Negotiating technologies and social action on the prairie: visual, verbal, and spatial rhetorics in the narrative of a public, interpretive exhibition

Susan Lee Booker
Iowa State University

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Negotiating technologies and social action on the prairie: visual, verbal, and spatial rhetorics in the narrative of a public, interpretive exhibition

by

Susan Lee Booker

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: English (Rhetoric and Professional Communication)

Program of Study Committee:
Charles J. Kostelnick, Major Professor
Dorothy A. Winsor
Barbara J. Duffelmeyer
Margaret R. LaWare
Lisa M. Fontaine

Iowa State University
Ames, Iowa
2003

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This is to certify that the doctoral dissertation of

Susan Lee Booker

has met the dissertation requirements of Iowa State University

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Committee Member

Signature was redacted for privacy.

Committee Member

Signature was redacted for privacy.

Committee Member

Signature was redacted for privacy.

Committee Member

Signature was redacted for privacy.

Major Professor

Signature was redacted for privacy.

For the Major Program
To
Anna Butler Faircloth Booker (1927-2001)
and
Herman Lee Booker (1927-1998)
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ACKNOWLEDGMENTS

My deepest appreciation goes to many people who have touched this project if only from a distance; I would not have known the end of it if not for you all. Some of you are listed here.

Many thanks to members of my Program of Study committee, present and past, especially to Nancy R. Blyler and Charlotte Thralls, and to James Pease and Susan Conrad. Special thanks to Charles J. Kostelnick, committee chair, who guided this project with wisdom, patience, and extra measures of grace.

To dear friends and colleagues for their interest, tireless encouragement, and unforgettable lovingkindness: at Iowa State University, Christianna I. White; Patricia C. Harms; Alzire Messenger; Lee-Ann M. Kastman Breuch; Andrea Breemer Frantz; and Neil Lindemann; at Hampden-Sydney College, Lizabeth Rand, Claire Deal, Elizabeth Deis, and Lowell Frye.

To special friends and family, who often merge as one: Robert C. Booker; Nancy K. O’Reilly, Patrick O’Reilly, and Kaitlyn, Sean, and Lauren Grace; Linda Wiley Ruble; Joanne and the Rev. Al Reiners; J. Malcolm Pace III; and Thomas A. Banton.
CHAPTER ONE: INTRODUCTION

In the theater of environmental tales of rags to riches, the Neal Smith National Wildlife Refuge and Prairie Learning Center (NSNWR/PLC), located in central Iowa, deserves at least a nomination for a supporting role. The refuge and prairie center, which work to restore and preserve Iowa's native tallgrass prairie and oak savanna ecosystems, exist on land that was originally slated for development as a nuclear power plant. When the refuge is fully established, approximately 8,600 acres will be home to the largest such prairie ecosystem restoration effort in the United States.

RESEARCH QUESTIONS GUIDING THIS STUDY

This document describes a qualitative case study that analyzes the visual, verbal, and spatial rhetorics associated primarily with the interpretive museum accompanying the Neal Smith National Wildlife Refuge and Prairie Learning Center. The study also includes an analysis of the establishment and development of the refuge itself as well as the refuge's nature trails and auto-tour route. In analyzing these rhetorics, I was guided by a central research question: How are issues of power and social action negotiated in a public educational exhibition? The question itself invites interrogation, in part because of the complexities in meaning associated with the terms it asserts and with the related terms with which it contends.

Power, for example, gets defined—and consequently valued—in numerous ways among the literatures of rhetoric, cultural studies, and professional communication. Similarly, social action and intervention come to this project via appearances in both the work of British cultural studies practitioners and in the pedagogies of contemporary teachers.
attempting to enact social change beyond the curriculum through community service learning. Further, I use the idea of negotiation to reflect the intensely rhetorical nature of the work of the refuge staff and designers. How they mix technical, botanical, and biological information within the framework of an interpretive museum space in order to accomplish stated goals and objectives for educating various publics about the prairie ecosystem—and for encouraging those publics’ participation in and commitment to the refuge’s work—requires an intricate dance among rhetoric’s participants of audience, purpose, context, and format. The results observed within the exhibition occurred because of decisions staff and designers made to include or exclude, to highlight or downplay, to focus on the past or on the present or future. These observable outcomes, then, are the outward and visible signs of the less-visible wrestling involved in all rhetorical projects. Often, the outcomes are not absolute or resolved. Indeed, they may not be resolvable. What I refer to in this document as tensions result; such tensions are the visual, verbal (textual), or spatial dancing that has taken place or that takes place within the exhibition. They are the tenuous result—often the unresolvable complication—of rhetoric in action. In later sections of this chapter and in subsequent chapters, I address these terms more fully and discuss their role in the contexts of both the exhibition and in rhetoric, composition, and professional communication pedagogy. Finally, I discuss the term environment, a term related to the work of the study site—and therefore assumed within the overarching research question—in the next section where I clarify other key assumptions. A reasonable extension of that term, nature, is also part of that discussion.

This project, then, may be described as deep rhetorical analysis of a site often overlooked by scholars in rhetoric, composition, and professional communication, although such a site is familiar and popular in contemporary culture and appears to be a growing
source for information about and action associated with the environment. Further, this project addresses not only the verbal, or textual, material that contributes to the persuasive discourse of the visitors’ center; it also examines the visual and spatial elements that refuge staff and designers intended in order to fully involve visitors—from introducing them to prairie landscape and environmental biodiversity to eliciting their participation in the work of restoring and preserving portions of the refuge, and, finally, engaging these community participants in not only deeper discussions about the environment but also greater action to preserve and protect natural areas around them, a concept I refer to as civic discourse. Such discourse involves not only engagement with the subject under consideration but also social action on its behalf, thus expanding how we might have perceived civic discourse in the past.

In the final chapter, I discuss the importance of such applications of civic discourse to rhetoric, composition, and professional communication pedagogies—an idea central to the work of cultural studies.

Given cultural studies scholars’ understanding of representation and of their understanding of the intricacies of power, culture, and context, I am led to ask these questions in addition to the central research question:

— How are technology and progress articulated through representation, power, and social action in the genres and practices of professional communication present at the NSNWR and PLC?

— What do the narratives expressed in the exhibition presume about the PLC’s audiences and their understanding of Iowa’s pre-European settlement prairie landscape?
— How are the narratives of restoration and preservation of the prairie ecosystem complicated by tensions such as wild and tame and insider/outsider, technology and Nature, heritage and progress, hidden/understated and revealed/promoted, constructed/control and natural/free, and stated/articulated and assumed/ignored? And, finally,

— How do these rhetorics of prairie restoration and preservation appear to operate in support of or in opposition to prevailing discourses of large-scale, global agricultural production in the region?

ASSUMPTIONS UNDERLYING THIS PROJECT

I provide a fuller response to the central research question in subsequent chapters, but the question seems important to pose in the first place because of its relationship to what I see as five key assumptions associated with this project: citizens must participate in public sites of discourse, the environment and nature are socially constructed notions, metaphors work as powerful elements in persuasive discourse, mythologies shape our impressions of culture and society, and technological objects reflect important social constructs. In this section, I discuss each of these assumptions as it relates to the present study.

Citizens must participate in public sites of discourse

This project is guided by the presumption that in order to sustain obligations of citizenship and social action in this new century we must fully engage in public sites of discourse, acting in ways that reflect critical thought about and participation in that discourse toward a transformative end. Arguing for helping students develop a “social imagination”—a term he borrows from Kurt Spellmeyer—Bruce Herzberg encourages fruitful community service learning as a way to encourage students’ broader perception of the world. His
connection between service learning, critical thinking, and participation in civic life supports this key assumption in the present study. Herzberg writes:

Students who lack this social imagination. . . attribute all attitudes, behavior, and material conditions to an individual rather than a social source. Students will not critically question a world that seems natural, inevitable, given; instead, they will strategize about their position within it. Developing a social imagination makes it possible not only to question and analyze the world but also to imagine transforming it. (67)

The present study assumes that visitors to the refuge and prairie center, too, benefit from a resultingly rich but perhaps complicated relationship with the environment that emerges from interacting with the unresolvable tensions in the exhibition’s discourse.

**The environment and nature are socially constructed notions**

Next, I assume that, as Carl G. Herndl and Stuart C. Brown write, the environment is a construction,

a concept and an associated set of cultural values that we have constructed through the way we use language. In a very real sense, there is no objective environment in the phenomenal world, no environment separate from the words we use to represent it. (3)

While Herndl and Brown’s claim challenges us to surrender certainty about what we think constitutes the environment beyond constructions from language, perhaps less broadly painted strokes make a similar point. For example, visitors to one of the first exhibit pods in the Prairie Learning Center’s exhibition—in a section titled “Much More Than Grass”—see that biological/botanical landscapes similar to prairie may, in fact, be called something else,
depending on where those landscapes are located. In South America, the prairie-like landscape is pampas. In Africa, it is the savanna. In Asia, the steppes. In Australia, the lowlands. Indeed, defining prairie remains a central task for refuge staff. Knowing when efforts to reconstruct prairie are, in fact, complete or successful is similarly debatable. Even at this early juncture in our prairie education, we see the mutability of the term and a consequent opening into which a rhetorical discussion might enter.

Our seeing entities such as the environment or nature as a result of socially constructed discourse is further challenged by Herndl and Brown’s claim that “the values and beliefs we hold about the environment are established through the discourses of a bewildering variety of genres, institutions, and media” (3-4). Therefore, we are shaped in quite powerful epistemological and ethical ways by the words and images we associate with a concept.

Further assumed within the analyses associated with the present study is “how culture gives meanings to the worlds we inhabit,” as broadly posed by George Myerson and Yvonne Rydin in *The Language of Environment*:

> Environmental discussion has many functions: to protest, to expose, to reassure, to propitiate. And, as a result, laws are enacted, rules are revised, institutions are created and destroyed, lives endangered and saved. At the same time, meanings are created, thickened, discarded. And the meanings rebound, they affect the outcomes, the laws, rules and institutions. Indeed, the meanings become the ‘situation,’ the cultural moment in which the environment is discussed. . . . Environmental arguments are factual,
informative, often scientific. But they are also meaningful, suggestive, and atmospheric. (2-3)

Biologists dub a particular mix of soil, hydration, and biodiversity prairie, but we are naïve if we fail to recognize another instance here of the power of naming and to ignore the degree to which the term prairie, for instance, becomes romanticized in contemporary American culture. One popular radio show host, Minnesotan Garrison Keillor, has created a loyal following of listeners and readers based on his home-spun tales of life on the prairie with his “A Prairie Home Companion” public radio broadcasts. The landscape of his Minnesota narratives is often referred to particularly as “the prairie.” Such specificity serves not only to situate the listener in a clearly drawn space but also to revitalize heroic images of life in such a space.

Indeed, I grant that these assumptions require substantially new ways of conceiving our surroundings, as constructions rather than presumptions. The voices of geographers, landscape architects, and geologists resonate in Chapter Two’s review of literature to help situate these notions of a constructed environment and nature. Indeed, scholars who conduct research that addresses some aspect of the environment may more successfully approach the subject not only by seeing this constructed nature of the environment but also by realizing that such construction happens in multiple and various settings by multiple and various speakers or writers who thus produce multiple and various types of texts.

Hemdl and Brown specify several contexts from which those words used to represent environment emanate:

- powerful scientific disciplines such as biology and ecology.
- government agencies such as the Environmental Protection Agency and its regulations,
In the present study, I explore not only the "words we use to represent [the environment]" but also the images and spaces that work in tandem with or work to supplant those words to shape contemporary understanding of a specified type of environment, a restored tallgrass prairie ecosystem, and the rhetorics that accompany the work of restoring and preserving that landscape. Further, these words, images, sounds, and spaces—broadly, the texts—that I analyze exist in various sub-contexts of the overarching museum experience.¹

Metaphors work as powerful elements in persuasive discourse

A third key assumption underpinning this project is that metaphors function beyond mere ornament in our language and in this analysis of museum display, in particular. Instead, these ancient figures of speech hold powerful persuasive sway in discourse—textual, visual, and spatial. Analyzing metaphor and analogy in science, technology, and medicine is, in fact, quite a useful way of communicating complicated topics to general audiences or to those without technical expertise (Sontag 1988, 1989; Lakoff and Johnson; Ortony; Gross).

Similarly, the prairie learning center's exhibition makes substantial use of metaphor and analogy to educate visitors about a less-familiar ecosystem, its components, and even about characteristics of the facility itself. Interestingly, in several instances, the metaphors discussed in Chapter Four: Results and Analysis either depend upon an appreciation of traditional understandings of the environment or construct for the visitor an image of or an

¹ Although my case study site is called a "learning center," I purposefully use the term "museum" throughout this document because I suspect that visitors to the Neal Smith National Wildlife Refuge (NSNWR) conceive of their experience there in much the same way as they would a typical museum-going experience by virtue of the presence of an orientation film, gift shop, interactive displays, and educational focus.
appreciation for “an earlier, simpler time.” That tension to present the relatively progressive actions of the refuge’s restoration and preservation project as part of a return to a traditional heritage makes this case study most compelling and the use of metaphoric analysis relevant as one element within the field or range of linkages examined.

**Mythologies shape our impressions of culture and society**

Mythologies hold tightly to us and guide us through culture and society. For visitors to the refuge, such mythologies maintain a tight grip through exhibits, along trails, and alongside visitors’ participation in promotional events. The refuge and prairie learning center’s location in the Midwest exposes visitors to a narrative that reflects the mythology of pioneer purity and grassroots sensibility.

Powerful aspects of the state’s cultural myths include images of brazen, sod-busting pioneers supplanted by contemporary images of sun- and wind-burned farmers working from before sunlight to after dark at harvest and planting times. Although the technologies associated with farming have indeed advanced from the early days of the moldboard plow and oxen or mule, one has only to reside in the state during preparations for a presidential election to experience the attention paid to small-town, rural life and to the people who populate the cafes and diners, gobbled up by media as timeless images of stalwart ancestors of the pioneers and their indomitable spirits. Farmers—either in their fields or drinking coffee with their peers at the local diner—are often pictured for national television as reproductions of the myth, portrayed as hackneyed images that nonetheless allude to a simplified, grassroots sensibility that seems to appeal to those supervising the airwaves.

In some ways the mythology has to compete against contemporary elements of progress and efficiency in order to get visitors where they are meant to go, both literally and
figuratively. The prairie center lies only 20 miles from the state’s capital, a thriving center in its own right and home to several leading insurance companies in the U.S. Visitors to the refuge and prairie center most easily approach from interstate highways that bisect the state, north to south and east to west, although they quickly leave behind the relatively seamless speed and habit of the interstate highway system for a journey that takes them through small towns, along the mile-grid layout of so many Midwest country roadways, and finally along a winding path to the prairie center itself.

Yet, in spite of the capital’s proximate interest in government and private industry, the state’s economy relies most substantially on agri-business: farmers and producers of farm equipment and related agri-businesses run the economic show in this part of the country. The state’s status as a global agricultural powerhouse only corroborates the images and cultural myths that have so closely bound this area since its settlement by Europeans beginning in earnest in the mid-1830s (Sage 52).

French structuralist Roland Barthes’ treatise on myth, semiology, and mythology, *Mythologies*, allows “that myth is a system of communication, that it is a message” (109) that can “consist of modes of writing or of representations; not only written discourse, but also photography, cinema, reporting, sport, shows, publicity...” (110). Further, Barthes writes, myth is part of a semiological system—of signs, signifiers, and significations—and “studies ideas-in-form” (112). In fact, Barthes explains, myth is characterized by “transform[ing] a meaning into form. In other words, myth is always a language-robbery” (131). Although much of Barthes’ theorizing goes beyond the scope of this project, it is in his contention that “myth is depoliticized speech” (145) that the connection to the current study seems more apparent. Barthes says that one engages in political language when that language, that
speech, is "operational, transitively linked to its object" (145). But when "man speaks in order to transform reality and no longer to preserve it as an image, wherever he links his language to the making of things, meta-language is referred to language-object, and myth is impossible" (146). In a sense, then, it appears that when language works within a sign system and is functioning without a sort of mediation, or a sort of self-consciousness, it appears to be depoliticized and therefore ripe for myth. The repetitious use of the Midwestern farmer to represent wholesomeness, diligence in work ethic, and—at its greatest length—goodness appears to be this sort of myth in the making. Further, Barthes asserts that "the very principle of myth" (129) is its quality of making natural what might otherwise seem more purposefully motivated. Myth, Barthes writes, "transforms history into nature"(129). His explanation of this characteristic "innocence" (131) of myth that gets read by consumers as fact (131) has direct implications for the work of the refuge and the exhibition. Because of this naturalized quality to myth, notions of land stewardship and agricultural production signify something quite other for residents of the area than do ideas associated with restoration and preservation, tasks that require the refuge staff to reconfigure perceptions, to attempt to unravel a tightly woven mythological narrative about Midwest landscape, its forms and functions. If we adhere fully to Barthes’ theory, the work of the exhibition to recast a portion of the landscape in a new role appears futile, at least in part.

**Technological objects reflect important social constructs**

Although not a linguistic element in the stated research question but one which is nonetheless slippery, complicated, and impossible to ignore in this study is *technology*. Cultural critics, rhetoricians, and philosophers often begin their discussions of technology by casting back to Plato’s use of the Greek term, *tekhnê*, “meaning either ‘art’ or ‘craft,”’ (404)
writes Peter Sedgwick, co-editor with Andrew Edgar of *Key Concepts in Cultural Theory*. Sedgwick differentiates between two understandings of technology, however; the first, “concerns that web of human practices within which the manipulation of (raw) materials is undertaken with a view to giving them a functional and useful form” (404). This first definition aligns with “technique,” he writes, and “presupposes some notion of purpose or design with regard to the manner in which materials are subsequently used” (404). The second understanding of technology, Sedgwick asserts, refers to the “end product of such a process of manipulation,” so that we have not only the activity or process of changing raw material to functional form but also the thing itself. I adopt a similar understanding here of this two-part treatment of technology.

When cultural critic Neil Postman reconstitutes technology for his discussion of culture and media, he situates the term squarely in the realm of politics and imbues it with power and consequence. “New technologies alter the structure of our interests: the things we think about,” Postman writes. “They alter the character of our symbols: the things we think with. And they alter the nature of community: the arena in which thoughts develop” (*Technopoly* 20). Postman is joined by political scientist Langdon Winner in seeing effects of technology rather than neutral processes and things, although Winner also sees technology as “artificial aids to human activity” (4). He, too, appears to understand technology as bipartite, as bound up in both “making and using.” Winner writes that the domain of those concerned with “how things work” and “making things work” is limited “to people in certain occupations, but not for anyone else. ‘How things work’ is the domain of inventors, technicians, engineers, repairmen, and the like who prepare artificial aids to human activity and keep them in good working order” (5). That domain may be limited, Winner concedes,
but what does attract the rest of our attention “are tools and uses. . . . Once things have been made, we interact with them on occasion to achieve specific purposes” (5-6).

It is Winner’s assertion about the power of technological objects and what he calls the “development of a philosophy of technology” (4) that seems most fitting for this study because of the breadth of technologies associated with both the work of prairie restoration and the public exhibition of that work—from the technologies of the plow and tiling that led to prairie’s destruction to seed sieves, containers, and motorized and computerized farm equipment that further aids the reconstruction of the landscape. Throughout the exhibition, technological objects also play a substantial role in the display of technical concepts. Winner writes that “The crucial weakness of the conventional idea [of technology] is that it disregards the many ways in which technologies provide structure for human activity” (6). He continues: “If the experience of modern society shows us anything, however, it is that technologies are not merely aids to human activity, but also powerful forces acting to reshape that activity and its meaning” (6). Further, “[t]he kinds of things we are apt to see as ‘mere’ technological entities become much more interesting and problematic if we begin to observe how broadly they are involved in conditions of social and moral life” (6).  

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2 In the course of locating this discussion about definitions of technology, I was drawn to a popular series of books for children, the Dorling Kindersley Eyewitness Books and the edition titled Technology by Roger Bridgman. Here, technology is defined as “the science and art of making and using things” (6). But what seems particularly powerful is the degree to which the writer aligns technology with human efforts and consciousness. The introduction continues: “Human beings are uniquely able to turn the materials of the natural world into tools and machines that can help them live. Although other animals can make things and use tools—the otter uses rocks to break open a shell—the way they do this hardly ever changes. Human technology is different: people are able to see new needs, find new ways of meeting them, and spot the value of accidental discoveries. The discovery of fire, for example, and its ability to transform clay into pottery or rocks into metals, made the modern world possible. Over the last few hundred years, scientists have found out why materials and machines behave the way they do. Using this knowledge, old materials have been improved, new materials invented, and science and mathematics brought to bear on products as different as swimwear and aircraft. Making things starts with design—working out what is needed and how to provide it. Designers now have a vast range of materials, methods, and components with which to realize their ideas, and today much of their work can be done by
ideas that guide the present study: that technology is defined by not only the things but also by the processes employed to create those things and that we must see technology as wielding influences and effects. Technologies—these broadly understood “artificial aids to human activity”—are never neutral (Winner 4).

Finally, I adopt here Charles Bazerman’s ideas about technological objects. In his 1998 Commentary titled “The Production of Technology and the Production of Human Meaning,” Bazerman defines a rhetoric of technology as “the rhetoric that accompanies technology and makes it possible” (385). Bazerman’s understanding derives from his book-length study of the development of Edison’s light bulb, a clearly technological object. Despite the intensely natural (environmental) purpose of the refuge and prairie center, I contend that Bazerman’s threading of technology through multiple discourses holds currency in this discussion as well. He continues: “The rhetoric of technology shows how the objects of the built environment become part of our systems of goals, values, and meaning, part of our articulated interests, struggles, and activities” (386). In turn, such objects circulate among various users, producing various effects and influences but without predictable or preconceived results. Bazerman adds that a technology’s development is necessarily interactant with many other powerful discursive systems, and if there seems to be an inevitable trajectory, it is not technologically determined in itself; it is in the alliance of several discourses that provide major meanings for the technology. (386)
When the prairie center addresses the role of a particular technological object—the plow, for instance—in its interpretive texts, images and orientation film, does so within a discursive system that "surround[s] and embed[s]" that technology (387). "By picking apart the conjunction of the powerful discursive forces that create value for and give shape to technological developments and their uses," Bazerman writes, well within the spirit of restoration and cultural intervention underway at the refuge, "we can begin to regain some of our choices about the technological future we will live in" (387). An important sense of agency appears to derive from these discourses, these rhetorics, of technological objects.

**BENEFITS DERIVING FROM THIS STUDY**

This project draws together literature from environmental rhetoric, museum studies, and cultural studies to analyze the visual, verbal, and spatial narratives associated with the educational exhibition at the refuge and prairie center. The Friends of the Prairie Learning Center advertise as their mission to “Increase public awareness and appreciation of the Refuge; Encourage public participation in prairie restoration and preservation; and Promote public use and enjoyment of the Refuge” (Friends). Yet there is more than simply living out that mission statement at work in the narrative associated with this site—in the state’s daily newspaper editorials, features, and news and travel stories about the refuge and prairie center; on the walking trails and auto-tour route through the refuge; in the planning and promotional documents generated by museum designers and refuge staff to establish and promote the site; and within the exhibition’s displays and its three-dimensional space and sounds as well. The central messages communicated in the exhibits within the Prairie Learning Center—what we might more familiarly call a visitors’ center exhibition—attempt to answer three main questions about the nearly vanished landscape: “What is Prairie?”
“What Happened to It?” and “Will It Grow Back?” I examine in more detail in later chapters how the exhibition narratives contend with these questions.

What benefits, then, derive for teachers, scholars, and practitioners of rhetoric, composition, and professional communication when pairing theory and practice from museum studies with cultural studies and situating this discussion among ideas about the environment in order to examine an interpretive museum space such as the NSNWR and PLC? The research conducted here has among its central purposes to enhance how a context such as the refuge and prairie center uses persuasive discourse and to what ends. This project interrogates visual, verbal, and spatial rhetorics to examine how issues such as nature, technology, progress, and control are represented in a public exhibition. I echo Henrietta Lidchi’s “poetics” of exhibition by analyzing the metaphors used in the visual, verbal, and spatial conversations of landscape restoration at the center. Additionally, this project investigates how those rhetorics engage with notions of power and social action in order to better understand how relationships exist between rhetoric, professional communication, and culture, and, further, to use that understanding to draw attention to constructed and contested public spaces where visual, verbal, and spatial discourse happens but is often viewed as non-negotiable. Indeed, as Steven C. Dubin reminds readers in *Displays of Power: Memory and Amnesia in the American Museum*, “museums are no longer dead zones or monuments to the past” (227). Now, Dubin writes, they are “noisy, contentious, and extremely vital places” (227). When Lidchi, in her examination of the “Poetics and Politics of Exhibiting Other Cultures,” asks “What does Trandescant’s museum represent?” and answers that “what is being represented. . . is the puzzling quality of the natural and artificial world” (158), I see an open invitation to conduct a similar examination of the tension between the natural world
(and its heritage landscape in the Midwest, the tallgrass prairie ecosystem) and the technologies that impact upon it (and, especially in the case of the tallgrass prairie, those technologies that once destroyed prairie and are now depended upon for prairie’s restoration). Technology and the environment, then, serves as a topical umbrella for the study described here.

Other similar tensions—presented in Chapter Four as units of analysis—emerge from the visual, verbal, and spatial discourses of the refuge and prairie center and prompt the following questions:

— How is the restoration of a heritage landscape controlled by refuge staff and museum designers and consumed by visitors to the center?

— How has the work and activity of the NSNWR configured or reconfigured regional identity and the discourses of that identity?

— How do objects, texts, space, sound, and living creatures at the refuge—such as the bison and elk presently located there but also those creatures not currently present—function to shape narratives about technology and the natural world? about progress? about wildness? about what is hidden and what is revealed?

And finally,

— In addressing a politics of exhibition, who/what is included in the narratives of prairie destruction and of prairie restoration? who/what is implicated? who/what is excluded?
BACKGROUND INFLUENCING THIS STUDY

This project grew out of several important influences in my own life: childhood exposure to museums; undergraduate study and a first career in journalism; and later graduate study in rhetoric, composition, and professional communication. As a young child, I was fortunately tooted around atop my father’s shoulders through miles and miles of the 1964 New York World’s Fair and again three years later, made to walk under my own steam, through Montreal’s Expo ’67. One of my most vivid, and lasting, museum moments came, though, on periodic family visits to Richmond, Virginia, where I joined other young children experiencing the edgy wonder over the Egyptian exhibit at the Virginia Museum of Fine Arts. Visitors walked into a darkened room and up a ramp to peer down over into a sort of Plexiglas™-topped sarcophagus to gaze at this most popular bit of the museum’s collection at the time. When that section of the museum was renovated not too many decades ago, the mummified remains were—more appropriately, I now believe—removed from public view.

In later life, I used my undergraduate degree in journalism and mass communication to work in public relations, public information, and community journalism. As a reporter, I called on numerous sources in order to better understand people’s interests in and their actions toward making their communities productive, safe, and invigorating places in which to live their lives. I learned about stakeholders and about voices—those included and those excluded. Although I did not realize it at the time, I was very much a part of shaping public discourse, of the rhetoric of the polis, and I have now come to see that work as an important prelude to this project. The processes that define a reporter’s work are strikingly similar to those that define a researcher’s work—especially a researcher engaged in the enterprise of “doing” cultural studies, of conducting qualitative research.
Finally, I experienced immersion in a graduate program where allegiance to principles of classical rhetoric underpinned most assumptions and analyses that guide the present study. Coursework in visual rhetoric and rhetorics of science along with guided independent study in museum exhibition and practice in a graphic design studio where students developed content and design for a local children’s museum provided the theoretical tools necessary to conduct this analysis. Further, engaging students as a teacher of technical communication during my coursework provided important touchstones for the daily working out of the knottiness of issues being wrestled with on the pages of journals and monographs. Teaching required me to locate examples of the kinds of “translations” of technical ideas to general publics that inform this study. A seminar on cultural studies allowed opportunity to read about and to begin to understand that enterprise so that I could proceed toward enacting a methodology suitable for this examination.

Beyond a childhood exposure to museums, a first career practicing the rudiments of qualitative research in the more popular and familiar context of journalism, and immersion in an intensely rhetorical graduate program, this project developed from an unexpected attraction to the prairie landscape begun while I resided in Ames, Iowa, during graduate study. I began this project, then, as a tourist. An brief notice in the local newspaper announced a guided walk through a reconstructed prairie at the city’s high school. A local specialist led a group of about a dozen people on a stroll through what looked to me at the time like an unruly field of weeds. A second outing to Doolittle Prairie—a few miles north of Ames—to see its metaphorically rich and marshy prairie “pothole” revealed a place lousy with vibrant orange butterfly milkweed in bloom, and I was forced to change my earlier presumption about the landscape. Prairie flora represented more than weeds. Further, the
leader of that walk revealed that a portion of the Doolittle remnant is, in fact, virgin prairie, never cultivated.

