflexivity can be incorporated as a means for addressing problems central to the perpetuation of the conflict. There is no one model for defining a reflexive practice. It would be foolish and possibly destructive for restoration science to simply copy the model from the social sciences. Yet in conjunction with social scientists, restoration practitioners and land managers can begin to define this new practice locally, as it meets the needs and problems of their particular landscapes and communities. In the long run, restorationists must become sociological strangers as well as scientists, land managers, and politicians. The work of ecological restoration should be more than just the interpretation of nature's needs; it must be the discernment of the needs of nature's publics as well.

## Notes

1. I do not attribute any of the quotes in this chapter by name. While most of the respondents gave me permission to include their names, I have chosen to maintain the anonymity of all respondents out of respect to the few who wished to remain unacknowledged. In addition, I have removed the names of those persons

mentioned within the quotes. As the NEPA lawsuit continues, I believe this to be the most prudent method for protecting the respondents. A complete list of the interviewees whose comments are used in this analysis can be obtained from the author.

2. One notable exception is the work of USDA Forest Service social scientist Paul Gobster. His analysis (Gobster 1997) simply and clearly describes the specific critiques and concerns of local restoration critics. Unfortunately, most restorationists dismissed even this effort. Speaking about the article, a TNC employee remarked to me, "It wasn't very useful. He is giving credibility to these people!"
3. Those who have studied similar public controversies argue that such events are attempts to enroll the researcher on their side (Scott et al. 1990). Some have argued that symmetric, constructivist accounts of scientific controversy inevitably appear to be written from the side of the underdogs or critics of established authority, and thus are not symmetric (Mulkay et al. 1983). I would suggest that while this is a valid concern, it is often true that much can be learned about a controversy from the bottom up—from the perspective of those whose challenges to the established hierarchies make clear the social practices and relationships that are central to understanding these conflicts.

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# RESTORING NATURE

*Perspectives from the Social Sciences  
and Humanities*

EDITED BY  
PAUL H. GOBSTER AND R. BRUCE HULL

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