Much of the methodology for the current study stemmed from my own initial interest in prairies—a subject about which I knew very little at its start, so that as such a learner I was very much a part of the appropriate, intended audience for the work of the refuge. That initial interest, though, is very much linked to a remembrance I have of standing for the first time on that particular patch of ground at the Doolittle Prairie—surrounded by the gold haze of a summer dusk—and knowing that no plow had ever sliced that land. That it had been consigned to natural rather than mechanical interactions for its history. And that now, it was not only preserved, it was also protected and shared. I was a prairie tourist before I was a prairie researcher. Over time, those interactions grew more formal and more focused. They happened in a typically non-linear fashion and sometimes in several ways at once. More detailed description of the methods employed in this study and the types and functions of data gathered follow in Chapter Three: Methods of Examining Power and Social Action in Public Exhibition.

Background Informing This Study

Rocky Mountain Arsenal National Park has been called “The Nation’s Most Ironic Nature Park” because that park—where, now, a diversity of wildlife thrives—is part of a landscape that once supported a World War II chemical weapons plant. The lack of human development in the park soon meant that Rocky Mountain Arsenal attracted a robust ecosystem that seems paradoxical, given the park’s status as one of the Environmental Protection Agency’s most targeted sites for cleanup (Cronon 57-66). The land that now supports the Neal Smith National Wildlife Refuge and Prairie Learning Center avoided the
birthmarks of chemical destruction and prescriptions of decades of danger for human interaction that characterized Rocky Mountain Arsenal, but the story of its beginning nonetheless features a compelling—and equally ironic—narrative that prefaces its selection as the site for this study.

In the 1980s, a subsidiary of the local power and electric company owned the land that secured the start of what was then called the Walnut Creek National Wildlife Refuge and Prairie Learning Center. The refuge was later re-named for the Iowa congressional representative who lobbied for the necessary funding to establish the refuge. When fully developed, the refuge will feature more than 8,600 acres of restored native tallgrass prairie and oak savanna ecosystem and will feature the flora and fauna that flourished on Iowa's landscape approximately 200 years ago. The Prairie Learning Center, opened in 1996, houses the refuge's administrative offices, a greenhouse area for nurturing prairie plants, research facilities, a small theater for the visitors’ orientation film, and an educational exhibition—the focal point of much of this study.

When power company officials abandoned their plans to build the power plant there, a regional environmental group identified the site as suitable for extending the longer-range vision of a central river valley greenbelt development, supported in Congress by the district’s representative, Neal Smith (Madson 291). Smith shepherded legislation through a Congress that allocated $6 million for the purchase of land and for the development of a tallgrass prairie restoration and preservation project, including the educational interpretive and research center and wildlife refuge. The now-retired congressman explains in his autobiography that the acquisition of that land and its development into the largest tallgrass prairie restoration project in the U.S. supported his focused, sustained vision for the
environmental and economic health and happiness of his constituents in the form of a
greenbelt along a central river valley. The Neal Smith National Wildlife Refuge and Prairie
Learning Center serves as the centerpiece of that long-range vision.

In writing about his efforts in Congress to establish the refuge, Neal Smith describes
the land as

ideal for the purpose of a prairie and wildlife restoration project. It all drained
into one creek—Walnut Creek—and most of the land involved was erodible
land that was being farmed. I secured the federal appropriation and
commitment to establish the refuge. (94)

A project that would later meet with its own critics close to home first invited rebuke from
some of Smith’s colleagues. Indeed, the May 26, 1990, issue of CongressioMa/ QwarferZy
reports the appropriation in an article titled “A Pork-Heavy Supplemental is Belatedly Sent to
Bush” with a sub-heading that reads “A Losing Battle on Pork.” In the article, Rep. Robert S.
Walker of Pennsylvania is quoted as calling the refuge funding (along with “a fish farm and a
research center in Arkansas... a ferryboat for Samoa, and New Jersey battery recycling
plant, and 37 previously earmarked projects that the Department of Housing and Urban
Development has refused to fund”) “nice things”; his attention is drawn, nonetheless, to a
$150 billion budget deficit (Kuntz 1633).

Walker’s depiction of the nice—but decidedly extra—things influences the overall
thesis in this document in an important way. While the refuge that Walker referred to in 1990
operates, grows, and attracts visitors, it shares in the complexities that define any political
institution or entity. Funding for the refuge was approved, but it was done so against the back
channeling of at least several voices of contention. Indeed, one might argue that the
narratives associated with the refuge and prairie center exist as contrary voices in a state where land stewardship issues receive much attention in the media, in research centers, and in local town halls and county seats. Farmers see themselves as both stewards of this highly productive soil and as managers of its commercial, economic output. Exacerbating that tension between farmer as steward of the ecology and farmer as production manager of rich resource is a romanticized perception of the place—one that represents the state’s and region’s cultural heritage of purity and simplicity. In such a portrayal, little room exists for the complex contemporary concerns of scientists and academics who, at least as often, worry over agricultural pollution of water supplies and air, losses of family farms, and increasing uses of chemicals and pharmaceuticals on the farm and in the livestock. No land for the refuge is assumed under imminent domain; refuge boundaries expand only when willing landowners choose to sell. Yet, strains of age-old choruses of us vs. them still resound. Mythologies of pioneer independence paired with reliance on neighbors turn quickly into narratives of contention and suspicion.

Today, the refuge includes more than 5,000 acres of land, with restoration underway of both tallgrass prairie and oak savanna ecosystems (Friends). Although the range designated for a full herd of such large native-prairie fauna is not available at the NSNWR (Smith 95), the refuge is home to a small herd of both adult and young bison and elk. A $30 million budget was allocated for the construction of the refuge and its educational interpretive center, which was completed in 1996 (Smith 95). “I visualize that this project will be one of the most utilized assets in [the central part of the state] by people of all ages,” Smith adds. “Schoolchildren who come to the education center on field trips will have the opportunity to learn how they fit into the chain of life” (95). The prairie center’s political
patron sees the rhetorical elements of audience and purpose for the restoration extending beyond educating schoolchildren into the realm of more substantial economic development. "It is an attraction," he writes,

necessary to encourage people to move to Iowa, but it is also important for current residents. I have been out to the beaches and talked to people, especially at Saylorville. Many of them cannot afford to go out of state for a vacation and many would not otherwise even be able to take their family on a weekend outing. (95-96)

However hopeful and even altruistic the congressman’s vision of the refuge’s impact might be, the prevailing sense is that the work of restoring and managing for preservation a complex ecosystem such as the native tallgrass prairie and oak savanna is complicated and requires much cooperation and collaboration between constituents and sponsors. Indeed, the work may never be entirely complete. This study examines some of the tensions made manifest in the process of developing sound arguments for carrying out the challenging environmental work of restoring and preserving a complex ecosystem. Its theoretical “lens” relies substantially on practice—examining the site for important linkages that occur in the everyday life of visitors’ experiences at the refuge and educational exhibition center. The site itself is of a sort that may be overlooked as a location where complex rhetorical work is accomplished, even though public museum exhibitions are popular venues for educating people about the environment, its landscapes and its issues. Above all, this project seeks to understand the tensions within the exhibit’s narrative that demonstrate compelling struggles between traditional and progressive values. How this particular site negotiates those struggles becomes a key aspect of this project.
For many residents of the area, the benefits of establishing a wildlife refuge and restoring a heritage landscape far outweighed the prospect of supporting a nuclear power generation plant in their backyard. Perhaps more important, however, is my contention that since the refuge and its interpretive and research center are fully operational and have been for nearly a decade, the various publics who visit or support the site may be similarly unaware of the rhetorical crafting behind not only the refuge’s and center’s continued development but also within the visual, verbal, and spatial narratives about environmental restoration, technology, and culture presented at the site.

Museums are crucial sites for the work of professional communicators in this larger project of untangling these knotty relations of power because of museums’ complexities as professional workplaces. As such, museum workers engage many of the genres and practices familiar to business and technical communicators. The NSNWF and PLC offers an especially compelling site for such study because of the tensions inherent in the relationships between agricultural development and preservation, between fostering an agricultural economic base in the refuge’s neighborhood and introducing non-commercial livestock into the vicinity. Some farmers in the area of the NSNWR initially challenged the idea of tallgrass prairie restoration and resisted plans to re-introduce bison to the refuge next door.

In order to situate these visual, verbal, and spatial narratives, I rely on literature from museum studies and cultural studies, primarily, but I also draw on literature about the environment and on literature from environmental rhetoric and present this discussion in Chapter Two: A Review of the Literature.
Factors complicating this study

The project described in this document may be characterized as a thick rhetorical analysis, conducted qualitatively, but it is further complicated in interesting ways by what I see as factors related to the uniqueness of such a site and to the rhetorically challenging task of analyzing a three-dimensional text. That is, this analysis does not adopt a strict rhetorical critical approach such as those that Sonja K. Foss explicates in her guidebook to doing rhetorical criticism: cluster criticism, fantasy-theme criticism, feminist criticism, neo-Aristotelian criticism and others. Instead, guided by the general assumptions of cultural studies, I looked for emergent themes—sometimes related to visual or verbal metaphor, though not always—and analyzed data in terms of units of analysis related to the rhetorical tensions I saw in the narratives of the exhibition.

Because the results presented in Chapter Four: Results and Analysis emerge from persuasive discourses—always contingent, always under consideration, always partial—speaking of those results as a set of absolutes, as final conclusions, seems misguided. Instead, the data I examined and the analysis I conducted appear much more compelling and useful for application in further research and classroom use when viewed as under construction. In fact, they must be. The tensions I have previewed thus far in this chapter and which I discuss more fully in Chapter Four are themselves subject to such flux, such negotiation and renegotiation—either by refuge staff and designers or by meaning-making publics in the act of learning and thinking and acting in relation to the prairie restoration. When I address factors that complicate this study, then, I refer to the observations I have made about the rhetorics of prairie, of community, of social action, of museums, and even of professional communication that underlie both the analysis conducted and the results described.
The landscape is dynamic

These factors include the dynamic quality of a living landscape and the corresponding challenges faced when trying to communicate the latest information about its characteristics. The landscape changes. The trails that lead visitors through restored and unrestored areas of the refuge offer new views with each trip. A field that one August features tall stands of big bluestem may be the location for a controlled burn the next. For the most part, displays featured in the prairie center’s exhibition remained static during the substantial portions of data collection; however, a display that is fully functioning during one visit may experience technical difficulties on the next visit so that observations of visitors interacting with that display necessarily reveal different experiences.

Research on museums re-positions rhetoric and professional communication

A second factor is that, although researchers from disciplines outside of rhetoric and professional communication have analyzed museum spaces—including political scientists, social anthropologists, and historians—there is little literature from rhetoric that models analyses of this type of space. Therefore, what complicates this study also works to situate it in a position of posing new contexts for research in these fields. Because the space considered here is modest, professionally constructed and managed, but by no means lavish or grand in its scope or function, it stands to remind scholars and practitioners in rhetoric and professional communication of Carl G. Herndl’s assertion to seek out the small, often-unremarked places where writers work. Herndl studied a civilian biologist writing “disruptively” within the context of a military base, and called on researchers to turn their attention away from the spectacular sources of discourse and toward the smaller, quieter contexts where resistance in discourse takes place. Herndl writes:
The quotidian is never as glamorous as a newly minted theoretical insight, but the unglamorous, difficult ground of everyday practice is the terrain on which agents struggle. Thus, research on resistance in professional discourse should eschew the grandiloquent and focus instead on the relatively small, often unremarked actions of writers. (458)

**Tensions exist that resist dichotomizing**

Finally, the points of tension that emerge from my analysis of the refuge and prairie center and that serve as primary units of analysis (addressed fully in Chapter Four) struggle against being perceived as strict dichotomies or even as loosely bound contradictions. Rather than consign these issues, these tensions, to either/or positions, pitting one idea—the state’s bucolic prairie landscape and romanticized heritage, for example—against another—contemporary large-scale agricultural production—these issues coexist best as tensions, engaged in an ongoing dialogue within a larger cultural text. They work best when viewed as contributions to social-cultural dialogues rather than as elements awaiting judgment as “good” or “bad.” Rather than perceive these tensions as unresolvable opposites, I see them best situated along a dynamic continuum similar to the way contemporary life in this part of the country is lived—with room for advances in science and technology at the same time that an allegiance to time-honored traditional values remains strong. The notion that these tensions appear to exist and to function within the larger discourse of the refuge’s narrative creates interest for the rhetorician. Their oscillation between foreground and background as I analyzed these data provide the intrigue that stands to inform further research about the rich texts that wait beyond our usual boundaries.
Preview of Remaining Chapters

In the following chapter I join two substantial bodies of literature—museum studies and cultural studies—with insights from environmental rhetoric and literature of the environment to begin situating the overarching research question: How are issues of power and social action negotiated in a public educational exhibition? I describe guiding assumptions underpinning each enterprise or discipline and discuss central tenets and key theoretical concerns associated with each one. Further, such juxtaposition of these bodies of literature allows for an analytical approach to understanding the environment that recognizes relationships of representation, power, and social action. Following the introduction of these literatures, I discuss three junctures where the two main literatures converge to enrich important understandings of professional communication’s role in shaping environmental rhetoric. The first of these junctures is representation, where I posit that public exhibition carries with it no inherent meaning; rather, the context is highly rhetorical, and meanings are derived from studying the effects of linkages—articulations—within the visual, verbal, and spatial discourses of a professionally designed and constructed exhibition. The second juncture is the notion of power as a crucial element in any such linkage. Finally, I examine how social action or intervention is bound up in this intricate structure of meaning-making through cultural studies’ attention to theory and through the politics (and possibilities) of display. Drawing these two bodies of literature together allows a way to examine genres and practices of professional communication within a context—public exhibition—not ordinarily associated with professional communication’s constituents of business, technical, and academic communication.
In Chapter Three: Methods of Examining Power and Social Action in Public Display
I provide a rationale for adopting a qualitative approach to this study and explain the methods employed to conduct it. Further, I detail the types of data gathered and the processes by which I collected these data. Chapter Four of this document presents the results of my analysis of these data, describing the strategies I used in the analysis and explicating how the results work to answer the project's overarching research question and related questions. Finally, Chapter Five: Conclusions identifies museums as potent sites for civic action and suggests additional applications of this study in rhetoric, composition, and professional communication pedagogy as well as calls for further research in the rhetoric of museum spaces.
CHAPTER TWO: A REVIEW OF THE LITERATURE

Public exhibition exists as an important source of cultural/political discourse and critique. When such an exhibition communicates technical information, the resulting discourse and positioning of the critique thickens. Because of the characteristics that define the site selected for this study—a public educational exhibition that seeks to communicate technical environmental information to primarily non-technical audiences—certain bodies of literature must be reviewed. This review works to situate the present study within the theory and practice of contemporary museums engaged in professional communication about the environment.

To that end this chapter begins with a review of literature from the general field of museum studies and includes scholarship produced by museum professionals in several areas of specialization: curators, museum educators, directors, and professors of museology.

This chapter also includes work from those writing in what might be termed environmental rhetoric and in environmental studies—geographers, sociologists, political scientists, historians, landscape architects, and anthropologists—in order to situate the visual, verbal, and spatial rhetorics of the NSNWR and PLC within a larger context of environmental discourse. I include literature about the environment in this review because of the benefits readers gain from seeing how professionals attempt to define and understand terms like environment, landscape, or nature, terms that might be taken for granted but which are more shaped, more constructed or rhetorical, than might otherwise be realized.

This chapter also reviews work from the enterprise of cultural studies, including a sample of definitions issued forth about this complex approach and a bit about its
development and guiding principles. Within that discussion of cultural studies, I briefly describe articulation theory—often considered an outgrowth of that enterprise—because I see articulation theory working to guide my methodological approach to data gathering and analysis. While those are topics considered in context in Chapter Three, it is important to introduce the theoretical description of articulation here as a preface to that subsequent discussion.

Finally, I draw together literature in museum studies and cultural studies to show how these areas work together to refine our understanding of representation, of power, and of social action or intervention. Because of the broad range of voices and ideas required to situate the present study, the net for this review is necessarily cast quite widely. Literature presented here derives from scholars in cultural studies, cultural critique, and popular culture. This project draws on the work of sociologists, philosophers, architects, environmentalists, technical writers, researchers in business communication, historians, graphic designers, anthropologists, and landscape architects. Because of the complexity of the case study site involved in this research and because of the necessarily inclusive conception of professional communication I adopt, few boundaries will be acknowledged in the course of this document. Further, communities of farmers and conservationists surround the project, contribute to it, and challenge its parameters. Insights from architects and designers shape perceptions of the physical structures present at the refuge, including the Prairie Learning Center itself.

More specifically, I have selected a public exhibition of a technical topic translated for —and seeking involvement from—multiple audiences because such sites are less often included in case studies of professional workplaces. Yet, the political and rhetorical
exigencies of such workplaces stand to inform researchers, teachers, and practitioners of professional communication in important ways. I use the umbrella term “professional communication” rather than differentiate into components of business communication, technical communication, and academic discourses because I see the boundary-drawing between those areas as less appropriate for my larger purpose. Rather than construct boundaries in this discussion, I prefer to expand the margins of the discipline in terms of genres, practices, and pedagogical implications.¹

The following section provides a review of literature from museum studies, defining museums broadly, arguing for the NSNWR as such a museum space and asserting museums’ importance as political players in and shapers of civic discourse. Drawing these literatures together provides a way to discern how persuasive discourse—used most broadly here to designate visual, verbal, and spatial rhetorical elements—is carried out within the museum exhibition. We see how designers and refuge staff both play with and play off of the various audiences for the refuge. We see how designers and staff choose to adhere to cultural and regional mythologies within displays and narratives presented in the exhibition and choose, in other instances, to challenge those myths. By using rhetoric to guide this analysis, we come to see, too, how this particular site enacts a progressive rhetoric of involvement, moving museum visitors past passive viewing into more active engagement and participation—what I call here social action and intervention. We come to see, too, how complex a rhetorical situation such an exhibition is, since many of the narratives expressed in

¹ That said, I also think it is fair to conclude that this project considers visual, verbal, and spatial rhetoric more closely aligned with genres and practices of technical communication, partly because of the subject matter addressed at the NSNWR, tallgrass prairie restoration and preservation. I include, however, where they seem vital to the overall analysis those genres that may be more exclusively considered part of conversations about business communication: memoranda, reports, web sites.
this space reveal themselves less as statements of certainty and more as demonstrations of complex tensions that may or may not be resolvable. We see rhetoric at work within a particular context at a particular time.

**Museum Studies and Rhetoric**

In her examination of the poetics and politics of displaying other cultures, Henrietta Lidchi stakes an important claim in the territory of museums as rhetorical sites when she writes that “a museum does not deal solely with objects but, more importantly, with what we could call, for the moment, *ideas*—notions of what the world is, or should be” (160). She is joined by Sharon Macdonald in viewing the museum exhibition as the kind of contested terrain that cultural critics and scholars of popular culture and cultural studies address. Speaking of science museums and displays, in particular, Macdonald concurs with Lidchi’s assertion. “[Museums] always involve the culturally, socially, and politically saturated business of negotiation and value-judgment; and they always have cultural, social, and political implications” (1). Macdonald explains the purpose of addressing “science, museums, and culture” in the same conversation this way:

> [W]e bring museums and science together not just to explore the politics and cultural operations of each, but also to highlight the discursive interrelationships between the two. Museums which deal with science are not simply putting science on display; they are also creating particular kinds of science for the public. . . . (2)

Lidchi’s and Macdonald’s comments demonstrate important acts of self-reflexivity that are crucial if meaningful cultural studies of exhibition are to occur and if professional communicators are to be able eventually to intervene in productive, socially influential,
ways. No longer institutions apart, museums are appropriate sites for examinations of the types of everyday questions that cultural studies chases. Indeed, they are increasingly sites of contention where big questions about identity, economics, and meaning-making are posed and put into practice. They are also the sites where the “smaller” questions of the everyday are addressed. Steven C. Dubin, writing in Displays of Power: Memory and Amnesia in the American Museum, says of museums that

They no longer merely provide a pleasant refuge from ordinary life, nor are they simply repositories of received wisdom. Museums have moved to the forefront in struggles over representation and over the chronicling, revising, and displaying of the past. (5)

If we have lingering ideas that contemporary museum spaces reside in the cabinets-of-curiosity mode of their institutional forebears, those ideas are clearly misinformed. Museums are vibrant, dynamic, and heavily implicated in shaping the discourses of their communities. If such a claim challenges readers of this present study, a brief review that provides definitions of museums follows.

**Seeing museums as rhetorical spaces**

Among museum professionals, “museum studies” is the term assigned to curricula in museology, the “branch of knowledge concerned with the study of the purposes and organization of museums” (Burcaw 21). Museology, Burcaw writes, refers to the study of the history and background of museums, their role in society, specific systems for research, conservation, education and organization, relationship with the physical environment, and the classification of different kinds of museums. (21)
Certainly, the study of museums' “role in society,” their “systems for research,” or their “relationship to the physical environment” cannot be viewed as a simple undertaking, but for this study, coming to some clearer view of what constitutes a contemporary museum space is necessary in order to provide context for the study of the wildlife refuge I report on in this document.

The literatures associated with museum studies and cultural studies—as addressed in the following section—exhibit a degree of self-reflexivity by recognizing that their disciplinary discourses shape and reshape how these respective terms are used. Both museum studies and cultural studies grapple with the uses and meanings assigned to and constructed around key terms like museum and culture. Further, both museum studies and cultural studies reveal struggles with not only what their key terms mean but also with what their projects allow and disallow for study. Both are partial. Both are in process. Neither has resolved who it is, who it is not, what it includes, what it leaves behind. Perhaps the idea that these literatures and their core terms are marked by complexity, charged with historical narratives that attest to definitions-in-progress, and exist as incomplete constructions adds to both projects’ usefulness as examples for comparison in this discussion.

At the NSNWR, the name of the place and the definitions of the landscape the project works to restore and then preserve are in flux. Indeed, what began as the Walnut Creek National Wildlife Refuge was re-named to honor the work of the congressional representative who lobbied for its establishment. The educational exhibition that presents the work of the refuge is not called a museum; rather, it is promoted as a learning center, even though many of the characteristics that define it are shared by museums and other public
exhibitions. The task, then, of defining a museum must be undertaken with mindfulness of
the stickiness of such a proposition.

Peter Vergo, in his introduction to *The New Museology*, acknowledges the
components of museology presented in Burcaw but reminds readers that while the study of
museums once attracted the attention of mainly museum professionals, a more contemporary
understanding of the influence of museums directs attention to a broader population. He cites
museums’ “embracing] virtually every field of human endeavor” as reason for their
relevance to “almost everybody”(1) and reiterates the rhetorical nature of museums’ purposes
as well:

The very act of collecting has a political or ideological or aesthetic dimension
which cannot be overlooked. . . . In the acquisition of material, of whatever
kind, let alone in putting that material on public display or making it publicly
accessible, museums make certain choices determined by judgements as to
value, significance or monetary worth, judgements which may derive in part
from the system of values peculiar to the institution itself, but which in a more
profound sense are also rooted in our education, our upbringing, our
prejudices. (2)

Indeed, Vergo sees the need to revise the emphasis in museum studies toward this
more politicized examination of museums as intimately related to—perhaps even dependent
upon—their continued existence and usefulness. His call for “a radical re-examination of the
role of museums within society” (3) increasingly resounds among his colleagues in museum
work, although not all share Vergo’s same degree of optimism for the success that such
institutions may accomplish.
A much more diffuse construction of the term “museum” marked its early history in America. Interestingly, although the term had been part of the vernacular for centuries, the charge issued by James Smithson in 1835 in his goal to establish what became the Smithsonian Institution was “a vague directive—‘the increase and diffusion of knowledge’” (Conaway 17). Although “museum” was absent from Smithson’s bequest, my search of the literature in museum studies shows an active pursuit by museologists to continue to mine vocabulary lists for suitable labels for their sites and to paint the notion of what constitutes a museum with refreshingly broad strokes.

Indeed, many aspects of the NSNWR, for example, reflect a typical museum-going experience. According to descriptive information from the Friends of the Prairie Center website, the refuge and learning center have an educational purpose among its chief missions:

To increase biodiversity by restoring and reconstructing tallgrass prairie and savanna habitats; To increase public knowledge and understanding of prairie through environmental education; To increase scientific knowledge and understanding of the prairie and savanna through ongoing research; and To provide a diverse recreational landscape for public use and education.

Complicating those rather cleanly drawn visions for the work of the refuge/center is what John Urry calls the “romantic tourist gaze,” where “Larger numbers of people seek, in their visual consumption, solitude, privacy, and a personal, semi-spiritual relationship with their environment, whether this is physical or built” (180). Indeed, visitors to the refuge not only consume the experience of viewing the serene openness of the prairie landscape, they are also drawn to representative actors from its ecosystem in the form of stuffed toy bison and professional-quality photographs of open spaces from the gift shop/bookstore combination.
Visitors are invited to take part in annual seed-sowing and -harvesting rituals, participate in bird inventories, and, for junior visitors, enter duck stamp design contests. An orientation film runs continually to frame the tallgrass prairie narrative, reminding visitors of the diversity present in the landscape before the destructive influences of the plow and economic development.

Because so much of the discourse of the refuge and prairie center expresses tensions between the landscape’s past and its present and future construction, between what lies hidden under the surface of the landscape and what is revealed above, between what is construed as wild and what is construed as tame, between technology and nature, and between what is stated and what is silent, the definitions of museums provided by James A. Boon seems particularly relevant to the present study. He expresses an awareness of contingency that also preoccupies cultural studies scholars, as I’ll address later in this chapter. Writing in “Why Museums Make Me Sad,” Boon says that

museums necessarily conjoin contradictory desires, including mature (propertied) and the youthful (less so) and perhaps even the reactionary and the subversive; that classification and captioning have something potentially both ennobling and prurient about them; and that the nature of museumgoing enmeshes the seemingly serious and the apparently voyeur-esque. (260)

Boon continues:

Museums, then, or things or processes museumlike, may be said to occur whenever viewers (or their equivalent) are guided, not always willingly, among artifacts, samples, labels, captions, stereotypes, light, categories,
drawings, feathers, skulls, visual murmurs, and (in the case of museums and zoos and theaters) other goers. (265)

Exhibition designer Margaret Hall devotes her attention to the grammar of design in the context of exhibitions, but even in her cursory discussion of the subject and setting for exhibitions she offers what I see as a serviceably broad definition of the purpose of exhibitions similar to the Prairie Learning Center’s:

The settings can vary... ranging from a building six centuries old or a museum or gallery built in any style at any time in the last two centuries to modern inflatable tents. The aim can be education, information, celebration, recreation, commerce or any combination of these. (9-10)

A less generous boundary is drawn by Burcaw in his handbook for museum workers and students of museology. There, Burcaw offers a dozen definitions of “museum” from various sources (18-20), but he locates the museum’s primary criteria in “existing to collect objects, maintain permanent collections, and base its educational work on these collections” (18). If one sees both the visual and verbal/textual narratives of tallgrass prairie restoration as parts of a “permanent collection”—as I do—and the educational, participatory, and research functions of the NSNWR as “educational work [based] on these collections,” there is little difficulty in seeing the study site as a museum.

Museum studies gives us insight into the rhetorical nature of museums. Indeed, there is no single brand of museum, no simplified definition of what constitutes “museum”; in that respect, then, the museum is inherently rhetorical because it must engage conventional elements of rhetoric in order to locate itself in a community. Museums are constructed to meet specific purposes, to address specific audiences, and, usually, to adopt the visual,
spatial, and aural characteristics conventional to their long histories. From museum studies literature, too, we see how museum work becomes rhetorical in the daily routines of museum professionals. Museum curators interpret collections, shaping ideas and determining which will be included and which will not within a particular display or exhibit. Museum educators often work to translate curators' ideas to various publics, often using the most rhetorically effective, but various, formats.

That the Prairie Learning Center is not called a museum further demonstrates the rhetorical nature of such institutions and encourages researchers of professional communication to begin examining such sites for their contributions to cultural discourse. I have identified the Neal Smith National Wildlife Refuge and Prairie Learning Center as the study site for this project, noting that it is characterized by elements that I wish to keep at the center of this discussion; among its central missions, for instance, the site has environmental education and research carried out and presented for the public's edification and enjoyment. It translates a technical idea—in this case, tallgrass prairie restoration and preservation—to non-technical publics. That it also features a directly political involvement in its inception and continuation through its relationship to the U.S Fish and Wildlife Service and U.S. Department of the Interior also deepens the refuge's connection to the inherent grassroots and political interests of cultural studies. For the purposes of the rest of this document, then, I will use the term "museum" to refer to the broadest possible category of exhibition within an institution that has education and/or research, if not collecting, per se, close to the heart of its mission.
Identifying major players and issues in museology

Scholars of museum studies represent a variety of sub-interests within a generally conceived understanding of museum work. They are museum educators (Roberts), archaeologists and anthropologists (Walsh; Clifford), professors of performance studies (Kirshenblatt-Gimlett), museum curators and directors (Harwit; Henderson and Kaeppler), designers (M. Hall; Velarde; Wurman) and philosophers (Hein; Griswold). Some work clearly lies in the domain of cultural studies, such as Bal, Karp, Macdonald, Lidchi, and Australian Tony Bennett, perhaps the most influential cultural studies practitioner in museum studies. Bennett’s The Birth of the Museum: History, Theory, Politics, addresses the “political-discursive space” (102) of the contemporary museum and concludes that the division between the hidden space of the museum in which knowledge is produced and organized and the public spaces in which it is offered for passive consumption produces a monologic discourse dominated by the authoritative cultural voice of the museum. (103)

Bennett prescribes an overhaul of the typical museum hierarchy to remedy this monologic dysfunction, replacing it with a more egalitarian voice and agency:

[I]t is imperative that the role of the curator be shifted away from that of the source of an expertise whose function is to organize a representation claiming the status of knowledge and towards that of a possessor of a technical competence whose function is to assist groups outside the museum to use its resources to make authored statements within it. (103-104)

Indeed, both museum studies and cultural studies coincide in the sites for projects undertaken and the linkages explored within those sites, as they do in the present study at the
NSNWR. Case studies provide textual analysis of museums, including living history museums, (Linenthal; Kirshenblatt-Gimblett; Handler and Gable); public art and exhibitions (Doss; Senie and Webster); and memorials (Blair and Michel; Griswold; Johnston) that seek to engage the politics of representation.

Having explored a bit of the ground covered by museum studies, I attend next to the literature of the environment, nature, and landscape that most relevantly helps to situate this study of a research site communicating about one such particular landscape, the prairie, in one such particular context, the public exhibition. Following this exploration of the socially constructed nature of the environment, I then focus on the places where cultural studies literature shares in discussions of representation, power, and social action—three concepts crucial to understanding how issues of power and social action are negotiated in the public exhibition of the NSNWR.

**RHETORIC AND THE ENVIRONMENT**

How we construct nature and define the landscape still concerns sociologists of place, geographers, poets, rhetoricians, and professional communicators, among others. How we think of our surroundings and what we call those places engages scholars on an epistemological level and continues to fuel debate. Geographer John Fraser Hart explains that he is “quite content with the simple vernacular definition of landscape as ‘the things we see,’” and adds that he is “saddened by the way the meaning of the word has been transmogrified” (23):

Some people have endowed the concept of landscape with magical, mystical, or symbolic significance, or have loaded it with metaphysical connotation. In
some quarters the word has even been turned into a talisman, as though it
were expected to bring good luck to anyone who uttered it. (23)

For John B. Jackson, a geographer, the notion of landscape reaches beyond simple
scenery. "It is a space or a collection of spaces made by a group of people who modify the
natural environment to survive, to create order, and to produce a just and lasting society"
(43). In this case, then, use of the term "landscape" purposefully involves human interaction
with the land and appears undeniably attached to a degree of social responsibility and
engagement. But geologists have a different take on "landscape."

Geologist Dale F. Ritter strips away the social, cultural, and economic connections to
landscape as he reminds readers of the distinction between landscapes and landforms.
Further, Ritter urges us to consider that how people view landscapes depends quite often on
their professional or occupational inclinations. Ritter writes:

Some of us, for example, appreciate landscapes for their aesthetic qualities:
landscape is simply there to be enjoyed and to instill in each of us certain
feelings and emotions that are difficult to explain. Any work of scenic art or
poetry represents one person’s attempt to communicate those intangible
feelings. In a different viewpoint, landscapes are there to be used in some
practical way. Geographers understand how the ingredients of landscape
control human activities such as trade, and how they prophesied the
development of civilizations and the growth of nation. Military leaders use
their understanding of landscapes for planning, supply routes, and topographic
advantage in battle. Engineers and architects learn to use the landscape for
structural design and, in some cases, to combine that design with the natural beauty surrounding a construction site. (61)

Ritter adds, however, that geologists eschew the concerns of geographers and poets; instead,

[W]e view landscapes as physical entities that are amenable to scientific investigation. We try to understand how and why any landscape got to be the way it is, and therefore our fundamental goal is to determine the reason for landscape. (61)

One such reason, he explains, depends on changes in landforms and their attendant components: mountains, plains, climate, rock type, rivers, plateaus (62). Although the geologist’s search for the reason behind the landscape might hint at a sort of certainty in knowledge-making, a more useful way of considering landscape—and landmark, in particular—comes from a scholar who has written a history of the Grand Canyon.

In his particularly engaging account of the rhetorical development of the Grand Canyon—one of the most magnificent and culturally constructed holes in the ground to come around in some time—Stephen J. Pyne argues that the canyon underwent numerous phases of cultural importance, rhetorically shaped by various audiences, social classes, and purposes. The canyon has not always been the prominent cultural landmark and tourist destination that it is today. “Before 1857,” writes Pyne, “the Canyon was an incidental landform, concealed amid scores of exotic western scenes, no more distinguished than the ancient shorelines of the Great Basin or the glaciated summit of Mount Shasta” (37). But that conception of the canyon changed:
From 1869 to 1882 it went from the status of a legendary giant suck to the subject of two classic works of American letters, from a place shunned even by professional pathfinders to one sought out by scholars and tourists with evangelical zeal and to which, at considerable inconvenience, the 1893 International Geological Congress would be directed. A peripheral landscape without cultural precedent—a scene as alien to Western civilization as the plains of Mars or the craters of Mercury—had seized the center and become an exemplar of geology, an epitome of historicism, a talisman of landscape art, and an icon of American nationalism. In roughly forty years the Canyon had become Grand. (38)

But Pyne points out, too, that the public's perception of—and engagement with—the canyon was shaped by social class and a change in audience. Two brothers, Emery and Ellsworth Kolb photographed the canyon, and in the process of their scenic photography and exquisite marketing skills reshaped the canyon's tourist function: "The interpreters of the Canyon," writes Pyne, "were no longer intellectuals, or the Canyon's patrons even the affluent late-nineteenth-century travelers of railroad and resort, but Everyman and his Model T" (134-135). Pyne explains that "What began as a symbol significant to a cultural elite became a pleasuring ground for the public. And more: The Canyon was transfigured into a sacred site" (116). Our conceptions of what constitutes the environment, then, are constructed, shaped—cultivated, if you will—rather than fixed, resolved, determined, or naturally inherited.

Visitors to the Neal Smith National Wildlife Refuge and Prairie Learning Center encounter an experience as multi-layered and complex as the ecosystem around them and
beneath them. Such an experience provides opportunities, simultaneously, to learn about nature and interact with a rare and intriguing landscape, and to engage multiple technologies; the experience challenges visitors to imagine the landscape’s biological and cultural past, while entrusting that landscape’s future to progressive environmental change.

At the same time this visitor stands at the top of an asphalt trail to scan acres of big bluestem for a glimpse of bison or elk, she may also turn to see fire specialists walking a perimeter with drip torches to set a controlled burn, working to eliminate non-native plant species, hoping to coax back some of the prairie’s original plant life. She walks past a satellite image of the region’s remaining prairie remnants to sit at a replica farmhouse kitchen table while a young child draws a picture of a bison or writes a poem about his impressions of the refuge.

The refuge, which will encompass more than 8,600 acres when it is fully developed, features stretches of rolling fields of prairie grasses and flowers and small herds of what animal ecologists playfully call “charismatic mega-fauna”—American bison and elk—that roam within a penned-off area to the north of the prairie center but which visitors may walk alongside on an asphalt trail that loops from the exhibition and research area.

Visits to this place require looking forward while looking back, imagining a landscape that has all but disappeared in order to re-conceive it. Such oscillation—such shifting—may feel unusual for visitors used to a typical science or natural history museum experience, where they are more often presented with a more linear narrative or with a topic that can be deconstructed using one-dimensional kinds of thought. The sorts of environmental change underway at the NSNWR appear to alter familiar—not to mention productive and profitable—regional economic livelihoods. Further, the narratives of display
and exhibition at the refuge corroborate the literature presented here: that our understandings of nature, landscape, and the environment are subject to cultural constructions, to persuasion.

One of the most powerful linguistic tools for constructing the environment is the metaphor. In the next section, I provide a brief discussion of relevant literatures that help situate how this ancient figure might be appropriately used as an analytical tool for understanding nature in this project.

The power of metaphor to shape nature

One of the central discursive forces at work within the narrative of environmental restoration and preservation at the prairie center is the literary figure of metaphor. Writing in *On Rhetoric*, Aristotle has much to say about not only the definitions of metaphor but also their purposes and usefulness in discourse. “Metaphor is the movement of an alien name from either genus or species or from species to genus or from species to species of by analogy” he writes in *The Poetics* (qtd. in *On Rhetoric* 295). But it is clarity in speech that Aristotle prizes, and he credits metaphor with possessing “clarity and sweetness and strangeness” (223). In composing prose, Aristotle says

> A word in its prevailing and native meaning and metaphor are alone useful in the lexis [style] of prose. A sign of this is that these are the only kinds of words everybody uses; for all people carry on their conversations with metaphors and words in their native and prevailing meanings. (222-223)

Further, Aristotle sees conspicuous purpose in the use of metaphor that through the ages has often gone unnoticed or refuted, the use of metaphor as a shaper of argument and tool for learning. Recognizing metaphor’s ubiquity and attempting to understand its power as a rhetorical tool, then, are important for this study because the narrative of prairie restoration
and preservation has a primarily educational function for the refuge's audiences of school children, residents of the region, and tourists interested in the natural world. Indeed, at least a portion of how these audiences understand the messages of the refuge—understand the environment, nature, the prairie landscape—depends upon the power inherent in and the aptness of the metaphors employed.

In their introduction to *Writing Worlds: Discourse, Text, and Metaphor in the Representation of Landscape*, Trevor J. Barnes and James S. Duncan take readers on a walk through metaphor's rhetorical history, from frivolous ornament to shaper of arguments. They acknowledge the rhetorical work that the figure accomplishes, especially in discourse about landscape:

> [I]t should be clear that metaphors are implicated in the very fabric of society and social processes; if they are to work they must resonate against an existing set of social and cultural representations. But in the resonance there is often conflict, intellectual and sometimes physical. Accepting new metaphors and their power to do new things frequently entails jettisoning old metaphors. . . .

To establish whether the revolution succeeds, and for how long it succeeds entails examining both internal issues (e.g., the metaphor’s logical consistency), and external ones (e.g., social relationships of power and vested interest). (12)

The visual, verbal, and spatial rhetorics associated with the work of the wildlife refuge and prairie center today negotiate powerful myths of the past loaded with Mother Earth/nurturer metaphors and sentimental reminiscences pitted against pragmatic economies of the present built around global exports of agri-business and technologies of crop and
livestock production and environmental protection. Museum designers, refuge staff biologists, and other specialists whose job it is to interpret the landscape—its history, despoliation, and current-day efforts to restore and preserve it—use metaphor throughout the exhibition in order to help negotiate tensions emerging from disparate areas of the prairie center’s interpretive center: in the visitor’s orientation film and Prairie Point Bookstore, in the exhibition’s label texts and images, and in public informational materials such as the refuge’s web site and promotional brochures.

At the refuge, both visual and verbal metaphors exist and demonstrate a struggle to negotiate the geographical region’s interaction with both the landscape of the past and the involvement with the present and future work to restore and preserve it. This interaction speaks to what I contend are political acts that engage relations of power and of social action. In Chapter Four, I present a fuller analysis of several of the exhibit’s metaphors that I think connect with visitors’ traditional conceptions of the state’s heritage landscape and that foster an existing sentimentality associated with the region, its landscape and cultural history. Within the narrative of the exhibit space, traditional metaphors of Mother Earth as nurturer and of a “natural” vision of Nature exude a certain degree of influence over an interpretation of the refuge and its work as natural, helping to authenticate and return a damaged landscape back to an original version. Yet, there must be departure from those traditional metaphors that revere a “natural” past in order for the work of the refuge to be accomplished.

In a rich brand of irony, in order to realize the kind of nature the refuge seeks to rebuild, the metaphors of tradition and of the landscape’s cultural history need to be replaced by narratives of progress and of progressive social action, since the work of refuge professionals is progressive. Certainly, reassigning the function of more than 8,000 acres of
productive soil—from grassland and crop production to what some may see as “unproductive land,” a Field of Weeds rather than a Field of Dreams—requires skillful persuasion, purposeful shaping. The prairie landscape introduces to many of the refuge’s visitors a challenge—to find a beauty in stillness and emptiness, in small bursts of color among the tall stands of otherwise bland grasses and sedges. Perhaps some come to the refuge filled with images of the prairie or prairie people served up by earlier cultural constructions from literature or paintings.

If there is peril in the packaging of viewing and experiencing landscape, there is also most certainly a fair measure of uncertainty for visitors as they navigate the experience of reading the metaphors generated by and shaping a landscape. Metaphors play a substantial role in the prairie center’s eventual success at that rhetorical task. Still, the pull of a powerful set of traditional myths about the landscape and its heritage seems still quite evident, and it is only in the analysis of these constructions or representations of the environment that intervention, as cultural studies theorists see it, is at all possible. It is only in examining the voice of the metaphors and narratives and images that create the story of the prairie that the work of social action may be conducted. A fuller examination of those voices occurs in Chapter Four’s presentation of results and analysis.

The power of images to shape nature

Complicated and perhaps even as confounding as it might be to attempt to gain some sort of reliable purchase on what constitutes the environment, nature, the landscape, the need to continue to do so remains great, particularly for scholars and teachers in rhetoric, composition, and professional communication. Writing in the Foreward to Technical
Communication, Deliberative Rhetoric, and Environmental Discourse, M. Jimmie

Killingsworth summarizes this need:

Despite profuse explanations and mountains of data generated every year by ecologists in academia, government, and industry, few topics of inquiry offer more uncertainty in the minds of the public than questions about environmental damage and the need for protection. Environmental issues present technical communicators with some of their greatest challenges—above all, how to make the highly specialized and inscrutably difficult technical information generated by environmental scientists and engineers usable in public decision making.

Just as we saw in the previous section the power of metaphor to operate rhetorically, here I offer further discussion of one such tool that professionals who communicate have in order to transform “inscrutably difficult technical information” into cogent prose: the image. Analyzing a three-dimensional space such as a public exhibition requires attention to more than the textual elements of the discourse. Visual and spatial elements demand visitors’ attention and act on visitors’ understanding of the messages communicated. This section provides literature that addresses visual rhetoric in several contexts: photographs, through the activities associated with capturing visual experience, and more basically how we interact with and learn to read and appreciate the natural world and our landscape surroundings.

Susan Sontag’s ideas about conventional forms of photography hold relevance to later discussions applying photography to displays at the prairie center. She writes:

Photography, which has so many narcissistic uses, is also a powerful instrument for depersonalizing our relation to the world; and the two uses are
complementary. Like a pair of binoculars with no right or wrong end, the camera makes exotic things near, intimate; and familiar things small, abstract, strange, much farther away. It offers, in one easy, habit-forming activity, both participation and alienation in our own lives and those of others—allowing us to participate, while confirming alienation. (On Photography 167)

Images come in non-tangible forms as well as experiences, and one of the most powerful experiences—our sense of familiarity with a scene—also shapes how we define, understand, and appreciate nature and the landscape. Calvin W. Stillman, an economist and professor of environmental resources, asserts that the differences between familiar and unfamiliar landscapes influence how viewers both anticipate and respond to the place. “Familiar views” Stillman writes, “are understandable” (53):

The viewer knows his or her relation to what is in sight. Familiar views often are taken for granted. . . . Views less familiar need something special to tie the viewer to the landscape. Chief of these may be repute. We all know we should be impressed by the Rocky Mountains and the Alps. . . . Structural elements help: something interesting in the foreground; a winding road or a stream that ties foreground to background. (53)

Making the place personal, though, is vital, according to Stillman.

It takes effort to get to an unfamiliar landscape. The anticipated experience must be worth it. People pay money to go on tours to look at things in a landscape, and expect value in exchange. They come to see ‘the sights.’ A sight, I submit, is gobbled down in one gulp; it is a whole. It isn’t read as a familiar landscape is, with its multiplicity of details, each with its own
meaning. A sight is eminently photographic. Many tourists seek snapshots as good as the ones they remember from the travel brochures. They do not linger over the scene; they go on to the next photo opportunity. Such landscapes are discontinuous and episodic, because they are basically without personal associations. (53)

That tourist phenomenon infiltrated Robert Bednar’s visit to Mt. Rushmore, as he studied a kind of mirror effect of photographers photographing photographers. In his essay “Caught Looking: Problems with Taking Pictures of People Taking Pictures at an Exhibition” reprinted in an anthology for composition students, Bednar contends that “when we visit a landscape that has been designated a tourist landscape, we inhabit not only a landscape but also an imagescape” (227). Bednar describes visiting Mount Rushmore National Monument and taking photographs not only of the sculptured faces on the mountainside but also of the visitors taking pictures of one another with the sculpture in the background. Soon, Bednar’s experience and the essay that describes it is more about the layers of picture-taking going on than it is about the site itself. He writes:

I found that my experience at Mount Rushmore could serve as a case study in the ways that portions of a landscape are made both visible and meaningful for the people encountering them. Every place I visited I carried with me a set of complex legacies that I had inherited from my particular upbringing and my academic training. Learning how this worked for me as well as my ‘subjects’ helped me understand that whether we consciously apprehend it at the site or not, all photographs of place pay homage to previous acts of inhabitation and image-making. (227)
If we are to fully absorb these varying perspectives and come to a fuller understanding of the sites and issues raised in this project, we must then ask What is Beauty? What is Nature? the Land? Landscape? Answers vary, and getting to those answers takes practice in reading our relationships not only to the subject in question but also to culture, to expectations, to prior experiences. In several ways, the experience of the Neal Smith National Wildlife Refuge and Prairie Learning Center challenges visitors’ relationships to nature, to the familiar landscape of contemporary agricultural Iowa and to the less familiar prairie landscape of long-ago Iowa. No experience is guaranteed. No reading is assured. The experience of nature, landscape, and environment at the study site resides in the contingent, in the uncertain, in what lies not only underground and hidden but also in what will be newly exposed and revealed.

What does it mean when we are presented with photographs of the land instead of drawings or paintings? when we are presented with satellite images? with videotape? The delivery systems used to portray nature matter. For instance, in one display presented early in the exhibition—in the “underground” area where the lesson is that there is more to prairies than dirt—the message is to remind visitors that Iowa’s land has changed shape with the arrival and departure of glaciers and to communicate the types of landforms that currently exist. A map accompanies a pair of tactile blocks that let visitors feel the variation in landscape shape. But the third type of visual used in the display, satellite imaging, a relatively high-tech representation to illustrate a natural element, the land, affirms Sontag’s impressions about the risks of alienation and depersonalization in particular visual forms.

Further, Stillman’s assertions about the influence of familiarity readily inform this study site. Bison and elk are part of the refuge’s attention to prairie wildlife because of their
recognizable characteristics, and the bison beats out the elk for that measure, providing for visitors a familiar connection to the prairie landscape.

It has been my aim, here, to connect the work of professional communicators writing and displaying the environment through visual means to the specific context of museum work—a context in which professional communication seems to lie undercover and yet stand to have great impact on many public audiences. Professional communicators are, inextricably, rhetoricians. As such, we shape important messages about the environment for these audiences. In doing so, we are engaged, by extension, in acts of intervention in the ways that publics perceive, interact with, and act upon the environment and the policies that shape and govern it. “Museums are social service providers (not always by doing direct social-service work, though many do that),” writes Elaine Heumann Gurian “because they are spaces belonging to the citizenry at large, expounding on ideas that inform and stir the population to contemplate and occasionally to act” (182).

Cultural Studies and Rhetoric

Cultural studies is concerned with intervening in the political situations of the everyday and in that regard serves as a most suitable approach for this study’s examination of a politicized site working to communicate about an equally politicized subject to various audiences. In this section I provide a brief introduction to cultural studies by including a sample of definitions about this complex approach and by tracing a bit of its development and guiding principles. The context of the NSNWR and PLC—one devoted to public education about an environmental issue—relates closely to the types of projects cultural studies informs. Concluding this chapter with literature from this field seems appropriate as a way to move from the specific context to the more general principles that guide the present
study. That is, after having shown how museums are conceived as political, rhetorical sites and after having demonstrated that even the concepts of landscape and nature are rhetorical, this chapter concludes with a larger framework in which to situate those claims.

**Defining cultural studies**

Whereas many disciplines are defined by the objects or ideas selected for study, by the methods or methodologies used to guide review of those objects and ideas, or by theoretical boundaries that clearly mark what counts and what does not count in the discipline, cultural studies rejects such tightly strung parameters. Indeed, scholars rarely refer to cultural studies as a discipline and, instead, more commonly call it an “enterprise” (Blundell, Shepherd, and Taylor 3) or “a particular way of contextualizing and politicizing intellectual practices” (Grossberg, *Bringing It All 246*). Cultural studies opens its field of inquiry to various objects, methods, and theoretical perspectives and “is committed to the study of the entire range of a society’s arts, beliefs, institutions, and communicative practices” (Nelson, Treichler, and Grossberg 5). In fact, cultural studies—the enterprise—is defined not only by an absence of such particular, it is also characterized by a resistance to such territorial marking-off. In “What is Cultural Studies Anyway?” Richard Johnson develops an enchanting analogy when he calls cultural studies “a kind of alchemy for producing useful knowledge; codify it and you might halt its reactions” (38). Although many have tried to fit the work of cultural studies into such a codified academic structure, Graeme Turner, in his history of British cultural studies, explains the enterprise’s positioning as an interdisciplinary field where certain concerns and methods have converged; the usefulness of this convergence is that it has enabled us to understand
phenomena and relationships that were not accessible through the existing disciplines. It is not, however, a unified field. . . (11)

Canadian scholars Blundell, Shepherd, and Taylor add this definition to the mix:

In a strict sense, cultural studies has neither a constantly identifiable subject matter nor theoretical positions that are characteristically its own. A constant in the cultural studies enterprise has, however, been a sense of critical political involvement—in particular, a desire to understand and change structures of dominance in industrial capitalist societies. (3)

In the introduction to their collection of essays discussing the “export” of cultural studies from Britain, Blundell, Shepherd, and Taylor call the early work of cultural studies scholars Raymond Williams, Richard Hoggart, and E.P. Thompson less a “fully fledged project” than a “constellation of intellectual and cultural interventions” (1). This intervention imperative, in fact, serves as an important assumption in cultural studies work. I’ll return to this notion of intervention in a later discussion about how cultural studies and museum studies are useful for examining linkages between professional communication and a public museum space. Such “intellectual and cultural intervention” might also be said to work cooperatively with two other characteristics of cultural studies. This approach grants contingency and temporary conjunction such places of honor within cultural studies practice that critics often wonder at the enterprise's efficacy or relevance to practical problem solving. Nelson, Treichler, and Grossberg remind us, however, that although there is “a continual preoccupation within cultural studies [with] the notion of radical social and cultural transformation and how to study it”. . . the work of cultural studies offers “not a chronicle of cultural change but. . . an intervention in it. . . ” (5).
Without a precisely prescribed methodology for “doing cultural studies,” one might feel a bit adrift in terms of understanding how to begin such work. Cultural studies commences from the concrete, from a problem that bubbles up from the everyday rather than trickles down from a given theoretical or methodological problem. As such, cultural studies problems or concerns can never be viewed apart from the historical and social forces that created—and continually re-create—them. The project is “made up as it goes along,” writes Lawrence Grossberg, because of cultural studies’ existence as a kind of response mechanism. . . . [A]t any particular time and place, [cultural studies] is constructed by articulating its practice into particular projects and formations. Cultural studies always and only exists in contextually specific theoretical and institutional formations. (Bringing It All 252)

Within the present study, the NSNWR and PLC provide the specific context in which an examination of communication about prairie restoration and preservation from the refuge’s establishment in the early 1990s until the present day occurs. The enterprise of cultural studies assumes contingency and rejects preconceived outcomes for such a study, relying on a series of linkages, or articulations, formed between elements present at the site for its conclusions.

Tracing cultural studies’ lineage

Important groundwork for this approach was laid in Great Britain at Birmingham’s Centre for Contemporary Cultural Studies (CCCS), beginning with its founding in the mid-1960s. Many scholars who attempt to chronicle the history of cultural studies do so rather wistfully when they write about the early, dynamic days of the CCCS. In those early years,
writes Simon During, cultural studies was about “subjectivity...—it studied culture in relation to individual lives, breaking with social scientific positivism or ‘objectivism’” (1). But unlike many other disciplines that present a tidy narrative of growth and development, cultural studies, according to one of its most recognizable scholars, Stuart Hall, was “never one school... never able to unify it all, nor did we want to create that kind of orthodoxy” (Grossberg, “On Postmodernism” 149). Yet, for all of Hall’s resistance to unifying the “school” of cultural studies in its early days, the CCCS may be identified with work in areas as diverse as subcultures, media, racism, Thatcherism, gender, postcolonialism, identity, and the politics of popular culture. The diversity of subject matter taken up for cultural studies projects can be contrasted with a consistency in general principle, a general principle that emphasizes the place of politics in any cultural studies enterprise. According to Hall,

[I]t was not possible to present the work of cultural studies as if it had no political consequences and no form of political engagement, because what we were inviting students to do was... to engage with some real problem out there in the dirty world... So, from the start we said: What are you interested in? What really bugs you about questions of culture and society now? What do you really think is a problem you don’t understand out there in the terrible interconnection between culture and politics? What is it... that really bites into your experience? And then we find a way of studying that seriously. (“The Emergence” 17)

At the NSNWR and PLC, the nagging problem that works to situate this study within the purview of the enterprise of cultural studies is the refuge’s connections to politics and public discourse. Indeed, the refuge exists because of political influence wielded by a political
player in the region. It also exists because of an overarching political message it assumes and communicates to its audiences: that to engage progressive environmental work matters.

Further, engaging that kind of environmental work often resists the dominant discourse. In the case of the NSNWR, efforts to first restore and then preserve a nearly vanished landscape resist more prominent messages of greater agricultural production of crops and livestock. When much of the state’s economy depends on bigger and better and movement forward to procure these greater fruits, the NSNWR’s conversation centers on movement backward, to literally regain lost ground. The conversation gets convoluted in a way when that movement backward also depends upon current technologies and developments in order to accomplish such a grand goal as returning more than 8,600 acres of farmland into native tallgrass prairie. The plot twists and U-turns that characterize this narrative mean that such a messy discourse fits neatly into the type of project cultural studies authorizes.

While cultural studies’ birth in England at the Birmingham School plays an undeniably central role in the story of its development, this enterprise that is so firmly anchored to politics, context, and contingency has also exported well—perhaps most readily to Australia and the United States. In Australia, Tony Bennett has engaged conversations in media, popular culture, and museums in ways that I’ll explore later in this document and, from Great Britain, Graeme Turner’s history of British cultural studies continues to serve as a useful introduction to cultural studies at large. In the U.S., Lawrence Grossberg’s status as a CCCS alumnus provides him special purchase on cultural studies scholarship closer to home, but Grossberg is by no means standing alone, as more and more contemporary scholars realize the benefits of such an approach to intervening in political situations of the everyday. Deriving from cultural studies, articulation theory offers a useful way to shape the
methodological approach to this project. In the next section, I provide a brief review of articulation and show how it informs methods.

Using articulation to inform methods

One of the most profound and useful analogies in the cultural studies literature comes from the discussion of Stuart Hall’s articulation theory. Although we are most familiar with the term “articulate” in its association with clarity in spoken language, its place in British culture provides a corollary to the North American tractor-trailer, the “articulated lorry”—“where the front (cab) and back (trailer) can, but need not necessarily, be connected to each other. The two parts are connected to each other, but through a specific linkage, that can be broken,” Hall explains (Grossberg, “On Postmodernism” 141). O’Sullivan et al. in Key Concepts also emphasize substantially more than does Hall this notion of the puller and the pulled in any articulation. They write:

Just as an articulated lorry has a prime mover and a trailer (where the prime mover, though smaller and lighter, determines the movement of the trailer—it provides motive force to the trailer), so articulation describes not simply a combination of forces but a hierarchical relationship between them. Forces aren’t simply joined or jointed, they are ‘structured in dominance.’ (17)

As Hall further describes the conditions and results of the linking that defines articulation, we may begin to see how discursive fields may be linked—articulated—within the contingencies of social-historical conditions and practices:

An articulation is thus the form of the connection that can make a unity of two different elements, under certain conditions. It is a linkage which is not necessary, determined, absolute and essential for all time... So, the so-called
'unity' of a discourse is really the articulation of different, distinct elements which can be re-articulated in different ways because they have no necessary 'belongingness.' The 'unity' which matters is a linkage between that articulated discourse and the social forces with which it can, under certain historical conditions, but need not necessarily, be connected. (Grossberg, "On Postmodernism" 141)

Articulation theory provides an appropriate starting point for examining professional communication in museum exhibition primarily because of the theory's imperative to engage in deep historicizing, radical contextualizing. Articulation theory gains its strength from the concrete rather than the abstract and relies fully on the contingent. Nothing is certain or preordained when discourses and social forces are articulated and re-articulated. These characterizing elements work to further articulation theory's suitability to a museum site where public interest is served and public voice is crucial. The match between public exhibition in a museum space and articulation theory works because a theory of articulation is both a way of understanding how ideological elements come, under certain conditions, to cohere together within a discourse, and a way of asking how they do or do not become articulated, at specific conjunctures, to certain political subjects. (Grossberg, "On Postmodernism" 141-42)

Articulation disallows reducing linked discourses and social forces to a false understanding based on "socio-economic or class location or social position" beforehand, according to Hall (Grossberg, "On Postmodernism" 142). In his consideration of articulation and narrativity in Mike Rose's *Lives on the Boundary*, John Trimbur reiterates the theory's
reliance on practice: "No outcome can be guaranteed as it is in orthodox Marxism. . . . but
must be determined concretely at specific conjunctures of history" (42). Instead, the theory
provides "a way of describing the continual severing, realignment, and recombination of
discourses, social groups, political interests, and structures of power in a society" (Nelson,
Treichler, and Grossberg 8).

Within the NSNWR and PLC, articulation allows one to examine the texts and visuals
of the exhibition's displays in conjunction with the media's portrayal of the center. It allows
for the linking of observations about the effects of metaphors within the spatial discourse of
the site with analyses of the roles played by various technologies in the exhibition. These
combinations and recombinations of elements add strength to the analysis undertaken in the
present study.

In the following sections, I bring the two literatures of museum studies and cultural
studies together to highlight what I see as important points of contact between them—in
terms of representation, of power, and of social action and intervention.

Addressing representation in museum studies and cultural studies

Cultural studies and museum studies work together to enrich contemporary
understanding of professional communication (as enacted in public display or exhibition of
the environment) by attending to the concept of representation. In some respects, cultural
studies may appear to command the stage about representation; in fact, there is ample
evidence to suggest that museum professionals—including historians and anthropologists—
are beginning to adopt constructionist approaches to language, meaning, discourse, and
knowledge and power that advance the study of public exhibition and display.
Cultural studies literature addresses representation directly, tracing its historical and theoretical heritage to the work of Ferdinand de Saussure, Roland Barthes, and Michel Foucault’s theories of discourse, knowledge, and power. Saussure’s and Barthes’ work gives us a sense of the structures of language and meaning; Foucault enriches their sign-system—or semiotic—approach to language by theorizing a role for power and a concern for producing knowledge (instead of simply “meaning”) within discourse (instead of simply “language.”) I’ll address this theoretical lineage briefly and show how representation is also taken up by scholars examining museum exhibition and display.

It is also important to note at this juncture that representation serves as the starting point of what I see as a progressively enfolded “answer” to this study’s guiding research question. That is, in order to see how social action or intervention may be carried out in a public project such as the exhibition of prairie restoration and preservation, we must first examine how representation works within such an exhibition and how power infiltrates the discourses and activities of the larger site. Only after addressing those concepts will any such call to intervention and social action cohere. Because these are terms most often associated with cultural studies, I will introduce each one as it is taken up within that body of literature and connect it to work taking place in museum studies.

According to Stuart Hall, representation is “the process by which members of a culture use language (broadly defined as the system which deploys signs, any signifying system) to produce meaning” (“The Work of Representation” 61). Representations, then, can be thought of as symbols standing in for words, objects, ideas, etc. Representation—as a process or practice—is thus tied up with language, meaning, and culture. “To belong to a culture,” writes Hall, “is to belong to roughly the same conceptual and linguistic universe, to
know how concepts and ideas translate into different languages, and how language can be interpreted to refer to or reference the world” ("The Work of Representation" 22).

Although Hall identifies three approaches to representation—a reflective, an intentional, and a constructionist approach, but it is that third approach that most closely aligns with the contingent nature of cultural studies ("The Work of Representation" 24-25). A constructionist approach rejects the reflective approach’s belief in a true meaning that is simply reflected by language. The constructionist approach also rejects the intentional approach that assigns the task of meaning making to an individual speaker or author. Instead, the constructionist approach to representation suggests that meaning is made through social actors who use the conceptual systems of their culture and the linguistic and other representational systems to construct meaning, to make the world meaningful, and to communicate about that world meaningfully to others. ("The Work of Representation" 25)

In this approach, signs often do complicated work—standing in for multiple meanings, providing symbolic functions—and it is through these social actors’ use of a system of cultural conventional codes that they are able to construct and negotiate meaning.

Saussure and Barthes offered students of language a scientific system for understanding how signs operate (through the interplay of signifiers and signified), how language systems operate in rule-bound fashion (Saussure’s notion of langue), how language operates through actual speech acts and situations (Saussure’s notion of parole), how connotation and denotation operate in language, and (through Barthes’ work) an extended cultural field for examining signs and representations through the activity of mythology in popular culture. Whereas Saussure and Barthes grounded their work in a structural system of
signs and meaning, Michel Foucault sought to complicate that groundwork. Foucault’s concern was with the production of knowledge—not just meaning—through discourse, or relationships of language and practice—not just language. Foucault sought to understand “relations of power, not relations of meaning” (Hall, “The Work of Representation” 43).

In her study of ethnographic museums, Henrietta Lidchi makes some of the most useful applications of the constructivist approach to representation in the current literature of cultural studies of museums. Lidchi’s semiotic analysis of an exhibition titled “Paradise” “explored the various ways in which objects, contexts, texts, and visual representations were deployed to construct meaning” (184). The exhibition served as a type of text for Lidchi’s discussion of the poetics of exhibition, an examination of the meanings produced by articulating texts and images and contexts. An examination of the politics of exhibition searches for ways that museums engage the “production of social knowledge” by teasing out the relations of discourse, knowledge, and institutional power (184, 185). Although neither type of examination is necessarily more useful than the other in terms of how we come to understand museum exhibition, Lidchi validates the politics of exhibition as a way to more readily comprehend Foucault’s conversation about “relations of power, not relations of meaning.”

Steven C. Dubin sees the consumption of museums as one quite particular way these struggles over representation are waged. In no way immune from a larger cultural pattern of consumption, he writes, museums too are implicated in complicated organizations of both public and private consumption—“all jockeying for funding, publicity, and paying customers” (7). He adds:
The most obvious example is the growing importance of museum stores, which have become a multimillion-dollar source of revenue. They now offer everything from temporary tattoos and coffee mugs emblazoned with reproductions of their prime treasure, to pasta in the shape of Rodin's *The Thinker* and baseballs bearing the 'autographs' of artistic heavy hitters. (7)

Such examples of representation as part of cultural consumption are clearly part of the rhetorics of display, but perhaps more appropriately considered as side dishes to the main course of the exhibition itself. It is in interrogating those central elements of representation, the displays themselves, that cultural theorist Mieke Bal's work informs the current study:

If there is anything that would differentiate the 'new' museology from the 'old' or plain museology, it is the serious follow-up on the idea that a museum installation is a discourse, and an exhibition is an utterance within that discourse. The utterance consists neither of words nor images alone, nor of the frame nor frame-up of the installation, but of the productive tension between images, caption (words), and installation (sequence, height, lights, combinations). (128)

Such self-reflexivity is not apparent in all museums studies literature, especially in the handbook presentations that introduce students to the profession (Burcaw; Dean), but Lisa C. Roberts' contention that it is museum educators who work on the progressive edge to push broader understandings of representation and knowledge in museum exhibition is encouraging (56). It is in the work that Karp and Lavine do in "Introduction: Museums and Multiculturalism" in *Exhibiting Cultures: The Poetics and Politics of Museum Display* that I find the most compelling bridge between this discussion of representation and the underlying...
tension that guides the next section's discussion of power, the second intersection I acknowledge between the two bodies of literature in museum studies and cultural studies. Karp and Lavine write:

Finally, we need experiments in exhibition design that try to present multiple perspectives or admit the highly contingent nature of the interpretations offered. This will be a challenge: people are attracted by the authority of museums, and audiences could lose interest if that authority is called into question. (7-8)

**Addressing power in museum studies and cultural studies**

Although museum professionals acknowledge that tension remains where issues of elitism in programming and operation are raised, such professionals have also worked hard to challenge past assumptions that museums occupy spaces reserved solely for privilege that they once did. Instead, writes Steven C. Dubin, museums work to shape and are shaped by the social culture—and, presumably, the power relationships realized and expressed within that social culture. “Museums are not sealed in a bubble,” Dubin writes. “What goes on generally in the culture affects how they operate; how they do their work likewise affects related cultural activities” (8).

But what is “power,” and how is the term used among cultural studies scholars and museum professionals? In order to begin to answer those questions, I think it is important to keep Lawrence Grossberg’s assertion of cultural studies’ concern with the everyday at the forefront of the discussion. Doing so reminds us that interrelations of power do not happen apart from the lived experience of the everyday. All such relationships are bound together, and any understanding of the practices and uses of those interrelations of power must
interrogate the backyards where power resides. Grossberg writes that power, as seen through the lens of cultural studies, is "complex and contradictory..." and operates not only in institutions and in the states, it also operates where people live their lives, in what is sometimes called everyday life, and in the space where these fields intersect. Cultural studies is always interested in how power infiltrates, contaminates, limits, and empowers the possibilities that people have to live their lives in dignified and secure ways. For if one wants to change the relations of power, if one wants to move people, even a little bit, one must begin from where people are, from where and how they actually live their lives. (Bringing It All 257)

Cultural studies practitioners are not alone, however, in their consideration of the interrelations of power, culture, and context. Speaking from a slightly different location, literature in museum studies also addresses similar concepts. Stephen E. Weil writes in the introduction to his 1995 collection of essays and addresses, A Cabinet of Curiosities, that "No matter how strenuously members of the museum community may insist on their own objectivity, the fact is that the thrust of every museum is ultimately shaped by the dominant authority under which it operates" (xiii). He continues:

[W]hat ought to be recognized is that there is nothing inherently virtuous about museum work. It is simply a technology, a body of knowledge about how to accomplish certain things. Like any technology, judgments about its value must depend on the ends for which (or even the dignity with which) it is used. In this respect, museum work closely resembles teaching (is it per se good to teach anything, even the most up-to-date methods of torture, or the
mechanics of terrorism?), publishing, or broadcasting. Discomforting as the notion may be to many of its advocates, the museum is essentially a neutral medium that can be used by anybody for anything. (*A Cabinet* xv)*^2^ Grossberg and other cultural studies practitioners would, I think, wish to clarify Weil’s use of the term “neutral.” Indeed, museums’ messages are impossibly neutral; the spaces, themselves, however, may be seen as blank canvases upon which a director or curator or educator’s work most certainly wears the colors of persuasive discourse. In that way, then, museums may go undetected in the general public as participants in and shapers of argument. And in that way they are, as Weil asserts, ripe for shaping such discourse, for persuasion, and they engage such persuasive activity perhaps without considering that they do so in such powerful—but seemingly neutral—ways.

Here, the work of Michel Foucault seems especially instructive. Foucault, according to Hall, moved theorizing about power to an important place in social theory when he wrote that

power does not ‘function in the form of a chain’—it circulates. It is never monopolized by one centre. It ‘is deployed and exercised through a net-like organization’. . . . What’s more, power is not only negative, repressing what it seeks to control. It is also productive. It ‘doesn’t only weigh on us as a force that says no, but…it traverses and produces things, it induces pleasure, forms of knowledge, produces discourse. It needs to be thought of as a productive

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^2^ I contend that rather than describing the museum’s medium as “neutral” —a rhetorical situation that many in professional communication would say is impossible—Weil might have more usefully discussed a tension between power in hegemonic discourses and museums’ challenges to such power.
network which runs through the whole social body.’ (“The Work of Representation” 49-50)

Steven C. Dubin, in Displays of Power: Memory and Amnesia in American Museums, sees museums as active agents in the culture rather than as passive recipients of cultural movement. He writes that museums are “important venues in which a society can define itself and present itself publicly” (3). Dubin’s assertion may set up a sort of museum-as-debutante analogy that—while the analogy does work to locate museums within a larger cultural conversation where they might affect change—also calls to mind museums’ long history as venues for the elite.

Tony Bennett, however, complicates Dubin’s ideas in important ways. In “Putting Policy into Cultural Studies,” Bennett addresses the role of the museum and its historical relationship to questions of power. The museum, Bennett writes, is a “cultural technology” and says its formation “has been intimately associated with that of modern conceptions of state-people relations” (29). Bennett continues by citing the work of Carol Duncan and Allan Wallach, who have thus usefully noted the respects in which, as an instrument for the display of power, the public museum is governed by different principles from those regulating earlier royal collections. For the museum is characterized by its rhetorical incorporation of the public—conceived as a citizenry—into the form of power which the museum itself displays. Whereas the iconographic program of royal collections served to validate the splendor and power of the prince, thus placing the visitor in a relationship of vassalage to a superior power, the public museum inscribes the visitor in a new relation to power in
addressing him/her as 'a citizen and therefore a shareholder in the state' (p. 457). The public museum, that is, serves as an instrument for relaying to the citizens of modern democratic politics a power that is re-presented to them as their own. (29-30)

But Bennett seems to be a good cultural studies practitioner, refusing to subsume the role of contingency, refusing to simply go along with what might be popular tendencies in museum work to “[restructure] the representational practices of the museum to facilitate the emergence of the oppositional subject of a counter-hegemonic” (31). He writes:

However useful it may be... to view museums as hegemonic apparatuses, this perspective is no more able to theorize the specific forms of politics peculiar to the museum than it is able to engage practically and productively with the actual agents that are operative within the field of museum politics.

(30)

In her review of the role of education—and particularly the role of museum educators—in museum life, Lisa C. Roberts writes that museums have been bound up in a “Belief in the inherent power of the object to teach and uplift... and it was widely assumed that visitors need only stand in front of museum collections to comprehend their antiquity, beauty, or rarity” (29). 3

Roberts' recollection of two viewpoints on the role of museums during the great American museum boom of the post-1870s provides still more to consider when investigating issues of power in public exhibition. According to Roberts, the first view saw

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3 Yet, as Donna Haraway argues in “Teddy Bear Patriarchy,” the power of the artifact in museum history is not only enormous and complex, in the case of the taxidermied artifact, that power is also potentially damaging to enlightened considerations of race and gender.
museums as "amateuristic sideshows devoted to popular entertainment" (21); the second view saw museums as "elitist enclaves...[that] catered to a more scholarly clientele" (22). Certainly, there is no guarantee that either view offers an accurate assessment of the role museums played then, nor is there a guarantee as to how the publics involved—either as the entertained, the included, or the excluded—were putting museums into the practice of everyday life. For a better understanding of those questions, I examine how cultural studies and museum studies address questions of social action or intervention.

**Addressing social action and intervention in museum studies and cultural studies**

As a way to frame this section's discussion of social action and intervention, I look to Nelson, Triechler, and Grossberg's introduction to *Cultural Studies*, where the editors call for an extension of cultural studies-based research into sites of resistance, saying such excursions are necessary but also contingent, temporary (6). It is precisely these calls—along with what I see as evidence in the literatures of museum studies and cultural studies that addresses issues of political change, social action, or intervention—that encourage my work within the context of professional communication in public exhibition, such as those documents and activities associated with as the NSNWR and Prairie Learning Center. I am using the terms *social action* and *intervention* more loosely here than either cultural studies scholars or museum scholars do, however, and I include glances at notions of community and context along the way. When cultural studies scholar Lawrence Grossberg speaks of intervention, for example, he says he does so "not in the sense that it intends to leave the realm of intellection and carry its practice to the streets. Rather it is interventionist insofar as it is not theory driven and theory is not its object of study" (*Bringing It All 263*). For instance, in her work as a museum educator, Lisa C. Roberts asks the kinds of questions that presage cultural studies'
preoccupation with intervention. While granting that visitors obtain a brand of power through their agency as interpreters in museum encounters, Roberts also contends that museums, too, play a prominent role in meaning-making. She asks “What, then, is the nature of museums’ responsibility in determining how to interpret and to present an object? What, given multiple potential interpretations, goes into weighing and selecting particular ones? (107)”

Social action’s messiness within a cultural studies approach becomes apparent in Grossberg’s work. Practices have effects, but when those effects are often difficult to identify and when the opportunities for affecting contexts also exist, knowing how to engage social action becomes even more difficult *(Bringing It All 265).* Grossberg further illuminates his notions of what I am calling social action in terms of its relationship to theory and power. Power as viewed by cultural studies, he writes is “always a relation between unequal forces” *(Bringing It All 265)* and adds that “… above all, cultural studies assumes that power is complex and contradictory, and it is committed to struggling with and within that complexity” *(Bringing It All 266).*

The context in which I am most interested is that described by Herndl and echoed by Grossberg and others: the quotidian and contingent. The NSNWR is neither the Smithsonian Institution nor a mega-exhibit intent on attracting sold-out crowds. It is, instead, relatively locally focused (although part of the U.S. Department of Interior/U.S. Fish and Wildlife Service) and in and of a particular community. The prairie restoration project—carried out on land originally intended to serve commercial, capital interests as a nuclear power facility—offers researchers in professional communication examples of resistance and political change of the sort that not only Herndl suggests but that are also embedded in the discourses of museums more globally. It features many of the genres and practices that are part of the
scope of professional communication but which are perhaps less widely recognized as “counting” in that discipline.

Nearly 30 years ago, the International Council of Museums (ICOM) issued a definition of museums that called for such institutions to be “in the service of society and its development” (Weil, Rethinking xiii). Addressing museum colleagues at the 1985 annual meeting of the Southeastern Museums Conference, Stephen E. Weil called for a revised focus for museums, away from a previously collection-based preoccupation and toward a more community-based imperative for museum operation. “Other kinds of nonprofit organizations are often established to meet a perceived and definable community need,” Weil writes. Museums get funded for often more limited purposes or to satisfy individuals or even corporations, potentially endangering a sense of community responsibility and intervention. “Yet no matter how it is founded,” Weil writes, “with rare exceptions the only way a museum can long continue is through the support it draws from its community. Not the museum community, but its own community” (Rethinking 21).

Although the guiding principles of cultural studies emphasize the importance of social action or intervention, Weil complicates that imperative with a sobering discussion, predicting disheartening outcomes for museums that hold too fast to a love of objects rather than to a vision for those objects’ use in a larger community. For Weil, the purpose of a museum appears to be inextricably tied to its responsibility to social action:

[Museums’] ultimate importance must lie not in their ability to acquire and care for objects—important as that may be—but in their ability to take such objects and put them to some worthwhile use. In our failure to recognize this,
we run the danger of trivializing both our institutions and ourselves.

(Rethinking 28-29)

Unfortunately, and contrary to the cultural studies imperative for intervention, Weil (writing in his later collection) either urges his colleagues toward what may be construed as a reality check or casts a palpable sense of futility over the effects museum work can actually have in a community:

Museums might also be more modest about the extent to which they have the capability to remedy the ills of the communities in which they are embedded. We live, all of us, in a society that seems determined to lay waste to the planet that is its sole source of support. Museums neither caused these ills nor—except for calling attention to them—have it within their power alone to do very much to cure them. (A Cabinet xvi)

Thankfully, Weil's doubt seems outweighed in the literature by more sanguine outlooks. Lisa C. Roberts acknowledges that museums have arrived late to the conversation of a socially constructed vision of knowledge, a conversation that professional communicators have engaged for years. “Yet museums,” Roberts notes, “whose very business is the generation and the communication of knowledge—have been slow to consider its implications for exhibits and the exhibit-making process” (55). Roberts’ advocacy of the museum educator as a prime mover and shaker among museum professionals in terms of promoting social change through knowledge construction (and presentation) is encouraging. Further, her ideas seem compatible with a cultural studies sensibility. She comprehends the importance of context and of interpretation as they relate to visitors’ own agency, their own ability to intervene in the experience of the exhibition and act beyond it. She adds:
The issue of language in museum exhibit text has to do with not just presentation but also context, which has as much to do with the visitors as with the object. In other words, visitors' interest and attention is determined not by an object’s inherent appeal but its relevance to their own framework of knowledge and experience. (69)

Roberts affords her museum colleagues an equally instructive look at the role of interpretation in exhibition, a look that to scholars of cultural studies may seem painfully apparent and only the first step toward a more complete interrogation of historical contexts and relations in practice. Meanings made by multiple audiences weigh in differently, Roberts explains. "Just because meanings are open to multiple possibilities does not mean that they carry equal weight," she writes.

Also, just because visitors play a role in interpreting their encounters with collections does not mean that museums no longer have a hand in shaping their encounter. Visitors' experiences and interpretations are still subject to stimuli that are provided by the museum. (107)

Roberts may recognize the role that museums play as "idea-, experience-, and narrative-based institutions—forums for the negotiation and the re-negotiation of meaning," (147) but how some of those narratives are read in the larger culture may not be altogether positive in terms of a promise for social action. For instance, Carol David found that through the "internal organizational structure of two large art museums and the social world of the people who govern them," and through promotional materials intended for the general public,

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4 Interestingly, Roberts' discussion falls within a chapter titled "Education as Ethics."
“a master narrative of elitism... dominates the way museums are perceived in this country” (319).

Social anthropologist Sharon Macdonald’s collection of essays examining the politics of display in science museums provides a fine example of how museum studies and cultural studies may collaborate to intervene in exhibition practices. Macdonald’s call to more fully consider the process of exhibition and display resonates with cultural studies’ approaches: “In order to move towards a more thorough understanding of the potentials, difficulties and consequences of putting science on display we need to look analytically at the contents of exhibitions in relation to their production, contexts and reception,” she writes (2). Macdonald identifies her purpose at work in the collection as bringing museums and science together “not just to explore the politics and cultural operations of each, but also to highlight the discursive interrelationships between the two”—a project very much aligned with cultural studies sensibilities. Further, her understanding of “politics” seems equally in step with cultural studies; that is, “we are concerned with ‘politics’ in this broad sense of the workings of power,” Macdonald adds (3).

Politics is, therefore, a matter of (often implicit) negotiation; a dynamic powerplay of competing knowledges, intentions and interests. Moreover, if we view knowledge and power as intertwined, politics is not restricted to particular events or institutions; rather, it has ramifications throughout social life and cultural practice. . . (3)

In the next chapter, I describe the rationale for methods employed in conducting this qualitative case study of how power and social action are negotiated on the politicized and rhetorical ground of contemporary museum exhibition.
CHAPTER THREE: METHODS OF EXAMINING POWER ANDSOCIAL ACTION IN PUBLIC EXHIBITION

This qualitative case study of an interpretive museum requires a commitment to thinking across disciplinary and methodological boundaries; indeed, such boundary crossing is a potentially overlooked aspect of many professional communicative activities. Instead, we who are engaged in professional communication—either as practitioners or as scholar-teachers—seem to seek out the niche, the specialization, rather than the overlap or intersection, the blurring and blending of disciplinarities. This project not only recognizes the inescapability of multi-disciplinarity, it also enacts such boundary crossings in its rationale, scope, and methodology.

In my study of the Neal Smith National Wildlife Refuge and Prairie Learning Center, I ask “How are issues of power and social action negotiated in a public educational exhibition?” That central research question is further understood by examining relationships among visual, verbal, and spatial elements at the refuge that shape or re-shape impressions about the region’s identity. A related question, then, is “How do the visual, verbal, and spatial narratives associated with this particular public exhibition—which works to translate a technical subject to primarily generalist audiences—represent technology and progress and thus encourage or discourage acts of social action or intervention?” In some sense, then, this investigation conforms to Hayes et al.’s assertion that

Although explorers are likely to be surprised by what they find in their new worlds, competent ones have some expectations beforehand that dictate many of their preliminary choices of what to look for and how to look for it. That is,
they aren't wandering innocently hoping that something interesting, anything interesting, would turn up. (93)

Despite those few necessary guideposts or expectations, this project remains centered on the less-conspicuous connections that associate it with cultural studies’ articulation theory, whereby researchers explore the contingent linkages between elements in a discursive field. Over time, some of those linkages—articulations—hold; some do not. Outcomes are never pre-determined but are recognized as subject to the temporariness or contingency created out of such a linkage.

**Using Qualitative Methods to Guide This Case Study**

"Case study is not a methodological choice, but a choice of object to be studied," writes Robert E. Stake. "We choose to study the case. . . . As a form of research, case study is defined by interest in individual cases, not by the methods of inquiry used" (236). In adopting such a stance, Stake distills the object of a study from the methodological apparatus and weightiness of traditional expectations around it and enlists the object’s researcher in a process whereby the “what” and “why” of an investigation appear to take precedence over the “how” of the study’s procedures. Stake continues: "A case study is both the process of learning about the case and the product of our learning" (237) so that rather than fretting over methodological imperatives, the researcher in this scenario seems empowered to investigate the object that matters to her. Indeed, in Stake’s understanding of one specific type of case study—the intrinsic case—the project “is not undertaken primarily because the case represents other cases or because it illustrates a particular trait or problem, but because, in all its particularity and ordinariness, this case itself is of interest” (237).
Case studies, generally, according to John R. Hayes, et al., are “exploratory” types of empirical research, “useful when the investigator is trying to answer ‘how’ or ‘why’ questions about events in real-life settings over which he has little control” (91). In that conception, then, the case study acts as a sort of preliminary study for a later, perhaps more focused, examination. Hayes et. al. write that among the strengths of this approach are that case studies are “detailed and try to capture something of the complexity of events... they provide opportunities for discovering unexpected relations... allow[ing] us to recognize the uniqueness of people and events” (91).

The case undertaken here both supports and denies these ideas in that it is undertaken, to use Stake’s terminology, for the intrinsic interest it provides rather than for its value necessarily as a precursor to later study. The refuge’s establishment as the nation’s largest restoration project of its type—and the narrative of its accompanying educational exhibition—seems reason enough to analyze its connection to issues of power and social action. That its purchase was secured as part of political bargaining on land originally slated for commercial nuclear power generation provides only additional layers of richness as a case site. Yet, what I see as an acknowledgment of wealth gleaned from the particular continues within some circles to point to the case study’s weaknesses as a methodological approach. Hayes et al. write:

Because so much information is collected for each case, it is impractical to study very many cases. Indeed, many case studies involve only one instance of the phenomenon being investigated. And in many situations, the small sample size imposes a significant constraint on what can be concluded from the study. (92)
Researchers may combat that constraint of generalizing from a too-small sample size by using the project to provide a counter-example to an existing claim, the editors write (92). Similarly, write Janice M. Lauer and J. William Asher, the case study does not primarily attempt to establish cause-and-effect relationships among variables; it seldom has that kind of explicit power. It is, instead, a design that, by close observation of natural conditions, helps the researcher to identify new variables and questions for further research. (23)

In his handbook to case study research, Robert K. Yin admits to contributing what he calls a more "technical" definition of the case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used" (23). But it is the notion of authority in case study research, introduced by Thomas Newkirk as he discusses the narrative roots of the approach, that I think raises among the most compelling issues in terms of methodology. Newkirk addresses Vygotsky’s inclination for a "more dramatic perspective, in which impediments, struggle, and transformation are the central elements. It is this perspective," writes Newkirk "that often orients the case-study writer" (135). Case study narratives, Newkirk concludes, are those that identify not only patterns but also impose "some moral framework that allows us to feel satisfied by the ending" and that "draws on a core of mythic narratives—deeply rooted story patterns that clearly signal to the reader the types of judgments to be made" (135).

Indeed, the current study required a methodological approach that assumed flexibility, contingency, and depth. Although much useful information about the effects of particular displays and about the relationships of visitors to museums comes from visitors’ studies—
oftentimes quantitative reviews based on survey data gathered from clipboard-and-questionnaire interactions with visitors—I sought to analyze the museum space and rhetorics of prairie restoration and preservation because of the compelling nature of the site itself. For me, the intrinsic interest in the case, as Stake describes and as cultural studies scholars suggest as part of working from the “ground” up, was the impetus for determining methodology. Further, my own experience with qualitative research projects conducted during graduate study that examined student expectations of and satisfaction with linked courses in learning communities led me to return to this approach. Finally, some 10 years of experience as a journalist prior to engaging graduate study lent a degree of familiarity with the processes enacted by qualitative researchers.

In the following section, I describe how I engaged qualitative methods to gather data for the current study. In doing so, I describe the data gathered by type and by rhetorical function in the discourse of the refuge and prairie center.

**EXPLAINING DATA GATHERING**

The site selected for this research—the Neal Smith National Wildlife Refuge and Prairie Learning Center—exists to restore and preserve tallgrass prairie and oak savanna ecosystems, to conduct research on the flora and fauna of such ecosystems, and to educate visiting publics about the native tallgrass prairie and oak savanna landscapes of central Iowa during the mid-1800s (Friends). Because the refuge’s audiences are varied—from teachers and students in grades K-12, to local and regional prairie enthusiasts and small-scale restorers, including technical specialists conducting research at the refuge, and because its general subject of prairie ecosystem management touches on many sub-topics, including animal ecology, biology, botany, and water and resource conservation, the NSNWR is itself a
meeting place of multiple disciplines and multiple discourses. It therefore seems reasonable to expect that the methods employed to carry out an examination of such a site reflect similar multiplicity.

Data gathered for the current study reflect the richness of museums as political, rhetorical sites of professional communication, in general, and the especially intriguing tensions that emerge from the NSNWR and PLC, in particular. These data exist in various formats, derive from various areas of the refuge and prairie center, and serve various rhetorical functions, as I discuss more fully in Chapter Four’s results and analysis. In the remainder of this chapter, I describe the types of data gathered and how those data function rhetorically in this study. An annotated virtual tour of the study site is provided in Appendix A as a way to assist readers’ ability to see the data in situ as much as possible.

**Types of data gathered and rhetorical function**

In this section I describe five main types of data gathered for the current study and, where possible, I provide photographs to illustrate the data. Further, where applicable, I describe briefly how the data work in terms of their rhetorical function at the refuge, a discussion I address more fully in Chapter Four. The data I gathered for the present study include

- documents (including newspaper articles, consultants’ reports and correspondence, and promotional information from the refuge and prairie center);
- interviews;
- signage (both exterior and interior);
- displays as part of the exhibition’s narrative;
- video and web-based materials.
Documents analyzed for this study. Several types of key documents informed this study and provided useful insight into the how issues of power and social action are negotiated in the visual, verbal, and spatial discourses of the refuge and prairie center. They include:

Newspaper articles. Using an online database supported by the Des Moines Public Library, I accessed approximately 67 articles that ran between February 17, 1990, and July 1, 2002, in the Des Moines Register, the state’s daily newspaper. The articles ranged from brief notices without bylines and official announcements of public meetings to bylined feature articles with photos. This corpus of articles includes news stories that report on refuge funding, neighbors’ reactions to the site, and bison and elk herd counts; photo essays; editorials; and travel supplement overviews. I purposefully selected this publication because of its status as a statewide publication with a respected reputation among journalists and its proximity to the refuge—close enough to have good access to the site but with enough distance to provide what I consider an additional layer of emotional remove from the impact the refuge was sometimes reported to have had on the neighboring community of Prairie City and its county seat of Newton. Newspaper coverage from either Prairie City or Newton might have also informed this study, but I decided at the outset of my data gathering to limit my review of articles to only the statewide daily newspaper.

Design/Planning consultants’ documents. A second documentary form of data I reviewed is the 1993 draft program plan generated by the refuge’s initial consultant, a document that describes the exhibition’s “Interpretive Mission,” “Visitor Experience,” “Exhibit Storyline,” and “Program Plan Worksheets.” The report is intended to communicate the “conceptual development and programming for indoor and outdoor exhibits and
programming" (1); the report also communicates the exhibition’s main message and—using text and images—provides a draft of the exhibits and trails.

Additionally, I reviewed correspondence and drafts of exhibit text and images between refuge planners and museum designers for the NSNWR’s two newest exhibits, the Charles and Mildred Petersen exhibits, “Native to the Prairie” and the Entrance Exhibit Elk display, completed in 2002. These documents trace how designers and refuge staff shaped and reshaped visual and verbal elements of those exhibits, affirming the rhetorical/political nature of museums.

**Newsletters.** The Friends of the Prairie Learning Center publish *Prairie Wind*, a newsletter that communicates news and photographs about events taking place at the NSNWR, recognizes volunteers’ activities, includes brief feature stories on the bison herd, Project Bluestem curriculum, bird count efforts, and other outdoor education activities or workshops and offers suggestions from the Prairie Point Bookstore. I read *Prairie Wind*, either in hard copy or online formats, during the approximately year and a half of active data gathering.

**Brochures and promotional documents.** As is typical of many tourist destinations, a brochure rack located near the main entrance provides visitors to NSNWR and PLC with information about events associated with not only the prairie center but also with neighboring communities. In the summer of 2003, brochures in this display rack included documents produced by the U.S. Fish and Wildlife Service, Prairie City Economic Development Commission, Jasper County Economic Development Corporation, and the local Friends group, independently and in conjunction with the Iowa Natural Heritage Foundation. These brochures promote volunteer opportunities (within the wildlife service in general and at the
PLC in particular), encourage conservation of migratory birds, describe and map the national refuge system, and describe the refuge’s Tallgrass Trail and explain the work of the oak savanna trail, “Where Ecosystems Collide.” Further, laminated guide sheets available at the prairie center’s information desk offer visitors color photographs and technical take-along information about birds, insects, blooming prairie plants (by month), and butterflies as visitors move throughout the trailways. These documents were also included in my review.

**Interview conducted for this study.** I conducted a semi-structured interview with Don Jorgensen, the refuge’s public use specialist because Jorgensen oversaw interpretive operations at the refuge, including exhibits and educational curriculum. The interview was semi-structured in that Jorgensen and I walked through the exhibit space together, discussing selected displays’ intent and observed visitor interactions with these displays. I was most interested in gathering Jorgensen’s impressions of how he saw technology at work in the exhibition and what seemed to work well in terms of exhibits meeting the refuge’s goals to educate and involve visitors in the restoration and preservation efforts.

**Signage analyzed for this study.** Signs analyzed for this study include wayfinding—orientation or welcome—signs and slogans that lead visitors from both Interstate 80 and Highway 163 to the refuge, through the refuge to the prairie learning center, within the center through the exhibition space, and along the trails and auto-tour route. I differentiate here between signs that direct flow or announce particular aspects of the exhibition from wall panels, reading rails, or stand-alone cut-outs that are part of the exhibition’s educational narrative. For instance, approaching the refuge from Interstate 80 and exiting at Colfax/Mingo, visitors follow a route south along Highway 117, approximately eight miles to the refuge entrance. At the edge of Colfax, a sign reads “Colfax—A Pleasant Blend of Town
and Country." A bit farther, visitors drive through Prairie City and are greeted there by a sign that reads “Prairie City—Proud of Our Past, Confident of Our Future.” These welcome signs inform visitors of the identities either already affirmed or desired by these communities and pose an interesting backdrop against which to situate the rhetoric of the refuge’s work. These welcome signs resonate in the analysis of compelling tensions in the exhibition’s narrative as presented in Chapter Four. In contrast to the more distant wayfinding signs and community welcome slogans, I consider a sign with an arrow beneath the text that reads “Exhibit Entrance” a localized wayfinding device within the exhibition space rather than part of the more overtly educational function of the refuge.

A less clear differentiation between wayfinding/orientation and educational and persuasive purposes resides with a white board, positioned to the right as visitors enter the PLC. On a weekday visit in July 2003, the board featured hand-written text decorated with images of prairie flora in colored markers: “Welcome to the Neal Smith National Wildlife Refuge” with a tally of the bison and elk herds and new arrivals:

- Bison 37 Adult 3 calves
- Elk 17 Adult 2 calves

Below the herd count: “15 minute intro video, Return to Wildness” and “Welcome.”

Along the Overlook Trail, visitors stopping to rest at a bench see a plaque that reads:

“This bench dedicated by her Winegar kinfolks 7-21-99, the 100th birthday of Aunt Leona, overlooks the old farm of Arthur and Leona Boliver.” This specialized type of sign, dedicating a physical part of refuge to a family member, by her “kinfolks,” works to further a myth of connection to the land and to family. A degree of familiarity gets established with “Aunt Leona” for visitors as they read the plaque and then turn to look out over the refuge to
the land where she and her husband made their home. Tensions between heritage and progress, identified as prominent throughout the refuge’s narrative, are certainly evident in this dedicatory plaque. Exterior signage—that leading to the refuge and along the auto-tour route—is illustrated and annotated in Appendix A.

**Displays analyzed for this study.** Data considered “displays” have an educational or promotional function in the refuge’s narrative of prairie restoration and preservation as opposed to wayfinding or visitor orientation signs. An illustrated and annotated tour of representative exterior displays—those stationed along the Overlook and/or Tallgrass trails and at the refuge’s main welcome kiosk en route to the PLC itself—and of representative interior displays—those part of the PLC’s educational exhibition—is provided in Appendix B. The displays selected for the Appendix relate to Chapter Four’s analysis, addressing prominent tensions that emerge from the visual, verbal, and spatial narratives exhibited in the displays. In that regard, they are representative rather than inclusive of all displays in the exhibition.

**Video and web-based materials analyzed for this study.** Electronic or video images exist in three main areas of the exhibition: in the orientation film, *Return to Wildness*; in a series of six short videotapes describing prairie’s relationship with fire in the Fire Theater, and in an educational hut titled “People of the Prairie.”

*Return to Wildness* runs approximately 10 minutes and volunteer docents announce starting times over a public address system. The film situates the prairie’s history, its cultural connection to people living on it, its biological characteristics, and the work required for its reconstruction. Portions of the voice-over narrative appear as part of Chapter Four’s discussion of results and analysis.
The Fire Theater is located as visitors emerge from the first pod’s emphasis on “Much More Than Grass and Trees” and before they encounter the second pod’s focus on native American and European settlement on the prairie, “Promise of the Prairie.” This mini-theater offers six brief videotapes on subjects that range from a poem about prairie fire by “Cowboy Poet and Large Animal Veterinarian” Baxter Black to historical information about Indians’ relationship to fire to how refuge staff manage prairie through controlled burns. Visitors sit on carpeted platforms and may select a captioned version of each videotape.

In the section titled “People of the Prairie,” visitors may watch videotapes on wide-ranging subjects, including “Bringing Back the Buffalo,” “Planting the Prairie” (musical), “Homesteaders Beware,” “A Family Vision” (about conservationist Aldo Leopold), “Memories of a Sportsman” (about the late John Madson), “Ding Darling’s Iowa” (about cartoonist and leader of the Federal Duckstamp Program), “Prairie Symphony” (about wildlife biologist Frances Hamerstrom’s work with prairie chickens), and “Prairie Homes.”

Further, I reviewed the refuge’s website at least a dozen times over the course of the year and a half of active data gathering. Included in the Friends of the Prairie Learning Center’s web site, www.tallgrass.org, is information about the history of the refuge, news and events, links to other government wildlife service websites, and information about research at the refuge.

**PREVIEW OF THE FOLLOWING CHAPTER**

In the following chapter, I analyze the visual, verbal, and spatial rhetorics of prairie restoration and preservation at the refuge and discuss how those rhetorics work to modify or codify existing cultural mythologies, how they expand opportunities for progressive
environmental action, and how they shape or re-shape perceptions of the heritage landscape and its inhabitants.
CHAPTER FOUR: RESULTS AND ANALYSIS

In answering this study's central research question, "How are issues of power and social action negotiated in a public educational exhibition?" I am guided by literature from museum studies, insight from rhetoric about the environment, and literature from cultural studies. Methods associated with a qualitative case study approach guided the data gathering for the present study. In this chapter I describe the strategies I employed to analyze those data, including documents, interviews, signage, exhibit displays, and electronic sources and discuss those results as they emerged from the exhibition's visual, verbal, and spatial narratives. Further, I present the results of the analysis of those data in terms of units of analysis employed.

AN OVERVIEW OF RESULTS OF THIS STUDY

Public exhibitions seek to engage us, to inform and educate us about particular subjects, and to persuade us that those subjects warrant our attention, our beliefs, our resources, our action. Rarely, however, do we stop to more closely define the terms of those exhibitions' narratives, their appeals, or to identify those who craft and disseminate the messages we are meant to receive, those who hold valuable stakes in the ways ideas and ideals get communicated. Too often we fail to interrogate the parts that make up an exhibition's whole. This document focuses on the rhetoric of one such exhibition—the educational interpretive museum associated with the restoration and preservation of tallgrass prairie at a national wildlife refuge.

In the course of analyzing this chapter's results, I argue that the visual, verbal, and spatial narratives presented at the NSNWR and PLC work to challenge prevailing assumptions about land use and participation with the environment among those publics most
likely to visit the refuge. Such narratives also work to re-define visitors’ experiences with museums or visitors’ centers such as this one. With a project as long range and complex as the one engaged at the NSNWR, no longer is a casual engagement with the accompanying exhibition enough to fulfill missions based on productive restoration. Instead, the relationship between museum and visitor requires a deeper commitment from visitors with an imperative to active intervention. The relationship also demands a rhetoric from the museum that provides challenges to its visitors without alienating them entirely. The progressive environmental stance adopted at the NSNWR must therefore push visitors to these deeper levels of engagement and action without disrupting their attachments to long-standing regional mythologies. Attempts to move visitors toward substantial environmental action—such as the refuge engages—must compete with influential dominant discourses about large-scale agricultural production, commercial consumption, and issues of technological advancement and control.

The work of the refuge—to recover a nearly vanished landscape, reconstruct it, and preserve it—requires visitors to see Nature in a broader way, as not always bound to popularized breathtaking views and great, grand flourish. Instead, refuge staff and museum designers are charged with building not only a complicated ecosystem but with crafting a new aesthetic for beauty in nature. The gems of prairie landscape are modest, often hidden, rough-hewn and wind-blown rather than easily packaged for consumption. When, for example, refuge staff adopt and exploit the American bison as a visual icon in contrast to beliefs that the American elk was more prominent in the prairie ecosystem or that the presence of booming prairie chickens marks the success of prairie ecosystem development, we might see the bison’s prominence there as actually negating authenticity at the site and

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1 According to a 2001 satisfaction survey of adult visitors to U.S. Fish and Wildlife Service refuges, including the NSNWR, visitors are most likely to be females (51.2%) and well-educated (51.9% report either a college degree or post-graduate education). Most are white (94.6%) and more than half have a household income of $60,000 or higher. The most popular categories for visitors to refuge sites are “observing wildlife or birds (64%), hiking (57%), visitors center (47%), and photography (40%)” (Report).
reducing the narrative's overall credibility. Instead, the measures of control and commodification observed at the site serve this larger goal of fuller participation and collaboration with community members.

Rather than adopt a stance critical of the refuge for these challenges that fall short of overall success, I prefer to position the narratives within a context that is highly charged with rhetorical tensions. Those tensions serve here as my primary units of analysis, discussed more fully later in this chapter.

**Strategies for Analysis**

What we see and hear and learn about the landscape of tallgrass prairie and its restoration is complicated by issues of consumption, commodification, and control—how the land and its residents are sold to us, the visitors, and how we are influenced in multiple ways to see that land and its occupants through a romanticized lens. What we see and hear and learn about the prairiescape is mediated, negotiated, and presented to us in a fashion that seems free of such intercession; however, I argue here that the presentation of the work of the NSNWR and PLC comes to us rhetorically rather than impartially. It is *made* to be rather than simply *presented* as is. Further, the long-term work of prairie restoration and preservation creates a context for a new type of museum or visitor center experience, one that cannot be satisfied (or entirely successful) if patrons pay only casual attention to the call to action. This place urges commitment and engagement from all who experience it.

**Attending to metaphor**

As I visited the NSNWR and PLC over the course of several years, and as I closely examined the exhibits within and the exterior trails surrounding the PLC, I paid special attention to the metaphors that emerged from the texts, the images, and associated parts of displays. The study of metaphor has marked my academic interest since I began graduate study, so to some degree I was predisposed to enter the PLC with a heightened awareness of not only *which* metaphors were present but also *how* those metaphors were enacted in the
exhibition. For example, the fact that the “Prairie Bites” display uses analogy to educate visitors about prairie animals’ chewing systems drew my attention; that the display uses ordinary household items or garden tools—technological objects—to explain an anatomical process seems particularly relevant to a rhetorically grounded analysis that seeks to identify relations of power and social action. Cultural critic and communications theorist Neil Postman writes that “a metaphor suggests what a thing is like by comparing it to something else. And by the power of its suggestion, it so fixes a conception in our minds that we cannot imagine the one thing without the other” (Amusing Ourselves 13). Within the “Prairie Bites” display, the ordinariness of the household items works to reinforce the power of analogy to assist with visitors’ understanding of the chewing systems involved. Focusing on such powerful persuasive action as carried out by metaphor, therefore, seems to be a productive strategy for analysis in the current study.

Organizing around tensions

I attended not only to the metaphor use and function that characterized the visual, verbal, and spatial narratives of the refuge and prairie center. I also organized this analysis around tensions that emerged from close study of the texts, images, sounds, and ideas presented in the exhibition and along the refuge’s trails. As I “read” the exhibition, seeking to construct a coherent message from the texts and images on wall panels and reading rails and among objects, sounds, and spaces, I found variations or departures from an entirely cohesive message. In fact, those moments of disconnect or dissimilarity from what I understood to be the central message or purpose accrued so often that I use those points of tension as central units of analysis for this study. The end result is not incoherence in the exhibition’s narratives but a new way of experiencing a visitors’ center and redefining museum spaces as rhetorical sites of intervention and social action.

While these tensions may at first blush appear to exist contrarily in the narrative, they actually function in a way that necessarily complicates the message that visitors receive; that
is, the work of the refuge is most realistically bound to movement between activities such as using progressive technologies to restore a lost piece of the past. Because the work of the refuge—indeed, of the region—must endorse processes and awarenesses of the past, present, and future, the narratives communicating that work must also, it seems, demonstrate similar attention.

In the following section, I describe the six main categories of these tensions that served as units of analysis in the present study.

**Units of Analysis**

I adopt as primary units of analysis for the present study the following tensions that emerged from the visual, verbal, and spatial narratives of the refuge and exhibition. As discussed in Chapter One of this document—within the section titled Factors Complicating this Study—readers should avoid the tendency to see these tensions as dichotomies, as discrete or contrary. Instead, I think they are more effectively seen as existing along a continuum. Indeed, the refuge’s narrative, replete in so many various types of data as it is with these tensions, may actually require that these tensions be so positioned. That is, the progressive work of environmental restoration and preservation may, in fact, be *more successful* because of the existence of these tensions, these ambiguities and oscillations between or among one idea and others that seem to be in contrast to it.

On one pass through the refuge’s exhibition, a visitor might leave with an abundance of “facts” about the prairie landscape and about what wildlife and refuge system staff are doing to bring it back. However, subsequent study of the narratives present in the space reveals a much more complicated mission, one that forces visitors to see and hear the work of prairie restoration in stark relation to the large-scale, global, commercial agri-business of the region even though there is little explicit narrative about real environmental concerns raised as a result of that kind and degree of production in the region. The primary goal’s message is most certainly represented in the texts, images, sounds, and ideas of the exhibition; however,
that message exists alongside a more complex text that coincides with a contemporary regional discourse of high-level agricultural production, potential damage to environmental quality, and concern for matters of health and wellness. The context in which the discourse of the prairie center operates is complicated, complex; therefore, while the goals and objectives of the exhibition may appear to be limited to educating visitors about an ecosystem, I think they more realistically expand to engage this more knotty context.

The units of analysis in the present study—these tensions—are

wild —> tame
technology —> Nature
heritage —> progress
hidden/understated —> revealed/promoted
constructed/controlled —> natural/free
stated/articulated —> assumed/ignored

In the following sections, I present a fuller discussion of these units of analysis and further develop arguments presented in earlier chapters as to the rhetorical and political nature of museums and the particularly interventionist characteristics of the NSNWR and PLC as it works to enact progressive environmental pursuit.

Wild —> tame/Insider —> outsider

Perhaps one of the most apparent movements in the narrative of the refuge and prairie center comes from the shifting between what is wild and what is tame or has been tamed. It is not difficult to see and hear the narratives address notions of wild and tame; what is challenging, however, is to pin down what appears to be the shifts in meaning attached to each term. What constitutes "wild" is not the same from one part of the exhibition to another, from one time in the prairie's history to another. What is "tame" also shifts and dodges. My analysis here reveals, then, a potentially confusing contingency surrounding the terms "wild" and "tame"; visitors may think they understand what is wild and what is tame or tamed, but
the results show how meaning gets transformed and affirms my central claim that visitors experience a new kind of community, involvement with the environment, and a new kind of museum experience as a result of the rhetorics presented at NSNWR. Such shifting violates what visitors may ordinarily be expected to carry away with them—a clear story of unquestionable progress. Nonetheless, the narratives about wildness and tameness appear to prefer wild over tame, and yet the contemporary economy depends substantially on control, taming, and containment for success.

Wild —> tame in animal and plant life. As visitors enter the PLC, volunteer docents greet them at the information desk and direct them to a modest orientation theater to watch the 10-minute video, Return to Wildness. The film’s opening scene depicts the current-day town square of neighboring Prairie City, where a young boy holding a stuffed toy of a lion morphs into an image of a live lion, and the transition to the prairie’s history begins by linking the Midwestern landscape of prairie to similar landscapes in Africa and South America. Images of hieroglyphs and native peoples flash past on the triptych of screens.

The purpose of the film, according to the original exhibit consultants’ report, is to “provide orientation to the message of the Refuge, to give visitors a sense of the beauty of prairie when the Refuge still looks weedy” (4). Interestingly, the refuge in its unrestored state is “weedy” — in a sense, wild. But the current state of the partially unrestored refuge evokes a kind of wildness that is less desirable in that non-native prairie species have invaded and taken up residence. Restoring the site to its original state of 200 years ago requires taming—through controlled burning of those non-native species and replanting and managing with prairie species—in order to allow for the original wildness to return. Wildness and tameness, then, take on multiple, contextual, time-dependent meanings. What is wild in one situation is not in another. Yet, the narrative of the orientation film appears to have delineated quite clearly those distinctions, and those distinctions play a substantial role in the film’s narrative. We see that movement between wild and tame from the opening images—of a “tame” stuffed
toy changing into a “wild” lion on the African savanna. The accompanying voice-over
narration says

_The town square._
_A place for play or relaxing on the grass._
_The rich lawn here is fed and tamed._
_A peaceful reminder that we are a part of the Earth._

_Yet, once, there was wildness here._

_Once the American prairie was here and wild as any grasslands in the world._
_As wild as the African savanna._

_Two hundred years ago this land was tallgrass prairie: big bluestem, little bluestem, slough grass, ripgut, Indian grass, needle grass._

_Where now is corn, there once was prairie._
_Where now are cities and towns, there was prairie._
_Where now are counties and whole states, there was prairie._
_Where now the land is tamed, there was wildness._
_The vast prairie supported an abundance of wild life._

The narrative speaks in terms of contrasts, conditions that are much more convoluted in the context of ecosystem restoration and preservation. Further, the subtext of this excerpt draws positive associations between wildness and goodness that shifts when the conversation focuses on what is tame and tamed. Linguistically, repeating “there was prairie” emphasizes the prairie landscape and, by extension, establishes that landscape as the ideal, the preferred.

The film narrative continues the wild-tame conversation as it addresses fire and wildlife, specifically the American bison. The film personifies fire and thereby imbues it with even greater rhetorical power than it would have without such personification. According to the film, fire “had its own wildness. There was nothing to stop a hungry fire. Prairie winds urged it to devour high grasses along a front, miles long.” Because of the life-giving aspects that fire affords prairie life, the buffalo “thrived. . . . Vast herds consumed the grass and lived in plumes of dust as they ran wild—wild as the wind.”
When the film addresses the role of the plow (a technological object that will be discussed in other sections of this analysis), the positioning of wild and tame along the continuum of tensions becomes even more overt. Further, the narrative’s uncertainty about how to situate the plow, rhetorically, becomes apparent here. Is it the ‘demon’ that destroyed the prairie? If so, how might designers and staff reconcile the reality that many visitors to the refuge either make their living by the plow or have family members who do? Once again, the film’s narrative reflects a very real tension in the culture about this technology in particular.

The voice-over narration says

_In 1837, a single American innovation changed this world: The steel plow._
_It sliced and folded over the sod._
_And the prairie’s riches were unlocked._

_The Midwest rapidly became America’s provider and earned the name “the Breadbasket.”_
_The land became owned, used, populated._

_And the prairies?_
_The prairies were divided, drained, and smoothed. Tamed._
_Within a single lifetime, most of the prairies were gone._

_Little bluestem became wheat._
_Big bluestem became corn._
_Where there was prairie, now there is ...us._

_And the wilderness left._
_The buffalo left._
_The elk, the prairie chicken, left._
_What remains of the prairie now lies in forgotten corners, overgrown with trees._
_Vague memories of a wildness long past._

The message again alternates between positively connotated impressions and not so positively shaped impressions. For example, the plow acts as a key to unlock the treasures that the prairie landscape holds in store. It acts upon the earth in a way that benefits early
settlers and their ability to forge livelihoods in such a challenging landscape. Yet, that tool also works to upset the balance, essentially destroying the prairie. Granted, something new was created as a result of the plow’s influence, a new landscape that today nurtures a global agricultural economy. In this context, then, the messages about the plow and how to read it vary.

This excerpt and the one that follows also illustrate the role of a passive agent in the linguistic structure. The narration says that “the prairies were divided, drained, and smoothed—tamed” but no one, no agent or thing, takes responsibility for that taming. Linguistically, then, the plow appears to be cleared of any blame for the destruction of the landscape. Further, the wild things of that prairie “left.” Again, by presenting an agent-less effect, visitors do not have to face the more challenging issues of how large-scale agribusiness continues to be conducted in their region.

There must be a point at which the refuge addresses the plow more directly, and the positive positioning of that technology—while it could be viewed as “spin”—is more realistically reflective of the tensions that require societies to negotiate technologies and their influences. In this case, however, the lack of agency is replaced, and technology becomes the hero. An imperative guides the narrative and again, by extension, the refuge’s reason for being: “And it must be done.” Technology is paired with a “natural” community so that the lines between wild and tame and goodness and disruption are further blurred. It continues:

_Now the past has a future._
_Land here has been cleared, made ready._
_And the prairie is returning._

_The technology that broke the prairie is bringing it back._
_An 8,000-acre national wildlife refuge, enough for a community—a natural community._
Bringing back part of our unique heritage, bringing back a portion of the prairie, is an ambitious undertaking. It will take a major effort and much capability, but it can be done.

And it must be done.

For the prairie will once again provide game for hunters, beauty for those who seek it. It will bring fascination, involvement, and education for young minds. It will be an outdoor playground, laboratory, an inspiration for us all.

Already there are heartbeats here. Already things are happening. The wildness—long misplaced—is finding its way home.

One of the most visible forms of that wildness at the refuge is the American bison, where a small herd roams in an enclosure north of the prairie center. The image of the bison is prominent in promotional materials and in media coverage of the refuge so that it appears to be tamed as far as its purposeful use in promoting the refuge. Yet, staff remind visitors that the bison are indeed wild and do so by posting signs alerting visitors driving the auto-tour route of the bison’s wildness. One sign reads: “ENTERING BUFFALO AREA. Buffalo are wild and unpredictable animals. Stay in your car and on the road.”

Wild —> tame in insider/outside relationships. The tensions that exist between wild and tame within the natural world of prairie animals and plant life align with similar tensions between casts of characters representing insider/outside relationships in the area. Just as the meaning of wild and tame shifted in conversation about prairie animal and plant life, that meaning seems equally contingent when the context shifts to people. Farmers whose land either abuts or neighbors the refuge—some of whom have sold property to the refuge for its expansion—emerge in media accounts as insiders who resist efforts from outsiders to alter their usual patterns of community. Analysis of media coverage of the refuge’s establishment shows that notions of who belongs to the landscape and who threatens a way of life, a heritage, continue to resist resolution.
In some instances the voices of skepticism seem tuned to age-old tensions between perceptions of big government overtaking the little guy, of exurban development versus the rural status quo. Simply moving through the exhibition space denies visitors deeper insight into how other relationships with the refuge are configured, what their histories are, and what interests are held by others. One newspaper article attributes a farmer whose land was adjacent to the proposed refuge as saying that the refuge was “better than a nuclear power plant” — damning the project with explicitly faint praise (Stone “Neighbors Skeptical”). Another farmer quoted in the same article had about half of his land lying within the proposed boundaries of the refuge and expressed uneasiness about the plans. The article says “[H]e’s unsure if he could rent fields elsewhere. He and his wife, Laura, also are uneasy about the prospect of more traffic and visitors to their quiet, rural neighborhood” (Stone A4). Although published discussions of the refuge’s establishment and land acquisition stipulate that land-purchase transactions would be completed only with willing sellers, an air of doubt seems to have remained among some of the neighboring property owners. For example, in August 1990, the Des Moines Register reported the comments of a small landowner in the area:

Ron DeBruin, who owns 240 acres in the proposed refuge site, said he and other smaller landowners don’t believe the government’s promise that no one will be forced to sell. ‘We all know if we’re in the way they’re going to take it,’ he said. ‘If they have it all bought around me, are they going to just let me stay there in the middle?’ However, DeBruin said most people in the area would be willing to listen to offers. ‘If they come out and offer the people enough money to relocate and do well, there won’t be any hard feelings. If they try to steal it at a cheap price and try to dicker the people down, there will be,’ he said. (Pollak “U.S. Agency OKs Buying”)
A similar skepticism came from a Newton man, Jim Reynolds, who was reported as saying “he didn’t think Congress members knew what the area was like when they voted to make it a refuge. ‘I think the people out East, when they proposed this reserve out in the middle of Iowa, they were envisioning Iowa as flat as a tabletop from the Mississippi to the Missouri’ rivers, he said” (“Residents Tell Concerns”).

An article in the Des Moines Register from May 1990 indicates that the county supervisors unanimously voted to support the refuge’s establishment and although some in the community expressed concern over the loss of tax revenues from the land, one supervisor went on record voicing her lack of concern over that issue. She is reported to have said: “I would think this kind of venture would more than make up for any tax loss with outside revenue, which I like even better. Let the outside world pay for it” (Norman “Federal Agency Isn’t Wild” 11A).

An article featured on the front page of the Sunday Des Moines Register’s Agribusiness section in May 1992 again highlighted farmers’ concerns about the refuge: potential loss of property taxes, potential loss of business at the local grain co-op, potential loss of integrity to the area’s drainage tile system, and potential absence of recreational opportunities for residents.

Business owners first thought the refuge would draw fishing and hunting, but its main emphasis will be as an educational center...Some doubt that busloads of schoolchildren will spend much in Prairie City. ‘We wonder how many people will come and look at prairie grass,’ said [the local mayor]. (Looker “Some Farmers Oppose”)

Still others fretted over what the reconstruction of prairie flora would mean. Another adjacent landowner is quoted in a June 1992 article as saying

These people from Washington, they don’t know anything about Iowa. These beautiful flowers they talk about are thorn trees and thistles. They keep talking
about the economy, but I know some people are going to suffer. (Hartman “Farmers Still Sour”)

Another farmer with land inside the proposed refuge boundaries “said he is unwilling to sell, but he isn’t optimistic about keeping his land. ‘Eventually, I’ll be forced to’ sell, he said, ‘Who would want to buy it in this area? I think it’s going to be a big weed mess’” (Hartman “Farmers Still Sour”).

From the beginning, proponents of the refuge were required to engage various audiences in persuasive rhetoric in order to eventually gain those audiences’ cooperation, collaboration, and comprehension of the work and message about prairie reconstruction. In Congress, the refuge bill’s sponsor ran up against accusations of pork-barrel politics, and even the U.S. Fish and Wildlife Service—the federal agency that now oversees the refuge—was reported as opposing early plans to construct what was called “a big-game preserve” (Norman “Federal Agency Isn’t Wild”). Additionally, some constituents in the Congressman’s district appeared skeptical of the idea. In what seems to me to be a contemporary version of the frontier sensibility pitting pioneering spirits of the West against the city slickers “back East,” there were clear divisions between those who saw the refuge’s work as part of a valuable process of educating residents and visitors about the state’s heritage and those who conceived of the plan as something cooked up by politicos and environmentalists who had little or no understanding of what life in that region was about and who seemed to hold little or no investment in that lifestyle, either. Some conversations about the refuge reported in the state’s daily newspaper featured this rhetoric that I characterize as insider vs. outsider or us vs. them.

The irony that marks this analysis revolves around the way “wild” and “tame” fluctuate in the prairie center’s narratives. Meaning resists codification. Indeed, what appears wild or inside in one context shifts to tame or tamed or outside in another. The landowners who might be seen as having tamed the wildness of prairie through cultivating
and controlling the land ironically acquired land from original inhabitants in a fashion that some might consider "wild." What or who is native and what or who is newcomer varies. Visitors to the refuge and prairie center likely come with preconceived impressions about the terms discussed here, but closer examination illustrates that there can be little if any certainty about their use, their meaning, their influence. Although the ideas also appear tinted with value in the narratives—wild preferred over tame, tame preferable in other circumstances to wild—such value judgments emerge equally confounding.

**Technology --> Nature**

As refuge and prairie center narratives engage notions of technology and Nature, the contingent and complex nature of those ideas reveals a tension that, as much as any other of the tensions under analysis here, forces visitors to see the refuge's work as inescapably knitted with technology and technological objects and processes. Nature and the work of restoring and preserving nature cannot be viewed singularly, as a purely "natural" affair. Nature in contemporary culture is embedded in, implicated with, technologies. There is not one without the other. We see the way Nature and technology work together through the use of metaphors in displays, through conversations about efficiency and production, and through other representations of technological objects and the natural world. Such narratives work against or challenge expectations that the refuge illustrates an entirely 'green' enterprise. Blurring the lines between Nature and technology requires visitors to see this brand of environmental work in more sophisticated ways that resist either/or conceptions. If we come to the refuge expecting to pay homage to Mother Earth without also honoring human ingenuity and technological progress, we leave with those expectations diluted at best and more likely thwarted. The progressive work of the refuge gets accomplished by looking forward in order to look back.

**Technology --> Nature in metaphor.** Undeniably, visitors and refuge staff encounter Nature in often-challenging ways at the refuge. The rhetorics of the environment packaged,
viewed, and experienced at the NSNWR and PLC present peril to the status quo, to simplified understandings of biodiversity and Nature. A fair measure of uncertainty exists for visitors as they navigate the experience of reading the metaphors generated by and shaping a landscape. Metaphors play a substantial role in the prairie center’s eventual success at that rhetorical task.

Exhibit designers and filmmakers clearly wrestle with how to represent technologies in the narratives they present. Sometimes, as I’ll discuss next, the presence and function of technologies are evident in the exhibit space; at other times, the human touch appears more “subterranean”—not unlike the structural support system of the prairie, itself. Relationships between the hidden and the revealed within refuge narratives are more fully discussed later in this chapter, but some of the characteristics of oscillations between technology and Nature reside just as readily in that section as they do here.

In the exhibition narrative, the notion of a “natural” Mother Earth gets complicated, artificialized, technologized as the work of restoring and preserving tallgrass prairie not only involves technologies, it also requires them in order for there to be a return to the naturalness that was the heritage landscape. Throughout the exhibit space, metaphors of construction vie with the mythology of a “natural” Nature.

In an early part of the exhibition, “Rootscape,” visitors contend with this notion of a constructed nature. Here, they learn about the structural components of the tallgrass prairie ecosystem: the prairie soil, the prairie animals that live both above and beneath the ground, and the strong root systems that protect prairie flora from harsh winds, winter’s plunging temperatures, and summer’s intense heat. A wall panel titled “Much More Than Dirt” instructs visitors about how prairies develop. The panel’s text reads “Prairie is built from the ground up. Prairie roots plumb the soil for moisture and nutrients. In turn, the web of roots holds the soil in place” (emphasis mine). This exposure to construction metaphors holds powerful sway over visitors’ ability to read the prairie as simply a “natural” system. In this
case, as the construction metaphors are blended into wall display text, they function to introduce visitors to the more complex interrelationships between Nature and technology that they experience later in the exhibition’s path.

Expressing tensions between technology and Nature happens not only verbally but also visually. One of the most popular displays in the exhibit, located in the first pod, draws visitors because of its interactivity and sound. The display’s use of a metaphor—and, in fact, a metaphor within that metaphor—demonstrates the vacillation between what is artificialized and what is natural. The display is titled “How is an Ecosystem Like a Symphony?”—an overt textual analogy. An interactive module instructs visitors to pull and push brightly colored horizontal levers to “change prairie diversity” as they change the richness of sound that accompanies the module when a crank is also turned, “to hear how the prairie tune changes.” The body text on the wall panel gets complicated, however, because it engages not only the symphony metaphor; it also introduces a web metaphor. The text reads

This music sounds richer when more notes are played; an ecosystem is stronger when it contains greater variety of life. Why? All plants and animals in an ecosystem are linked to other plants and animals. Imagine these links as strands in a web. A diverse ecosystem has many strands in its web. This dense web is more stable and at the same time more able to adapt to change.

Here, the explanatory strength of metaphor gets sadly diluted and likely confounds the message of the importance of biodiversity rather than clarifies it for visitors. However, the juxtaposition of the two demonstrates the constant movement between technology and Nature.

Technology —> Nature in terms of efficiency. Analysis of this tension between technology and Nature further shows that matters of efficiency get aligned with matters technological in the exhibition (although efficiency is undoubtedly a characteristic of Nature as well). Perhaps because the refuge’s work challenges the region’s commitment to
agricultural production rather than environmental restoration and preservation of a nearly vanished landscape, the discourse within the exhibition attempts to connect the work with efficiency—an especially highly valued commodity within agriculture’s production-oriented system and within the region’s staunchly held mythologies. In several locations throughout the exhibition, wall panels carry the headline “Sustainable Design” and highlight the efficiency of wastewater treatment and heating and cooling systems, touting the center’s commitment to enacting sustainable design. Even so, and despite a tendency to conjoin efficiency with technologies in the exhibition, the body text on one such panel mixes “natural” metaphors with the constructed nature of the PLC itself. The body text says “We save heating and cooling energy by mayffmg the building into the ground. The earth zMaw&zfa? the building to help keep the temperature constant, and earth berms block strong prairie winds” (emphasis mine).

In this instance, the metaphor of nurture fluctuates, illustrating acts that might be read by a visitor as both natural and artificial. In the first sentence of the panel text, the building is nestled into the ground, protected by the surrounding natural elements and—by extension—persuading visitors to see the artificial, the constructed, as part of natural surroundings. Yet, as the text continues, the earth acts as insulator for the building, perhaps an act that we might more readily associate with artificial, as in the (oftentimes fiberglass) insulation applied to a house under construction. The use of the term “nestling” connotes a natural placement, like a bird or small mammal making a resting place or home in the ground. Rarely do we think of concrete and metal being “nestled” on a construction site. Further, the use of the preposition “into” works to intensify the connection to the land. The building is not “constructed” or “erected” on a site; rather, we see it as placed gently, naturally, into Mother Earth, who/which acts as “insulator,” protector—a shield against harsh conditions.

I think the metaphoric uses of language in just this one panel text allow us to see some of the tensions that exist in the exhibit’s narrative. In the text just described, the notion
of Mother Earth as a natural nurturer seems to strain against a conception of a surrogate
Mother. There is an attempt to nurture by “nestling” the building while the earth, conversely,
assumes a more artificial role as “insulator.” Understanding relationships between
technology or the artificial and Nature, then, demands that visitors abandon either/or
conceptions in favor of a more complex awareness and to see matters of efficiency in equally
broad terms—perhaps even as illustrative of the refuge’s attention to building its rhetorical
credibility.

Nature and technology combine in the textual material that illustrates the prairie
center’s technologies of wastewater treatment. A wall panel hung in the center’s restrooms
persuades visitors to see the work of the refuge as environmentally sensitive and perhaps
even environmentally pro-active as well as being technologically savvy. Doing so seems
particularly effective, since residents of the region are regularly inundated with news reports
of questionable—if not outright detrimental or dangerous—environmental practices borne,
especially, out of the work of large-scale agriculture. The center has built a wetlands area that
works in concert with natural processes of wastewater treatment. The wall panel text explains
that nature works in conjunction with “a constructed wetland” where “hungry microbes... 
consume the nutrients” that would otherwise “upset the balance of the Refuge streams.”
There is interplay here between that notion of a “natural” Mother Nature (perhaps even
anthropomorphized by the image of the “hungry microbe”) and a more surrogate Mother
Nature, taking care of natural processes with supplements that are not necessarily contributed
naturally.

Finally, we see the refuge’s discourse about efficiency vis a vis the tension between
technology and Nature in the final pod, where visitors learn about current efforts to restore
and preserve the prairie ecosystem. In a project as extensive as rebuilding the prairie
ecosystem, refuge staff depend on creating levels of efficiency. In one of the exhibition
area’s final pods—Helping Prairies Survive—visitors see a mannequin outfitted as a seed
collector with now-outdated apparatus for gathering seed. The equipment is suitable for managing a five- or ten-acre plot of land, a refuge staff member says. Not 8,000 acres. “Efficiency-wise,” the staff member says, “this is the kind of stuff you do for little things.” The depiction of such seed collecting processes, then, is not accurate and further diminished because it represents an inefficient system. Instead, he says,

We can do big things in big ways. This was early on. And if we are going to take it to the next step, showing some of the ways of collecting seeds with combines and actually putting that into the reconstructed areas, that’s something that I want to get you a mental image of. . . . We are still collecting some seeds by hand. . . . in areas. . . . or species that are hard to collect by machine, but by and large, we’re going after things in big ways.

Big things in big ways. Efficiency. Productivity. The rhetoric of the reconstruction sounds paradoxically like the language of the region’s agricultural commodity-driven economy. In this way, the discourse of the exhibition blurs the distinctions that mark mythologies that separate the environmental work of the refuge and the commercial production of the region. In the end, such dissolution of myth will force a new rhetoric of environment to emerge and visitors to engage the refuge’s work with a fuller understanding of the complexities involved. A similar challenge to visitors gets issued as the narratives address technology and Nature through objects in the exhibition.

Technology —> Nature in objects. Within the underground “Rootscape” section of the exhibition, visitors may engage an interactive display to “see” what lies beneath the prairie’s surface. Designers have used a replica of an X-ray in order to examine the underground; instructions accompanying the display tell visitors to “Push the button to take an X-ray of tallgrass prairie sod.” Pushing the button reveals a backlit line drawing of roots and outline of an underground prairie dweller, a mole or ground squirrel. Use of a familiar technology, X-ray, seems to predominate over the actual benefit for visitors. In other words,
what is revealed is decidedly secondary to the idea of engaging an X-ray in order to see. Regardless of the effectiveness of such a choice, the fact that designers employed a technological process in both the activity and the message again exemplifies interconnection between technologies and Nature that permeate this exhibition’s discourse.

In the same section, a much more subtle blending of technology and Nature occurs as textual and visual elements combine to show visitors how Iowa’s landform has changed over its history. One might argue that any time Nature is represented in a way other than the display of the thing itself, technology is employed. Photographs, paintings, drawings all require technology for their result. The text on this panel indicates that the state features landforms from the “freshly plowed farm field” to “steeply rolling land used for pasture and timber.” Interestingly—and again illustrating the tension between technology and Nature—is that the map is produced by National Oceanic and Atmospheric Association (NOAA) satellite imaging.

The use of high-tech representation—tiny blocks of color that differentiate among the various types of land in the state—to show a natural image, the land, seems congruent with Susan Sontag’s notion of the risk of depersonalization or alienation in photography (On Photography 167). The pixel-like blocks of color draw the visitors’ attention, but the information they impart—information that stands to encourage participation in the work of the prairie refuge’s restoration—is presented in a format that comes nowhere near replicating the warmth of the land, its fertility, its responsiveness to change. Again, easy determinations about what constitutes how we view and experience Nature get complicated in the exhibition’s discourse.

The technological object, however, that commands the clearest connection between Nature and technology on the prairie is the plow. Beyond introducing visitors to another interrelationship between Nature and technology, the plow requires that we see the refuge’s work and the contemporary agricultural economy of the region in a way that likely tests our
stance on the economy and environmental quality of life in the region. It is in the analysis of
the plow that I think intentional social intervention can be both complicated and necessary.
How we talk about the technology reflects not only values and meaning, it also shapes our
activities and reveals interrelationships of power. An editorial that appeared in the state’s
daily newspaper in May 1993 concludes with a rather poetic acknowledgement of the results
of the plow, though this four-letter word is never uttered in this printed paragraph; instead, a
subtle agency is ascribed to the plow drivers themselves and a sort of mysterious sense of the
prairie’s eventual return gets stirred into the mix:

The same settlers lured to Iowa by the tall prairie lushness were quick to
destroy it, turning it under to grow crops. And to a degree, those crops
changed the nature of the soil over the course of more than a century. But
deep in the genes of the native grasses lie the memories of adaptation.
Dropped again on the world’s most hospitable seedbed, they’ll be back. ("In
Iowa, A Huge")

Prairie center designers seem conflicted over how to contend with the plow. On one
hand, it is the object that destroyed the prairie, making the work of the refuge staff necessary
in the first place. On the other hand, the consequent destruction and settlement of the prairie
provided for the development of the state’s contemporary economy, an economy that today
provides home to research and production by the world’s leading agricultural equipment
manufacturers. According to a quick-facts webpage at the state’s Department of Agriculture
website, the state "leads the nation in production of pork, corn, soybeans, and eggs. . . . There
are more than five times as many hogs in the state as there are people. . . . In 2001, the state
was ranked third in the nation in total agricultural exports"("Iowa Agriculture").

The plow emerges as a central technological object within the presentation of the
prairie center’s educational exhibit, working not only to historicize in a material way the
destruction of the heritage landscape but also to shape a powerful economic and political
approach to the environment. If one lives in the state, and especially if one earns her livelihood from its agricultural bounty, she must contend in this museum with the complicatedness of this object. She must negotiate a meaning of this object. How the plow is represented, visually and verbally, in the prairie center becomes central to how visitors understand the work of the refuge—and, by extension, how they understand their role as citizens of the community who might choose to act (or not) on the environment in new ways as a result of the display.

The rhetoric of technological objects in the exhibition operates to diffuse either/or conceptions of the relationship between technology and Nature, in some ways even challenging or diluting mythologies that work to divide the two. Instead, this discussion shows how the embedded nature of technologies in our contemporary lives becomes reflected in both subtle and overt ways—visually and verbally—in the exhibition’s discourse. We might argue that the use and function of particular metaphors examined here work at various levels of effectiveness, but the ubiquity with which Nature and technologies exist mirrors the complexity of our everyday cultural interactions between the two.

**Heritage —> Progress.** The third of six tensions that emerges as units of analysis in this study has to do with the shifting between the past and the future, between the region’s devotion to its heritage and its commitment to a vital future. Indeed, on their way to the NSNWR and PLC from Interstate 80, visitors pass through the small towns of Colfax and Prairie City. Welcome signs featuring the town’s slogan attest to this tension of heritage and progress even before visitors reach the refuge. In Colfax, the sign reads “A Pleasant Blend of Town and Country”; in Prairie City, the sign says “Proud of Our Past, Confident of Our Future.” Given the examples of this tension between the area’s heritage—in terms of both cultural identity and the more particular heritage of the prairie landscape—and the progressive work of building a confidence in the future and a restored version of that heritage landscape, these roadside welcome signs best illustrate how the narrative works: the ideas
cooperate, collaborate, to create a fuller whole than would single-minded adherence to one idea or the other. What is described here as a tension is more effectively seen as a fruitful collaboration, an alliance of cooperating partners. The successful work of the refuge depends on these ideological flips and switches. If true intervention by the community into the work of the refuge is to occur, members of the community must re-vision how they see and experience museums.

In earlier sections of this chapter, I discuss the role that mythologies about the region play in the discourse of the exhibition. Here, again, as I address the tension between heritage and progress, we see the guiding myths of pioneer life surface so that the bucolic images and cultural histories of the landscape and its people are pulled into fascinating tensions when viewed through the sensibilities of 21st century Midwestern life. Now, instead of illustrating the power of the individual guiding oxen yoked to plow, pictures of this region just as readily show the large-scale, corporate farms as neighbor. Newspaper headlines worry over potential health hazards resulting from large hog lots or suspicions over producers’ overuse of antibiotics in healthy livestock (whose manure is then spread over fields and has the potential to run off into streams and waterways). The neighbor who helped sustain others during the development of this region may today be the one who sells his land to a corporately owned, high-production facility whose practices may threaten water, air, or ground quality and good health. What we knew to be so in one time and context undergoes shifting in another. Meaning is characterized as much by its dynamism as by its reliability. Within the exhibition space, there are further examples of this oscillation between regional heritage and progressive movement toward a different but related ideal.

At the refuge, visual and verbal metaphors illustrate the geographical region’s interaction with both the landscape of the past and the involvement with the present and future work to restore and preserve it. This interaction speaks to what I contend are political acts that engage relations of power and of social action. In the following sections of this
chapter, I analyze several of the exhibit’s metaphors that I think connect with visitors’ traditional conceptions of the state’s heritage landscape and that foster an existing sentimentality associated with the region, its landscape, and cultural history. In the previous section of this chapter, we saw how traditional metaphors of Mother Earth as nurturer and of a “natural” vision of Nature influence how visitors might interpret the refuge and its work as natural, helping to authenticate and return a damaged landscape to an original version. Yet, there must be departure from those traditional metaphors that revere a “natural” past in order for the work of the refuge to be accomplished. In a rich brand of irony, then, in order to realize the kind of nature the refuge seeks to rebuild, the metaphors of tradition and of the landscape’s cultural history need to be replaced by narratives of progress and of progressive social action, since the work of refuge professionals is progressive.

In the largest, most open, section of the exhibit path, the second pod—about halfway through the exhibition—visitors learn of the influence of settlement on the prairie ecosystem: from the Native American presence on and use of the prairie to the appearance of the railroads and the plow, the loss of top soil, and the technology of tiling to help drain the prairie. This is the section of the exhibit’s narrative where, in effect, visitors see how the prairie died.

In the midst of this section’s substantial coverage of the peoples and inventions that characterized this period of the region’s development sits a three-dimensional visual touchstone to the past—an oak table and four pressed-back oak chairs. For many visitors, the set is perhaps most unremarkable, since it closely resembles a kitchen that one could easily locate in current-day farmhouse—or country décor—kitchens. What is remarkable for the purpose of this analysis is that the set wears the clear imprint of yesterday, intended to remind visitors of “the way we used to be.” Visitors are encouraged to “draw or write your thoughts about prairie and drop them in the [wooden] box [that sits atop the plastic-covered table].” Index cards and crayons and markers are provided, and many visitors slip their
comments and artwork underneath the plastic covering as their mode of display. There is a sense that, regardless of the potentially politically charged activity that occurs outside at the refuge, inside there exists a welcome attitude from those in charge that encourages feedback within the context of a familiar, home-spun setting.

The presence of the table—and its metaphoric positioning as a reminder of the past situated in the present—is an overtly outward and visible sign of the tension between heritage and progress that appears throughout the exhibition space. The farmhouse kitchen table acts as a three-dimensional representation of these tensions, but visitors to this pod’s Fire Theater who may wish to more fully examine the role of that technology in prairie health and development also see a menu of choices that reflects the tension discussed here. For example, the videotapes available for viewing include how the native people used fire on the prairie, how current staff use controlled burns to develop and manage the refuge, and how prairie chickens—called “fire birds”—signal a healthy prairie ecosystem, among several others. The videotapes necessarily offer visitors exposure to the past as well as to the present and future, indicating that the complete narrative of prairie establishment, destruction, and re-development depends on such a full array.

Within this largest central pod of the exhibition, where the Fire Theater resides and where the interactive table and chairs rest, visitors also engage a display titled “Find the Best Land.” In this case, a typographical sign also serves as a reminder of the ambivalence in the exhibit’s narrative: Is the message about the past or about the future? Here, several land forms are depicted on the illustration of a grid of the refuge area. Small flip panels allow visitors to reveal which sections of grid would have been most profitable and productive for early European settlers. Attached to the top of the grid is a replica of a “For Sale” sign that reads “Century 19 For Sale,” an apparent nod toward visitors’ present-day familiarity with a real estate company similarly named. The difference is in the obviously 19th century typographic styling. The word “For,” for example, features an open typeface that is shaded to
take on a Wild Western flavor. The use of a fist with pointing finger positioned in the lower right-hand corner of the sign—directing visitors' attention to the grid and interactivity below—also suggests advertisements of the 1800s.

But perhaps the most striking of textual wrestling that happens over the heritage and progress tension occurs in the first reading rail as visitors move from the exhibition’s entrance into the “Rootscape” displays. Here, in three panels that ask “What is Prairie?” “What Happened to It?” and “Will It Grow Back?” designers and staff have addressed the past within the context of the present and future work of the refuge. The center panel must explain what happened to prairie, how it was destroyed. And yet as we saw earlier in this chapter, such an explanation requires a delicate dance between indicting crucial technologies and uncritically praising practices and players who allowed the prairie landscape to change. When the panel text asks “What Happened to It?” it provides this response in the sub-heading: “Tallgrass prairie once covered the Midwest. Now only bits and pieces remain.” The body text reads “Deep prairie roots left a great legacy—the best farm soil in the world. As we profit from this fertility, we realize that prairie might disappear forever. We’re taking action to preserve our natural heritage.”

**Hidden —> Revealed**

Following his 1983 acclaimed travelogue *Blue Highways*, William Least Heat-Moon wrote a meditation on the prairie landscape, *PrairyErth* (*a deep map*). That meditation provides a relevant prelude to the discussion of this fourth tension between what is hidden and what is revealed, about what is understated and what is promoted, what is familiar and what is unfamiliar. Least Heat-Moon describes a 1965 drive that took him through prairie country after having spent years aboard a navy vessel. He attributes his sharpened sensibility and new way of looking at landscape to his years of watching the water, “especially

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2 A look through Van Nostrand Reinhold’s *The Type Specimen Book* reveals a specimen called Gold Rush that closely resembles the typeface used in the display.
levelish, rolling things” (27). When Least Heat-Moon got to the prairie, he developed a strategy for watching it:

I learned a prairie secret: take the numbing distance in small doses and gorge on the little details that beckon. . . . Search out its variations, its colors, its subtleties. It’s not that I had to learn to think flat—the prairies rarely are—but I had to begin thinking open and lean, seeing without set points of obvious focus, noticing first the horizon and then drawing my vision back toward middle distance where so little appears to exist. (27-28)

Seeing prairie requires, as Least Heat-Moon describes, a re-focusing of vision. A re-visioning in the purest sense. That task becomes more difficult because so much of prairie lies underground or in modest form so that vision necessarily must sharpen. As Least Heat-Moon continues

I came to understand that the prairies are nothing but grass as the sea is nothing but water, that most prairie life is within the place: under the stems, below the turf, beneath the stones. The prairie is not a topography that shows its all but rather a vastly exposed place of concealment . . . where the splendid lies within the plain cover. (28)

Indeed, the exhibition at the NSNWR and PLC addresses the underground nature of prairie in its first section, “Rootscape.” Here, visitors learn the anatomy of prairie as an ecosystem that hosts plants with root systems that extend up to twelve feet deep. Pocket gophers and snakes burrow into the soil, “below the turf” as Least Heat-Moon reminds us. Children see themselves “as tiny bugs” in the Kids Maze where a gigantic-seeming model gopher greets them in their new, diminished size—all to emphasize the variety and activity beneath prairie’s surface.

While overt distinctions between what is hidden and what is revealed on the prairie are plentiful in the exhibition space, I want to also draw attention to related tensions that
pose struggles between what is promoted and what is understated within the refuge’s narratives and between what is familiar and what is unfamiliar. These are important considerations because of how they affect the influences of the refuge’s rhetoric. That is, when we attend to the aspects of the refuge that are promoted, brought to light, and those that are either ignored or underplayed, we see how elements of power play out. We also see the museum or visitors’ center exhibition as a more complex space doing potentially greater work in communities and for environmental progress. But re-visioning museums in such a way heightens the degree of interaction, investment, and commitment from visitors, members of the community, and potential patrons and sponsors. Passively viewing and dropping a dollar in a donation basket will no longer suffice.

Regardless of the colorful prairie forbs that catch visitors’ attention along the prepared Overlook and Tallgrass trails and regardless of the herds of bison and elk that roam on adjacent hillsides, the prairie reconstruction project at the NSNWR is as much about the unseen as it is about what is seen. The story told in the interpretive exhibition is one of soil as much as it is one about the hope of returning prairie chickens to the ecosystem, of keeping bison and elk, and of educating visitors about compass plants. When school children visit the refuge, the Soil Builders educational program conducted by the public use specialist and other refuge staff is among the most important. “Knowing that soil is a vital part of the agricultural economics and what we can do to preserve, if not reconstruct some of that basic mechanism that made the soil, that’s where we’re at,” the public use specialist says.

Further, the processes of heating and cooling waste treatment—elements often hidden in a public institution—^are made quite visible at the prairie center. Indeed, the associated ductwork and components are made not only visible but also celebrated. These architectural innards are drawn into one’s attention purposefully in an act of classical rhetorical savvy,

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3 I am reminded of the presence of—and of the initial controversy over—the visible ducts and pipework that so shocked museum-goers at the Centre George Pompidou in Paris decades ago.
establishing the center’s ethos—its credibility—by integrating behind-the-scenes processes with the restoration narrative, not only allowing visitors to see layers of insulation and heating and cooling apparatus but also calling attention to and validating these elements.

Throughout the exhibition—and even in a wall panel titled “Follow the Flush” detailing the refuge’s construction of a wetlands to manage waste water treatment in an environmentally friendly fashion—wall panels with the title “Sustainable Design” draw visitors’ attention to the usually hidden aspects of construction: heating and cooling systems, insulation, and research functions. Instead of hiding away those aspects of the refuge that staff can use to highlight the environmental credibility established there, these elements are purposefully on display. Midwest values of frugality and environmental mindfulness are clearly on display; rhetorically, the panels work to persuade visitors of the refuge’s adherence to these values. As discussed in earlier sections of this chapter, the text again illustrates interesting tensions between Nature and technology and between insider and outsider connections to the land.

On one such “Sustainable Design” panel, the text reads “Lots of windows take advantage of our sunny setting. Natural light supplements our electric lights, saving us up to 25% of the lighting power we would have used. The windows are ‘high performance’ glass. They’re three layers of glass with inert argon gas between them. The gas is a great insulator.” Next to what appears to be a peek at the layers of insulation within the wall, the accompanying panel text reads “Throughout the building, we’ve chosen materials that conserve energy and use resources efficiently. Many help insulate the building, which reduces the energy we need for heating and cooling. You can see several of our choices in this wall.”

Designers have made visible the usually hidden HVAC elements within the building and reconfigured expectations about museums by providing meta-narrative about the exhibition process (in this case, the behind-the-scenes work that is associated with heating,
cooling, and insulation), including those statements within the path of the exhibition. Similarly, the area in which volunteers separate and label seeds and in which researchers conduct studies is part of the overall exhibition space. What are often tucked away in unseen areas of a museum are to some degree part of the visitors’ space. In that sense, then, the refuge challenges usual expectations about the involvement of its visitors in these ways. It says that these are functions with which visitors must contend. Next to the research lab, a wall panel reads “Research at Neal Smith NWR” and the sub-heading says “Neal Smith NWR is breaking new ground in the science of prairie restoration.” The body text reads “Scientists do research projects here. They study the ecology of our native prairie and savanna remnants and develop new strategies for growing new prairie and savanna. Data collected annually helps us track our progress.” Administrative offices, however, where decisions affecting the development of the refuge’s work take place, more typically remain behind closed doors.

Messages to visitors and the resulting imperative to act is more complicated than helping visitors read the landscape in a new way, though certainly one cannot happen without the other. The narratives of hidden and revealed, of promoted and understated, and of familiar and unfamiliar create very real dissonances in how we respond to the work of the refuge. That is, there is a constant pushing at comfort zones here—from how visitors approach the refuge to what they see when they arrive. Shaping the degree of familiarity that visitors have with either the land or its occupants is most certainly part of the refuge’s work and likely influences visitors’ responses to prairie even before they enter the exhibition space. One difficulty is in seeing whether those responses align with refuge goals. Do, in fact, visitors leave with a singular enough sense of what they can do? Is the call to action issued from the refuge clear, or is it diffused by the relative newness of what it is asking visitors to consider?
Calvin W. Stillman, an economist and professor of environmental resources, writes of the comprehension of the familiar in landscape (53), and NSNWR staff, too, recognize the influence of familiarity on visitors to the prairie. Bison and elk are part of the refuge’s attention to prairie wildlife because of their recognizability, and the bison beats out the elk for that measure, providing for visitors a familiar connection to the prairie landscape. But getting visitors from the nearby interstate highway to the local system of highways to the prairie center itself involves introducing visitors—especially those from the region—to a path that is somewhat unfamiliar. “As we bring people to this place,” the refuge’s public use specialist says, “we invite them by our signage, but also by the road itself and the attraction of spaces.” He continues:

In central Iowa, the lack of these kinds of things is pretty obvious. Not that straight roads... or roads that are set up on a grid based on latitude and longitude. ... or corn and soybeans are bad. When you stray from that, a road that kind of follows the watershed and weaves its way through the hills and rills and down to the streambeds again, it’s attractive in ways because it gives people an experience they’re not quite used to as a general landscape that’s dictated. But it gives an opportunity for us then, too, to put some of those species back in there so that they can feel like they’re in a corridor of a natural setting. And even though they’re still in their car, what they’re seeing along the sides may be reminiscent of a view that would have been here 200 years ago.

Moving visitors through a relatively unfamiliar landscape in order to get to the prairie center and its nature trails affirms that the prairie discourse begins long before anyone sees the first exhibit or spies a grazing bison. Indeed, this approach further illustrates the difficulty that refuge staff have to define what prairie is and where it begins, since visitors’ awareness and sense of anticipation certainly is intended to begin on these outskirts of the refuge itself. Such
an approach complements the refuge’s rhetoric of participation and collaboration, of engaging visitors beyond a couple of hours spent in the exhibition or walking along trails. Fully understanding prairie, gaining an appreciation for it, and making a commitment to support the work of the refuge requires multiple interactions with the landscape, a more substantial involvement than most visitors are used to assuming.

One of the most striking elements of this tension between what is hidden and what is revealed or what is promoted and what is understated comes as visitors experience difficulty in understanding what prairie is and what it isn’t. Indeed, much of one’s visit to the refuge is spent learning characteristics of prairie—of learning how to “read” a specialized, mostly romanticized but realistically unfamiliar, landscape. Just as Least Heat-Moon had to recast his vision to incorporate the horizons and modest offerings of prairie, so, too, do visitors to the NSNWR. A trip to the prairie center and the experience of its beauty is unlike a vacation destination with grander sorts of natural beauty. As visitors must first learn to read the landscape, they must then learn a new appreciation for the subtler forms of beauty it offers.

Unveiling what prairie is begins after visitors encounter the entrance elk display and walk down a ramp that leads to the “Rootscape” section of the exhibition. In this first set of reading rails that ask the exhibition’s primary questions, visitors confront “What is Prairie?” The panel’s sub-heading reads “It’s more than flat land with grass” and the body text reads “It’s a community of thousands of different kinds of plants and animals, living together and depending on each other. Prairie differs from place to place, from dry uplands to wet lowlands, from open plains to shady savannas.”

This initial definition of prairie that visitors see falls short of a precise, accurate definition of prairie, according to public use specialist Jorgensen. “It could describe anything,” he says. “This could be rainforest; it could be timberland. And, if you took the word ‘prairie’ out, it doesn’t define prairie.” Instead, Jorgensen explains, “prairie” can best be defined by understanding what amounts to a series of cause-and-effect relationships
between climate, moisture, soil, and species of plants and wildlife—a definition, he adds, that would fail to fit within the physical constraints of a wall panel or reading rail. Mythologized, romanticized conceptions of prairie are represented only by photographic images of open fields and wide skies. Indeed, the system that Jorgensen characterizes seems much more scientifically prescribed and based substantially on climatological considerations. He says:

[The existence of prairie] has a lot to do with the amount of water—rainfall—in a year, when it comes, and then that [moisture and timing] determines the hydrology and that determines what kinds of plants are going to grow there, and that determines the soil. And, so, what is prairie? It’s made up of tall grasses and wildflowers [often called forbs] growing in a climate that has approximately 220-250 frost-free growing days. But it’s also coupled with rolling land that had interspersed with small drainage patterns that, in many cases, were not well-defined, so we had potholes. Those kinds of situations led to different types of prairie. . . . That’s a big definition, but you also talk about approximate numbers of species, tall grasses, and forbs with that climate. The animal life is reactive to it, although the large grazers had something to do with how it could function.

On a much more pragmatic level, visitors approaching the PLC may be confused by what is prairie and what is not. “They’ll see stuff that they know are weeds and they’re saying ‘Well, this is just weeds.’ And they’re correct,” Jorgensen says “because many prairie plants were considered, or are considered, weeds. But there are many prairie plants that people don’t even know about, so it’s exotic to them, or it’s outside of their experience, and then they’re saying ‘Well, that must be what prairie is.’” Ironically, visitors often identify plant species that they might not consider weeds—for example, Queen Anne’s lace, a weedy invader to the prairie ecosystem—and because it’s familiar and “pretty, kind of,”
says Jorgensen, visitors might think they’re looking at prairie. “Well, they’re not. It’s a European invader. But they’re used to it.”

This shifting ground between what is familiar and what is unfamiliar—exotic—certainly challenges the myths of prairie landscape that some visitors bring with them to the refuge. The educational function of the refuge and prairie center requires numerous visits in order to rub away at those myths and to begin re-fashioning a new understanding of the landscape being restored. In some sense, then, educating visitors is as much about re-educating them, about revealing what has been hidden or understated or unfamiliar and creating a new way of looking not only at the particular tallgrass landscape but also at beauty in nature writ large.

In its biological sense, then, prairie is defined by degrees of moisture, soil types and drainage patterns, and plant species and growing days. The big grazers, bison and elk—what biologists playfully call charismatic mega fauna—become value-added components to prairie life; the landscape can exist without them. Yet they are what is perhaps most “revealed” at the NSNWR, certainly promoted and exploited because of their familiarity—at least visually—in the culture. This analysis of the hidden/revealed tension must address the degree to which prairie animal life gets promoted or understated, and some rich ironies exist in this aspect of the restoration discourse as well.

While not necessary for constituting a biologically accurate prairie, the elk and bison certainly do contribute to a romanticized notion of prairie because of what Jorgensen says is their recognizability for visitors, especially in the case of the bison. Regardless of the reason, bison are especially popular at the NSNWR. In the summer of 2003, the welcome board that greets visitors at the entrance to the PLC included a tally of the herds: 37 adult bison and 3 calves; 17 adult elk and 2 calves within the refuge’s 750-acre enclosure. The number of bison present on the refuge is relatively small; indeed, visitors to the refuge may never see an
actual bison, depending on the herd’s grazing pattern that day or the visitors’ inclination toward hiking the Tallgrass Trail which leads them alongside the adjacent enclosure.

Whether or not visitors encounter bison in residence at the refuge, they are certain to leave having seen the ubiquitous image or form of the bison. It is everywhere: on free, takeaway bookmarks advertising the Prairie Point Bookstore (where the logo’s line drawing features an overlaid drawing of the coneflower across the bison’s back, shoulders, and head); in the small, hard, brown plastic replicas sold in the book/gift store (wildlife’s corollary to the little green toy soldiers of so many childhoods); in the plush versions sold as toys or as puppets. On way-finding signage and informational kiosks that visitors approach en route to the Prairie Learning Center, only the U.S. Fish and Wildlife Service’s shield and the National Refuge System’s image of the blue goose figure more prominently than does a line drawing of a herd of bison and elk illustrating a map and key to the refuge, bison/elk enclosure, and Prairie Learning Center. On most days, a taxidermied adult bison stands in an environmental education area in the Prairie Learning Center. In these ways, then, the bison operates synecdochically, made to stand for the whole prairie, regional heritage, and the presumed work of the refuge to restore and preserve that heritage. While this use of the part for the whole grants the bison certain representational power, it simultaneously dilutes the accuracy of educational messages about prairie and risks denying credibility that has so carefully been established throughout other areas of the exhibition.

Although various species of bison lived on the North American landscape—including those that inhabited woodlands and mountain areas—Plains-area bison were more plentiful in short-grass rather than in tallgrass prairie, according to Jorgensen. Further, elk are “believed to have been more common than bison,” visitors learn from one of the exhibition’s newest displays, yet bison overshadows both elk and the prairie chicken, a key marker for the health of a prairie ecosystem, as the refuge’s predominant visual icon. The visual and verbal narrative communicated through the bison’s saturation in promotional and material goods
validates its familiar mythology. It is the ubiquity of the bison image at the refuge and the romanticized mythology of the creature that allows the refuge to commodify and consume nature in a way that serves a public relations and promotional function as much as it serves an environmental and educational one.

The high visibility of the bison overshadows not only the American elk but also the modest prairie chicken. In the conversation over what is hidden and what is revealed and what is familiar and unfamiliar and promoted and understated at the refuge, the prairie chicken is an important player. It is part of other flora and fauna included on plaques embedded in the retaining walls along the main walkway and on tiles that line the interior path that guides visitors from the first to the second pod. Prairie chickens are included in the Fire Theater, noted as “fire birds,” and a biographical sketch of prairie chicken biologist Frances Hamerstrom is included in the “People of the Prairie” audio-visual hut in the second pod. Later, in the “Think Big” display that asks visitors to move images of prairie animals to a corresponding slot that indicates how many acres they need to thrive, prairie chickens surprise many with their needed 8,000 acres of living quarters. However, prairie chickens do not emanate quite the same charisma as do the large grazers nor do their replicas sell in the gift shop; however, a display located in the third pod of the exhibition asks community residents, teachers, and environmental experts to complete the sentence “The NSNWR will be a success if...” When Ornithologist Gladys Black answered the question, she said this: “When bobolinks, marsh hawks and short-eared owls nest here. The return of prairie chickens would mean it’s a great success.” In the interactive “Grow for It” display, visitors learn about how long it takes to restore the prairie ecosystem. The longer they turn a handle that lights up a timeline, the more likely they are to see small panels indicating various species appear. After plants and insects and birds and mammals and large grazers appear, at about the time the visitor tires of “restoring” the landscape, the prairie chicken appears. By these accounts, then, prairie chickens seem to be key elements of identifying a substantially
sized, complete, and successful prairie ecosystem, but they remain “hidden” in the discourse because of their absence from the refuge itself, their unfamiliarity in culture, and their understated attraction.

**Control and commodification —> Authentic, free-ranging, unique**

The discourses of the refuge and prairie center that seek to answer cultural studies’ call to intervention and social action are leveraged against the tensions discussed here: those aspects of the refuge that control visitors, wildlife, and messages and those aspects that depict a greater sense of freedom, as well as those characteristics of the refuge that are commodified, and those that resist such packaging and promotion.

When critics of Florida’s Walt Disney World or California’s Disneyland disparage those popular theme parks, they do so by pointing to the lack of authenticity—to an exploited adherence to that which is simulated rather than to that which is genuine. Although the refuge system and the NSNWR and PLC in particular strive toward loftier goals than the entertainment value associated with theme parks, a measure of inauthenticity and overcommodification associates with the prairie experience there. Because there is no other reconstruction of tallgrass prairie landscape of the size undertaken at the NSNWR, designers and staff must rely heavily on myth to persuade visitors of the importance of their work. This analysis shows that the refuge’s reliance upon the landscape heritage and upon regional mythologies supports its efforts at controlling and managing the natural world, ensuring greater success in meeting its goals to involve communities in the restoration and preservation of the tallgrass ecosystem. The Neal Smith National Wildlife Refuge represents the largest such tallgrass prairie restoration effort in the U.S., and achieving success in that work requires collaboration, control, and commodification. It requires constructing an image of a place that no longer exists in the memory of most of its visitors. It requires shifting conceptions of what counts as beauty in nature. And it requires a longer, deeper commitment from its patrons than do other tourist destinations or attractions. Staff depend upon patrons to
carry out the often-tedious efforts of seed collecting, sorting, planting, and nurturing. The construction, control, and commodification that takes place at the refuge must be tied to larger regional values and cultural myths in order to assure progress. The kinds of tensions discussed in this chapter act to reinforce these ties rather than to weaken them. As much as we might chafe at the packaging and promotion of the refuge’s “charismatic mega fauna,” such commodification must be part of the discourse if the larger goal of restoration and preservation of the lost landscape is to be realized.

One way the refuge’s control and commodification becomes explicit happened as the name of the refuge itself was changed, from identifying the refuge with a place to identifying it with a person, its political patron. What is now the Neal Smith National Wildlife Refuge and Prairie Learning Center began as the Walnut Creek National Wildlife Refuge and Neal Smith Prairie Learning Center. The new identification may seem a relatively small change (except for the expense and effort to replace signage) but the move reflects a rhetoric that exacerbates the tensions discussed here. The renaming pays homage to the refuge’s political patron and in doing so erases the connection to the local geography in lieu of highlighting an individual. Even though Smith is a son of Iowa who in his retirement has returned to his native state, his status as a former representative in Washington could be seen as fostering the insider-outsider tensions that were often reported in the media. Without conducting focused studies of the impact that the renaming has had on visitors—those resident to the area and those passing through—it is difficult to understand the influence that the change from Walnut Creek to Neal Smith has had on the refuge’s work. It is possible that those in the surrounding communities feel an affinity for Smith’s work in Congress so that honoring him in such a way appropriately personalizes the refuge while at the same time linking the project within a political realm that may be less attractive to those feeling the tug between insiders and outsiders, or Iowans and those “inside the beltway.”
Viewing the landscape in such a way— as connected to a political realm, as existing under a larger sense of order and control— happens to a smaller degree than is reflected in the refuge’s name. Indeed, during my first interview with Don Jorgensen, the public-use specialist and supervisory ranger, I was intrigued by his reference at one point to the land as “the resource.” Such a description reduces the ecosystem of its complexity, casts it in a more generic light, further commodifies the natural world. Removed from the land as we were, seated in Jorgensen’s office, the landscape, the object of his work, was to a very real degree objectified. It was both literally and figuratively “out there,” and it was envisioned to some degree as “an available supply” (American Heritage). Even Jorgensen’s title of public-use specialist presumes a human and public connection to the land and envisions its “use.” In order to be restored, first, and then preserved, this landscape must be used, it must be made attractive to those patrons and participants who—in order for it to return and offer the riches promised in the discourses of the exhibition and nature trails—must engage it as more than a casual nicety in their backyards.

Yet this notion of land both for use and as a resource for human interaction is not necessarily divorced from the area’s relationship to the land, both historically and contemporaneously. This region views land as a commodity for good reason: land in this section of the middle states carries with it powerful emotional value, as generations of families have settled on and cared for this land and passed it and the memories of it to their children and grandchildren and beyond. Also, the land here holds particular economic value, as it features among the richest soil in the world for agricultural production. The degree to which the restoration and preservation is successful depends on appropriate control over visitors and the messages they receive and on how the refuge and its inhabitants are made available as commodities to engage the public’s interest, desire, and commitment.

Refuge staff and exhibition designers must also control and manage not only the physical space within the refuge boundaries and the information that is communicated about
the reconstruction but also the amount of information they deliver about a new concept or aspect of prairie landscape. Too much information and visitors may experience museum malaise, information overload, and fail to return for those deeper levels of engagement and action. Too little information and the refuge's educational mission risks being unfulfilled. Telling the story of this landscape to refuge visitors—and, by extension, communicating a persuasive message that the work of the refuge in reconstructing and preserving tallgrass prairie is important—depends upon communicating a clear understanding of what, exactly, prairie is and isn’t. Presenting a clear definition of prairie is the first part of what Jorgensen identifies as a three-part message he wants visitors to understand after having toured the exhibition space: What is Prairie?, What Happened To It?, and Will It Grow Back?

Jorgensen’s message seems to fit museum professionals’ advice to “exercise self-control” in exhibition (Serrell 1). Though her work referenced here focuses specifically on the exhibit labels, Beverly Serrell presents designers and others associated with mounting successful exhibitions with advice that assumes they adhere to a few principles of sound communication with visitors. Serrell advocates for having a “big idea” and for writing interpretive labels that are limited to that idea and with a tone that complements the idea. Asking visitors to consider what prairie is, why it is gone, and what can be done to bring it back seems reasonable, limited, and focused—a big idea that refuge professionals and designers can successfully communicate and that visitors are able to access and comprehend.

The first part of that three-part lesson, however, requires visitors to understand landscape in ways that may challenge their prior knowledge, a conception of prairie as a vast, open space with very little biological action taking place. The prairie ecosystem is a complex one, according to Jorgensen. Within a section of land, as many as 10 or 15 different soil types might exist. As he looks in the exhibition area at a replica of the tallgrass prairie populated with grasses and forbs and wildlife species, he indicates that the numbers of represented species within that replica amount to far fewer than visitors would see in the “real world” of
a prairie remnant or reconstruction. "You could have 175-200 species pretty easily in an area this big," Jorgensen says. "If you put more than 30 species in here [for visitors to see], it's just going to be so overwhelming."

Visitors’ interactions with the texts and accompanying visuals within the exhibition area are similarly controlled. Wall panels and reading rails adhere to a consistent typographical template and stylistic voice. Designers have clearly paid attention to practical concerns of museum-goers who need reasons and places to sit and rest rather than demanding they take in the entire educational experience in one long walk. Interactive displays are located within each of the three main pods; a change in elevation as visitors walk up a slight incline from the first pod to the second creates additional interest. A diorama of prairie landscape awaits at the end of that ramp and gives visitors several taxidermied species to seek out among prairie grasses and forbs. Directly across from the diorama, the Fire Theater provides the first substantial place to sit. At the end of this second pod, the largest of three pods, visitors reach the People of the Prairie audiovisual hut where, again, benches are provided and they may refocus their attention on videotapes of prominent people associated with advancing the environment or the prairie landscape. To the north of the prairie learning center, one of the key examples of control roams in a 750-acre enclosure.

Just as refuge staff and local media have exerted a measure of control over the geophysical surroundings of the refuge and over the public’s perception of their importance and viability, the herds of bison and elk are also objects of control by refuge staff and by the media.

The herd of bison and elk experience authentic life on the prairie because the refuge staff provides no supplemental food sources other than the grasses growing in the bison/elk enclosure. Clearly, the animals are "controlled" in the sense that they are penned, and visitors are controlled by where they may wander as well. Jorgensen adds:
But that’s not the same as having a naturally regulated expanse, where they’re range animals and they’re being naturally regulated by natural predators and the elements. Although we don’t feed our bison—we let them eat what’s out there and they drink from the pond and the creek—we still manage them.

That management takes the form of population management, in particular, Jorgensen explains. Strips of grasses are visible from the prairie center where refuge staff have mowed the enclosure to help ensure fresh food sources of greener grass that is more appealing to the animals. Although stands of mature bluestem strike an impressive scene for visitors as acres of it wave in the late-summer wind, when it matures, it becomes rank, and the buffalo won’t eat it, Jorgensen says. “They’ll eat it when it’s green and first coming up. So we have to manage. We’ll mow areas and try to keep that green coming up.” The readily available and desirable food sources on the refuge may also be seen as supporting the herds’ overall good health and reproductivity—another key aspect of their population management.

Unlike the highly public and publicized decades-old annual dispersal of wild horses residing on Virginia’s Eastern Shore at Assateague Island, dispersal of elk and bison at the NSNWR is much less public. Ironically, perhaps, the bison are used prominently in public information and public relations efforts and are either pictured or mentioned often in news accounts of events at the refuge (whether or not the event has a direct relationship to the bison), but when the herd’s reproductivity challenges the refuge’s capability to suitably sustain it on the given acreage, selected members are dispersed with little or no public attention.

Jorgensen acknowledges that visitors who have come to see the buffalo as a symbol of the prairie center’s work express concern over the herd’s annual dispersal, but, he adds, the refuge arranges for the bison to go to Native American groups or to county conservation boards in the state. An article in the state’s daily newspaper announcing the first such dispersal indicates that 20 of the 41 dispersed animals were to be sold “by sealed bids.”
Jorgensen says that today no bison are sold for pets or to support a popular bison meat industry. In the early days of the refuge’s development, the newspaper reported on the initial roundup that brought the first bison to the refuge from Nebraska to Iowa. There, the article explains, the bison “will thrill generations of schoolchildren and other visitors. They will teach scientists what happens to prairies when bison stomp them down, run on them and sleep on them” (Beeman “Buffalo Get New Chance”). Similarly, when the first elk and jackrabbits were introduced to the refuge, the Register ran photos and stories of those events as well (Beeman “National Wildlife Refuge Returns”; Beeman “Refuge’s Wildlife Family”). Management of the bison and elk at the refuge is complex and, to some degree, contradictory. The animals contribute to botanists and biologists and refuge staff in that they help complete the picture of prairie ecosystem.

Bison and elk support the public relations function of the refuge because they are recognizable to visitors and yet somewhat unfamiliar in a landscape more often populated by horses, cows, and hogs. They are exotic in the sense that they depart from the everyday and reinforce the mythology of a romanticized West. Perhaps even to some small degree the presence of bison at the refuge work to assuage a measure of guilt that some visitors may feel over the rampant slaughter of the animals in the 1800s. The animals are controlled in terms of their range and population on the refuge and in terms of how they are perceived by publics; the “bad news” of their necessary annual dispersal and management of herd gender and number is reported but not celebrated. Their visual image is either photographically or otherwise reproduced on the refuge’s website, on brochures and other take-away public information documents, and in toys available in the refuge’s bookstore/gift shop. Media coverage—in editorials, news stories, and travel and tourism pieces that run in special sections or on weekends—nearly always mentions (and often includes photographs of) the refuge’s bison or elk. While rolling fields of big bluestem may not attract visitors to the
refuge, the possibility of sighting the herd of bison or elk may. Having such a commodity in
the backyard seems worth the investment that its management and control requires.

Indeed, the various elements of control exerted at the refuge and what feel from an
uncritical stance like unseemly bits of commodification of nature function not to alienate or
resist visitor engagement or to exploit disrespectfully. Rather, they are strategies necessary to
make familiar what is inextricably unfamiliar—a landscape nearly gone, a time, a heritage.
While prairie does exist in romanticized mythologies of the region, in small ditches, and in
protected remnants, the NSNWR will restore the largest area of the landscape in the U.S.
with this project. Its attempts to educate, perhaps recast those myths, and engage citizen
participation in the process mean that some of the ambiguities—the tensions—discussed here
exist because of the complexity of the task and therefore should be seen not as mitigating
factors in the refuge’s discourse of success but as requisite components for change. In the
final section of this chapter, I’ll show how the refuge’s stated goals exist alongside contrary
assumptions or ideas that go unarticulated.

Stated/articulated —> Suppressed/unarticulated

As this chapter has shown, the discourses of the NSNWR and PLC are marked by
layers of overt and explicit and of past and present blended with the future, and of the natural
tugging against the constructed, of ideas hidden and ideas revealed. Similarly, this section
concludes the discussion in order to show that none of the tensions present herein exist
discretely; instead, discussion of one set of tensions necessarily blends into the next. One set
depends upon the next, so that however isolated these tensions seem in their presentation,
here they are more accurately seen as moments in a larger conversation rather than as
detached or separable. Indeed, the discussion in this section depends upon the previous
analysis because what is articulated and what goes unsaid in the refuge and exhibition
similarly shifts. What does seem certain in this examination of the rhetorics of prairie
restoration and preservation at the refuge is that the project demands different kinds of
listeners and different kinds of speakers than perhaps museums and communities are used to. This project also claims that a new kind of visitors' center exhibition results. The deceptively simple act of defining prairie works as my first example to support that claim.

As mentioned previously, one of the first reading rails that visitors approach features three questions intended to shape and guide visitors' educational experiences about prairie: What is Prairie?, What Happened To It?, and Will It Grow Back? On the surface, the questions seem reasonable, uncomplicated, and suitable for the various audiences the refuge welcomes. Yet, how those questions get answered situates the refuge within particular political and cultural boundaries and problematizes the discourse that results. For example, choosing to define prairie as a “community of thousands of different kinds of plants and animals living together and depending on each other” by mobilizing a metaphor associated with positive connotation and with links to a dominant mythology of the region—family, heritage, land—asserts a presentation quite different from one that would have aligned more closely with scientific disciplines of biology and animal ecology, of hydrology and entomology. Community. Living together and depending on each other. Such a notion is familiar to visitors, even if the landscape being defined and described, is not.

When designers and staff ask (and answer) What Happened To It?, they may choose to adopt or reject a rhetorical stance that implicates the technologies of the plow, of the railroad, of drainage tiling, all of which contributed to the destruction of the biologically diverse tallgrass prairie ecosystem but which also contributed to the wealth the region knows today. Indeed, that shift in the landscape is acknowledged in the answer to this second question: “Deep prairie roots left a great legacy—the best farm soil in the world. As we profit from this fertility, we realize that prairie might disappear forever. We’re taking action to preserve our natural heritage.” This text operates in three particular ways of interest. First, it acknowledges the debt that the commercial agricultural heritage owes to the prairie landscape without alienating those who might be associated with contemporary agri-business. Next, it
asserts action to “preserve our natural heritage” and by linking visitors to an already-strong idea and ideal, heritage, designers and staff forge an important connection between this initial educational interaction and the rest of the exhibition. Finally, the answer opts out entirely of a discussion that marks contemporary debates over large-scale farming and hazardous pollutants. Conversations about the health of the landscape that get carried out in regional media, in professional journals and conferences in the state, and in the backyards of refuge neighbors essentially end for visitors at this point. The narrative here says, instead, that what has happened to the prairie has happened. The vitality and productivity that was left in its place when early technologies were developed and employed on this landscape are appreciated, but no fingers will wag at contemporary practices that might pose a risk at alienating the refuge’s relationship with its modern-day neighbors and potential patrons or benefactors.

Through the visibility of the refuge’s mission on the tallgrass.org website and through the answer included on the third reading rail panel, “Will It Grow Back?” we see this oscillation between the said and the unsaid at play. The sub-heading on the panel reads “Yes. In time and with our help, prairie will grow on this land.” The body text says “At NSNWR, our mission is more than just replanting prairie. Our goals are to learn more about the process of restoring an ecosystem, and to get people like you involved. We welcome you to learn about and enjoy the prairie landscape.”

What goes unstated in this display text, however, is the degree to which “people like you” must be involved in order for the restoration to be successful. Because no other restoration project of this sort and size has been undertaken in the U.S. before, it is likely that no one knows exactly how long the project will take. It is just as likely that it may never truly be “complete,” since the notion of “prairie” appears to be as rhetorical as the notions of “museum” and “landscape” or “environment.” Logistically, however, the project’s scope
astounds. Turning 8,000 acres into a massive experiment in biodiversity—collecting seeds, propagating young plants, setting them into the soil—becomes a daunting affair.

According to the refuge’s public use specialist who spins the narrative into a mathematical reality, each acre contains 43,000 square feet. He estimates that an authentic plot of tallgrass prairie hosts approximately five plants per square foot for a total of 215,000 plants per acre. “We can only grow about 10,000 out of here if we’re real efficient in a year’s time. So, how many plants are we going to have to grow to do an acres? Much less 8,000 acres? So, let’s get real,” he says. Naturally, an enterprise attempting to attract attention and participation and commitment would be less than rhetorically savvy to present such calculations in public materials. Yet, the reality of such a project appears to depend heavily on selling not just the idea of a restored prairie but also the activity of bringing it back. The paradox enters in in terms of how some bits of that narrative get articulated and some bits do not. Too much conversation about the need for efficiency and productivity and refuge staff risk echoing the sounds of large-scale agricultural operations at odds with the refuge’s goals. Not enough conversation and resident visitors may receive mistaken impressions that a weekend stroll along the nature trails for a glimpse at the bison and elk is all that is required here. For the kind of active, engaged social action that this place appears to need, a more realistic level of engagement likely falls somewhere in between.

Interestingly, the “Prairie Forecast” display—located in the third and final pod—makes a bold attempt to articulate the complicatedness of the project without making excuses. Indeed, the exigencies cited in the body text have plagued settlers and farmers in the region for centuries. The difference is that instead of attempting to break sod and plant a crop or to increase productivity on an already-rich production site, the implied producers are attempting to re-make the landscape into something new. The body text for this display reads

In 1991, we predicted we could plant the entire Refuge to prairie within 20 years. Many factors, such as seed availability, weather, and land ownership
affect what we can do and when we can do it. It will take decades after the last acre is planted for prairie to become truly established.

Articulating what prairie is and how refuge staff intend to bring it back and the degree to which visitors must assume responsibility and participate in that process are important elements in the tension between the stated and the understated in the prairie center’s narrative. Another substantial element, however, involves how the exhibition talks about native peoples on the prairie. Here, too, attempts are made to give voice to the Native Americans who resided on the landscape prior to active European settlement in the 1830s. The Peterson family exhibit, one of the two newest displays in the exhibition, addresses native peoples’ cultural interaction with the prairie by emphasizing how they used natural resources in daily life. This display, located in the first pod, precedes further information about Indians’ interactions with fire on the prairie in the central pod, “Promise of the Prairie,” subtitled “Endless Hills, Parallel Lines” to foreground the settlement and development that changed the landscape. The accompanying text to this section divider reads “Native American and early settlers lived on the prairie in ways that maintained balance and diversity. As surveyors parceled the lands, the seeds of change were sown.” The roles of these players on this complex gameboard of richly diverse interrelationships seem underdeveloped, oversimplified. Here, agency is again underarticulated or simply unstated. The text continues with “Wealth of Grasses” that reads “Tapping into the treasures of rich prairie soils, farmers supply the needs of a nation. Prairie was changed forever.” Finally, in the third part of the section divider’s text, “A Right to the Land,” we confront what potentially could qualify as provocative rhetoric, aimed at shaping a revised perception of what land stewardship entails. Indeed, because the text disallows the “success” of that nation so bent on control to stand as the last word and includes displays on prominent regional conservationists Ada Hayden, Aldo Leopold, and J.N. “Ding” Darling, the oversimplification gets challenged here. Certainly, though, the challenge speaks most clearly through the
presence of the conservationists' stories rather than through any overt champion in the text. The text reads “Success of the Nation once seemed tied to the control of nature. But powerful voices led the way to a new ethic of conservation.” The degree to which the exhibition narrative contends with the degree and kind of conversations—which to leave in and which to leave out and how to make its case—helps illustrate that the refuge maintains multiple goals. The rhetorics surrounding those goals are correspondingly multiple and complex. Visitors’ expectations get stretched at the refuge; visitors are called on to be full participants in the life of the restoration work being carried out. As this analysis has shown, rhetorical tensions abound. They challenge existing knowledges that visitors might assume about prairie, about Nature, about technology, about their own connections to the region, and about powerful mythologies steeped in regional values and desires. In order for the long-term, labor-intensive work of restoring the nearly vanished landscape of tallgrass prairie to succeed, the rhetorics communicated through the exhibition must perform a delicate movement between these tensions.

In the following chapter, I review the greater conclusions drawn from this study and suggest ways that this analysis might be applied to further research and to work in rhetoric, composition, and professional communication classrooms.
CHAPTER 5: CONCLUSIONS

*We need museums and their siblings because we need collective history set in congregant locations in order to remain civilized. Societies build these institutions because they authenticate the social contract. They are collective evidence that we were here.*

Elaine Heumann Gurian—"The Many Meanings of Objects in Museums"

Gurian's claims are impressive. We have museums because they show us that we are human, that we are developed, that we are progressing. That we are a species in connection—perhaps even in community—with others. But laying such a prodigious order at the feet of museums seems to me unrealistic or unfair. I do not presume to make such powerful claims about museums, in general, nor about the NSNWR and PLC, in particular. I am, however, quite willing to assert that the strength of the museum as an institution that shapes cultural interactions seems incontestable. Museums have marked civilized cultures since before the common era. Their purposes have evolved. Their audiences have broadened. In short, the reach of a museum's influence now extends into far more varied venues and circumstances than ever before. Museums touch our lives and the lives of those with whom we share the planet and they do so for a multiplicity of reasons and in a multitude of ways. Museums matter.

Generalized in this way, museums are thoroughly part of society, culture and politics. As such they are sites in which we can see wider social, cultural and political battles played out. They are not, however, simply sites, battlegrounds, terrains, zones or spaces. Museum displays are also agencies for defining scientific knowledge for the public, and for harnessing science and technology to tell culturally
authoritative stories about race, nation, progress and modernity. (Macdonald, "Exhibitions of Power" 19)

The potential of museums to affect such social change can be significant, as Steven C. Dubin recounts in his analysis of the 1969 exhibition, Harlem on My Mind, at the Metropolitan Museum of Art. And although this study addresses an interpretive, rather than art, museum, Dubin's assertions about museums as sites of resistance and social action apply. Dubin labels the Harlem on My Mind exhibition "political dynamite," (51) "an opening salvo in the continuing debate over 'high' and 'low' culture" (53), and says that the exhibition "forced museums to represent minority communities" (54). Indeed, Dubin quotes two black curators working at prominent museums as saying that they have their current positions because of the influence that resistance to Harlem on My Mind had on museum practices. According to Dubin, Thelma Golden, a curator at the Whitney Museum says, "'Had the protests not happened, I'm not sure the Whitney or other institutions in this city would have changed. It galvanized most museums to get to the place where in 1990 I could work here and do the things I do. But it took twenty years'" (54).

While some may see opportunities opening up as a result of the controversies and responses of the past, not everyone holds as sanguine a view about the progress of museums since the exhibits Dubin analyzed were mounted. Dubin quotes Peter Liebhold, co-curator of Between a Rock and a Hard Place: A History of American Sweatshops, 1820-Present, shown at the Smithsonian's National Museum of American History, as saying that "Museums are a different place to work, post Enola Gay. There were a number of exciting, interesting shows [before that] exploring the bounds of what type of material would be talked about in museums. And I think most people retreated from it" (243). Dubin concludes his examination
of postmodern exhibition with this: “Even if such controversies were to cease immediately, they will remain an important artifact of an era of extraordinary social change and self-examination in America” (245).

Particularized to the site of the NSNWR and PLC, I wish to explicate here four points that assist in answering this project’s overarching question: “How are issues of power and social action negotiated in a public, educational exhibition?” These results and their implications are further discussed in the remaining sections of this chapter; I also discuss ways in which these results might lead us as scholars and teachers of rhetoric, composition, and professional communication to new ways of engaging pedagogies of civic action.

**Museums as Rhetorical Spaces Reshape Knowledge-making and Community**

First, as Macdonald asserts, museums are more than just the repositories of artifacts, designed by and for the social elite. Instead, as she contends, they serve as vehicles for knowledge making and as valuable informants about contemporary civic life and citizenship. The NSNWR and PLC’s exhibition fulfill these civic functions—in this case, educational and participatory functions about a nearly vanished landscape—and does so as an inescapable rhetorical agent acting on audiences with often-complicated purposes at hand. Exhibition materials and refuge programming assist visitors with learning how to read and appreciate a landscape that demands, for many visitors, a new way of reading and appreciating the landform, a new experience with nature, and a new understanding of what constitutes beauty in nature. As in any persuasive discourse, the rhetor makes mindful choices, and so it is within the discourse of the prairie center. For example, visitors are purposefully directed to understand the message of prairie history, development, destruction, and reconstruction and
preservation in ways that coincide with the interests of the sponsoring institutions, the U.S. Fish and Wildlife Service and National Refuge System.

The modernist sensibility toward One Man's Vision of cultural development—not unlike the vision that guided James Smithson in his founding of the institution bearing his name—finds a contemporary corollary in the establishment of the NSNWR. It was the vision and effort of the namesake Congressman that has led to this environmental work. The complexity and labor-intensive nature of the refuge re-shapes that singular vision, requiring the engagement of others to make it successful. Still, what began as a refuge named for the geographical location was renamed upon Smith's retirement to honor the Congressman's work. Closer examination of the individuals whose words and images are included in the exhibition narrative would also yield interesting contributions to another discussion of the ethos employed at the refuge and prairie center site. Certainly a hierarchy of expertise does exist. Local and regional prairie experts are valued as "resources" but not necessarily as biological, scientific experts. Their books are sold in the bookstore and gift shop, but they are not necessarily consulted on refuge activities.

Volunteer docents advise visitors about the next showing of the refuge's orientation film. The theater in which the film is shown is designed to intentionally deposit visitors at the proper starting point in the exhibition area. More subtle directives such as spotlighting or a change in carpeting color or texture indicate desired movement into another focus area. Visitors learn about the ecologies of prairie landscape, but the educational exhibition also includes prominent displays about the efforts of the U.S. Fish and Wildlife Service, and the Service's logo is also featured on exterior kiosks at the approach to the refuge and at reading rails near the outdoor trailheads.
Public exhibition, or museum, spaces are not only rhetorical; they are deeply political as well, and as the previous discussion of tensions in the exhibition’s narrative shows, we often must look beyond texts and between the lines to see the degrees to which rhetoric is enacted in these spaces. Quite literally, the NSNWR involved political wrangling in the halls and meeting rooms of the national legislature in order to secure the funding for its establishment and development. Further, we saw from the discourse of area landowners that such unequivocal political control over a site also comes packaged with long-standing associated fears and perceptions that twist the political spectrum into sometimes-contentious insider-outsider relationships.

Writing in his collection of museum case studies *Museum Politics: Power Plays at the Exhibition*, political scientist Timothy W. Luke says that museums “give us narrative glue to assemble totalizing oversight out of fragmentary facts” (103). They work to shape the social, cultural, and personal issues that intersect with daily life. For farmers and landowners in the central region of the state where the NSNWR refuge is located, the establishment and operation of the refuge has had precisely those sorts of influences. Some have sold land to the refuge system that was long owned by their families. Others have seen their neighboring townspeople fear lost tax revenues or business for the local co-operative because of the refuge’s presence. What may appear at first glance to be a source of tourists’ benign respite from a seam of interstate highway is more accurately the site of purposeful storytelling. That storytelling—the shaped narrative within the exhibition—is backed by what appears from this analysis to be a concerted effort to move environmental awareness and action from beneath a mantle of suspect activity to progressive, commonsense engagement, fully compatible with the area’s long heritage of land stewardship and mindful caretaking.
**Classroom application**

This project, then, presents teachers of rhetoric, composition, and professional communication with a situated case in which a close reading of texts—visual, verbal, and spatial—extends rhetoric's reach into perhaps previously unconsidered spaces. I imagine creative applications of visits to museums or exhibitions where technical or scientific concepts are “translated” for various audiences as a way to introduce attention to multiple audiences, for example. Students who might role-play a trip through an exhibit space as a beginning reader will undoubtedly have an experience quite different from the student imagining she is a retired subject expert in a related field, both of whom might be likely receivers of such a museum’s messages. What assumptions about audience have designers and educators made, given not only the verbal or textual examples but also the visual and spatial elements of the exhibition as well?

Because museums are rhetorical and political and because they exist in three-dimensional form, they provide lab space of a sort in which to show students how messages affect the whole of an audience. While we are familiar with and perhaps even skilled at guiding our students through “textual” spaces, the use of visual and spatial rhetorics may challenge us as well as our students, and yet we all live our lives in three dimensions—full of sounds and smells and moving bodies—rather than only by accessing words on a page or across a computer screen. Practice at reading how rhetoric works in those additional dimensions seems important for educating whole students. To use the earlier example of our two types of audience, we can ask students to inquire: Are wall panels placed where the beginning reader may easily see what is written upon them? Are pathways through the exhibit space lit well enough for older visitors to make their way safely along them? Does
sound—perhaps from audio or videotape—from one display area bleed into another area so as to risk confusing or irritating the visitor and, thus, reducing the message's reception?

For students in first-year composition who have at their disposal multitudes of textbook readers but few that emphasize visual communication and rhetorics, a three-dimensional exhibition space offers valuable resources for fully experiencing rhetoric. Within such a space we may prompt: What is the purpose of the exhibit? How do you know? What visual signals indicate this/these purpose(s)? Whose interests are served by visitors accepting this message, these purposes? Whose interests are ignored? denied?

Students in upper-division courses in professional—business and technical—communication have greater exposure to classroom texts that encourage practice in engaging visual rhetoric. Primarily, however, that practice seems limited to teasing out ethical problems with displays of quantitative data or to providing rationale for selecting a cut-away illustration over an exploded view illustration, for example. Being able to study visual and spatial rhetorics in a concrete situation—perhaps even to consider revising choices that designers made in developing the exhibit space—seems to offer students a richer pedagogy than does text-based analysis only. Further, opportunities exist in many communities where non-profit museum spaces would benefit from associated service-learning experiences for students in both composition and professional communication courses. In short, the possibilities for moving classroom discussions and assignments into these rich rhetorical spaces appear limited only by one's creativity for their usefulness. Students are exposed to a context which is already familiar to them and that remains familiar to them as lifelong learners but which could be understood more thoroughly as a result of such close study.
Future research

This project focused on a site where a technical, environmental concept—tallgrass prairie and oak savanna ecosystem restoration and preservation—was featured, but I would invite further research within contexts where any technical, scientific, or historical concept or issue is considered for public education and action. I purposefully exclude fine arts museums from my interest and prescription, here, because I think they must contend so substantially with issues of aesthetics and taste which obscure matters of rhetoric that have to do with audience, purpose, context, and format.

Rhetorical analyses of the discourse that happens not only within the exhibit space itself but also of the conversations and debates that led to the establishment or development of such spaces could be especially informative in terms of how communicators address issues of gender, race, and social class. Such scholarship may also provide further insight into genre study as professional communicators examine documents and communicative practices that extend the boundaries of business communication or technical communication. When we do so, we are likely going to be issued challenges to continue considering what "counts" within our disciplinary boundaries. What is academic writing? What is business communication? Where do genres or practices previously considered journalistic, for example, intersect with genres and practices more often considered within the purview of technical communication?

Seeing museums as rhetorical, political spaces entails seeing rhetoric in a way that requires attention not only to textual analysis but also to visual and spatial analyses as well. In the next section, I discuss the value of these approaches as substantial findings emerging from this project.
The analytical approaches used in this study are guided by the assumptions associated with British cultural studies, most particularly articulation theory. Within the scope of that theoretical approach, researchers attend to issues of the everyday—issues that bubble up from the “dirty world.” Often—and I think that this study demonstrates that not always—those issues intersect with matters of gender, race, and social class. Indeed, this study could have been differently focused to address those aspects of culture. In that I attempted to draw conclusions about my analysis by creating linkages among documents that exist in association with the site, I think that this may be considered a cultural studies approach to the problem of how matters of power and social action are negotiated within a public, educational exhibition.

Explanatory and persuasive power also derives from engaging figurative language in the form of metaphors, similes, and analogies in the course of analyzing visual, verbal, and spatial narratives in the exhibition’s narratives. Metaphors carry great rhetorical weight, and for that reason they seemed to be a useful tool for understanding the impression that the Prairie Learning Center might leave upon refuge visitors. For example, incorporating the simulated X-ray as a way to help visitors “see” what lies beneath the surface of prairie landscape provides a familiar touchstone. What complicates that strategy in a productive way, I think, is that doing so also introduces a medical reference where none is apparent.

This was not a clipboard-and-survey visitors’ study, although it could have been. Certainly that type of study might yield interesting insight into designers’ and refuge staff’s intentions either met or unmet for their participating audiences. My interests here, however, were more focused on textual rhetorical analysis and on creating and exploring tentative links
among texts connected to the exhibition's interior displays and the refuge's exterior educational panels and kiosks.

It is important to remember that—under the auspices of a cultural studies project—these linkages are contingent, temporary, without guarantee. A linkage constructed now may not be a viable linkage constructed six months from now. Resulting assessments also are subject to such contingencies. Conducting such a study requires flexibility and an openness that one set out without a pre-determined outcome or hypothesis in mind. Instead, joining documents and discourses together and exploring possibilities of meaning within those junctures prevails. Coming to understand how those junctures operate within a specific context at a specific time thickens the resulting assessment.

*Classroom application*

To the extent that we aim to instruct students most fully about rhetoric, its influences, and its effects, I believe that assisting students in analyzing communicative practices from within contexts that are familiar but perhaps less studied can be only a positive pedagogical experience. Cultural studies that begin with problems posed from daily life and the challenges and issues of daily life provide a kind of relevance that educators in the 21st century must seek. But simply because the problems of cultural studies emanate from the everyday does not presume that they are easy problems with which students must contend. They are, instead, complicated by human relationships among persons representing varieties of races, genders, and social classes. We play vital and satisfying roles by not only exposing our students to but also working with our students to examine those relationships and their places within public discourses.
Where an examination of a rhetorical space such as museums through the theoretical lens or approach labeled cultural studies requires additional flexibility and openness—from both students and instructors alike—more historically familiar rhetorical and metaphoric analyses are also useful classroom applications, I contend. Much depends on the richness of the site. Museums as institutions have long and rich histories that provide classroom study with good contrasting examples. Their varied purposes, audiences, and the ways in which messages are packaged in order to meet the needs of those purposes and audiences offer students fruitful contexts for study. Museums are complex communicative structures, and even the most modest of public exhibitions would rarely, I think, exhaust possibilities for examination and analysis.

**Museum Spaces Provide Innovative Sites for Education and Social Action**

The third result drawn from this study has to do with the value associated with museums as sites for education about the environment and as potential driving forces behind social action and active citizenship in a democratic republic. This study examines how issues of power and social action are negotiated through the discourse of exhibition; further, the study proceeds under the highly politicized assumption that to address citizenship and social action as essential elements of an informed scholarly agenda and of a responsible pedagogy is a right-minded course to follow. Given that assumption, then, I conclude that museums offer scholars, teachers, and practitioners of composition and professional/academic communication a principal way of understanding complex ideas from the world around us.

"In adversity," writes Elaine Heumann Gurian, "it is understood by antagonists and protagonists alike, that the evidence of history has something central to do with the spirit,
will, pride, identity, and civility of people, and that destroying such material may lead to
forgetting, broken spirits, and docility” (164). She continues:

This same understanding is what motivates cultural and ethnic communities to
create their own museums in order to tell their stories, in their own way, to
themselves and to others. Yet neither the museum profession nor its sibling
workers in the other storehouses of collective memory... make... the case
clearly about its institution’s connectedness to the soul of civic life. In cities
under duress you can hear the case being made better by mayors and
governors. . . . Mayors know why museums are important. Citizens,
implicitly, do too. (164)

With the NSNWR, I selected a site that addresses one of the key concerns of
contemporary public life—the environment—that reflects elements of the passion to which
Gurian refers. Further, it is a site that works to enact a progressive move to restore and
preserve a nearly vanished landscape. As we see from the various public events that invite
participation at the refuge and prairie center, opportunities for intervention into the
restoration and preservation process are not only available; instead, such public intervention
is necessary in order for the project to succeed. Interestingly, various degrees of control are
exerted over these public interactions with the refuge and exhibition space that complicate
still further the abilities for publics to truly engage the site and its messages. Still, the study
of and intervention into a complex environmental project such as the Neal Smith National
Wildlife Refuge and Prairie Learning Center means contending with those levels of control
and seeking to understand their motivations and effects.
Classroom application

A common characteristic of courses in first-year composition or rhetoric—especially in the second semester of a two-semester sequence—is to build the course around a focus or theme, and a similarly common characteristic of such themed courses is writing about the environment. Indeed, alongside readers developed with popular culture or multicultural themes, readers with the environment as the focus are quite visible among publishers’ booklists. Special issues of professional journals in rhetoric, composition, and professional communication feature the environment and an entire sub-discipline of environmental rhetoric has grown out of this attention. The natural world in which we live provides a challenging, complex backdrop against which to think and write persuasively and analytically and against which to think, write, and participate actively within the public sphere. It is through an association with what Thomas P. Miller dubs “civic literacy” that, he says, “Rhetoric has been most vital when it has been dynamically engaged with the domain that lies between what is up for debate and what is beyond question” (39). Maintaining the status quo with a substantial patch of farmland or engaging community participation to help ensure that future generations experience the biodiversity of a complex landscape—the work of the NSNWR and PLC—falls squarely within that directive. Continuing his discussion of the role of civic literacy in advanced composition classrooms, Miller writes:

As students examine what is up for debate, how it was called into question, and why it is useful to view the debate from multiple standpoints, they can learn to value critical reflection as a means to practical action, rather than as an end in itself. Students can develop this rhetorical stance by reflecting on their expectations about a text and its expectations about them, the
experiences that validate and challenge those expectations, and the codifications of those experiences in discursive, moral, and social conventions. In other words, students can learn to question what is assumed, where those assumptions come from, and what gives them authority. If these are to be rhetorical questions, their answers must include actions. (39-40)

Action, education, and the environment are bound up together. Writing in *Landscape in America*, Calvin W. Stillman, a retired professor of environmental resources, reflects on both the definition of nature and the relationship of education to nature and landscape: “My own view,” he writes, “is that nature is a personal sense of supportive propriety, and that having an effective personal view of nature always involves three elements: living things, a feeling of reciprocal relations with those living things, and an escape to ‘infinity’ —in space or in time” (56). He continues:

My favorite definition of education (and I cannot recall to whom I owe it) is that education is the enhancement of the possible. This establishes education as the matter of facilitating an individual’s growth toward a higher level of competence in dealing with the student’s own particular personal environment; with the opportunities and the constraints he or she faces. This disestablishes education as a simple purveyor of facts. It avoids the question, ‘What is a fact?’ (57)

Very much a part of these calls to social action and intervention in issues associated with the environment as a part of educating young adults for contemporary citizenship is the reality that all of the oppositions involved in such discourse do not always get resolved. The next section reminds us of how such tensions between representing a heritage landscape and
representing the progressive work of reconstruction and preservation continue to exist in the visual, verbal, and spatial discourse at the refuge and within and beyond its exhibition narrative.

**TENSIONS MAY NOT ALWAYS BE RECONCILED**

If we are to continue this discussion in terms of resulting conclusions drawn from the study, I would also argue that we must examine, too, the tensions that emerge from close analysis of the visual, verbal, and spatial discourses present within the exhibition and refuge. It strikes me that this point may be most relevant for informing research methodology as much as it draws attention to the exhibit site itself. The exhibit's purpose is to educate visitors about what prairie is, what happened to the landscape in the middle states region, and how to bring it back. While refuge staff and designers clearly address those three main topics within the visual, verbal, and spatial narrative of the exhibit, what is less clear—what requires more substantial analysis—are the points where one aspect of the narrative appears discordant with another. What, then, as researchers, do we make of such seemingly unresolvable tensions? Is resolution crucial? Don't we create new ways of contending with rhetoric and power and social when we allow such tensions to flourish in our public discourse? How do we understand a context, such as the refuge's exhibition, where the unresolvable nature of rhetorical tensions seems *necessary* in order for appropriate social intervention to take place?

Such a point of tension exists where on one wall panel visitors read about the prairie center's attention to sustainable design. The panel text reads: "We save heating and cooling energy by nestling the building into the ground. The earth insulates the building to help keep the temperature constant, and earth berms block strong prairie winds." A cut-away view of
insulation and construction materials accompanies the text. In conjunction with this progressive attention to environmental soundness is the presence of a research center as well—another signal to visitors of the refuge’s future-oriented disposition. The accompanying panel text sub-headline reads: “Neal Smith National Wildlife Refuge is breaking new ground in the science of prairie restoration.” The body text further aims to solidify a perception that the refuge sports an environmentally progressive sensibility. It says “Scientists do research projects here. They study the ecology of our native prairie and savanna remnants, and develop strategies for growing new prairie and savanna. Data collected annually helps us track our progress.” What makes these two examples relevant to my claim is that—sandwiched between these two texts in the spatial layout of the exhibition—lies a contrary visual example that creates an interesting paradox. An oak table and chairs, situated in the middle of the exhibit’s pod devoted to pre-European and European settlement of the prairie, requires visitors to experience a traditional touchstone alongside rhetoric of progressive environmental issues. Visitors are asked to attend to the messages of how the refuge’s establishment honors environmental soundness and sensitivity to built systems that must coexist in the natural world. Yet, they are also asked to share that attention with reminders of the region’s romanticized past—here, with a glimpse of romanticized domestic life. Indeed, while there is no explanatory text in the exhibition that explicitly addresses this tension between past and future, a prominent brochure at the information desk acknowledges the tension in the subheading: “The Tallgrass Trail: Back to the Future?” Resolution of this tension does not appear to be a chief concern of the refuge staff with whom I spoke. Certainly, visitor studies that seek to identify the degree to which visitors are aware of or are concerned with the oscillation among past, present, and future could reveal
interesting data; however, just as instructive is that these sorts of social/cultural myths are very much a part of what may have previously been considered a bias-free zone.

In fact, Gurian’s study of the objects associated with displays seems relevant to the kinds of objects either purposefully on display as part of the educational function (such as those associated with the Peterson family’s sponsored exhibit on Native Americans on the prairie) or those that are more convincingly part of the narrative’s “backdrop,” as is the table and chairs. She writes:

> By accessioning or displaying objects, the creators of museum exhibitions are creating or enhancing these objects’ value. Further, society’s acceptance of the value of museums themselves likewise transfers value to their objects. When museums receive gifts or bequests from a major donor’s holdings, they are inheriting—and then passing on—a set of value judgments from someone who is essentially hidden from the visitor’s view. A particular aesthetic pervades such museums because of the collections they house and the collectors who gave the objects in the first place. (172)

**Museums Enact Social Cohesion Through Rhetorical Tensions**

When so much of contemporary life seems hurried, disingenuous, and overwrought, I am encouraged by the lessons that this study offers for consideration. In part, they speak to our **human desires** for connection with one another through the very spaces in which exhibition takes place, where we come together to learn and to share in that learning as social beings together. The architectures, the surroundings—places both natural and built—provide touchstones to cultures or characters that inspire and satisfy some part of us larger than ourselves, a part that not only recognizes but also relishes the value of intellect and ingenuity
conjoined with grace. The provocative topics that educators and designers address in these spaces— and in which they invite us to enjoy and challenge us to contemplate— disrupt the usualness of daily life and require us to stretch and move in ways that may be unfamiliar or uncomfortable. The rhetorical tensions discussed in the previous chapter create what I see as productive discord for refuge visitors. The rhetorical disruption that the refuge’s project and its accompanying narratives afford actually serves a larger good, bringing visitors into a new relationship with their surroundings. All good things. Museum exhibitions introduce us to newness, forcing us into fresh, compelling relationships with words, ideas, spaces, and sounds.

Oftentimes, as I have come to realize during the course of this analysis, museums and their messages allow many voices to resonate within the discourses they present. They encourage puzzlement. They urge uncertainty. Although the discourses we hear in spaces like the one studied here sound authoritative, more often than not those nods toward authority retain degrees of contingency. We are urged to look beyond the display presented and to listen for other sounds beyond those on the audio track in order to have the fullest possible understanding of the rhetoric involved. Beneath the veneer of certainty resides a commitment to circumspection. We stand to learn much about modulating our own classroom, civic, and cultural discourses from these contexts.

The lessons presented here also touch on our professional desires to communicate with one another as scholars engaged in rigorous academic inquiry. Museums that engage complex and often complicated subjects such as those associated with the sciences, with technologies, and with nature present kaleidoscopes of data for further study. We turn them one way and see one sight. We breathe in deeply or shift our intellectual weight even only a
bit and see a slightly different one. Indeed, because each of those fields of inquiry is itself shaped and socialized by convention and persuasion, the possibilities they present for our attention—our intellectual enlightenment—seem endless. It is useful, then, to develop strategies for investigating these patterns. It is beneficial, then, to explore the terrain of these narratives and to discover not only how they are fashioned but for whom and for whom they deny ready access or full voice. Because scholars of rhetoric, composition, and professional communication understand the rudiments of persuasive discourse, we stand to enter these contexts with expertise that we are obligated to share with others. Because these are public spaces, we are called as participants in civic life to engage them and to share our knowledge about them with the audiences invited into them, with our fellow citizens.

Finally, these lessons speak to our instructive desires as educators because the best teachers among us crave opportunities to discover creative new problems and new venues for our students. Moving them to experience rhetoric within the contexts of these complex idea systems in ways that require them to read the rhetorics of words, images, and spaces means that we are doing our job well. Because public exhibition has evolved into elaborate forms of interactivity and engagement with all the senses, we hand our students rich and even enticing situations to unravel. Their lives change, they see their surroundings differently when they participate in the subjects they have met in the classroom. If they stomp seeds of big bluestem into the ground or nurture the growth of a compass plant after having learned about the prairie soil and the biodiversity of that landscape, it seems likely to me that when they are citizens faced with responding publicly to issues in their neighborhoods and communities they will better understand how to question the origins of the issue and how to identify and assess the various interests at stake.
When we enter institutions that mimic the purposes of museums—from cabinets of curiosity to explanatory panels along a nature trail—listen to the messages they present, interrogate those messages critically and completely, and then return to the streams of our civic lives of obligation and intervention, we have engaged this particular project in important ways. The moves we make to cross-examine the obvious and then to act on our findings resonate far beyond our own interests, rewarding us not only as scholars and as teachers but also—especially—as individual citizens connected to and for community.
APPENDIX A: SELECTED EXTERIOR SIGNAGE

This appendix provides a photographic tour of exterior signage in two main contexts—as visitors approach the refuge and navigate through it to the Neal Smith National Wildlife Refuge and Prairie Learning Center and as visitors travel the refuge’s Auto-Tour Route through the bison and elk enclosure. Signs in these two contexts function primarily as wayfinding or orientation for visitors and work to encourage visitors’ participation and—within the wildlife enclosure—restrain movement that might be harmful to visitors, wildlife, or both.

APPROACHING THE REFUGE

Figure A1. After exiting from I-80 at Colfax/Mingo, visitors drive eight miles south along Hwy. 117, through the towns of Colfax and Prairie City. Visitors approach the NSNWR here for about another four-mile drive through Iowa’s open landscape.
Figure A2. On a July afternoon, the Iowa roadsides and ditches are full of color—including Queen Anne's Lace and Black-eyed Susan. This sign welcomes visitors to the refuge and posts hours of operation. The blue goose logo in the sign’s upper right-hand corner connects the Iowa refuge to the National Refuge System and the shield logo in the center of the sign links the refuge to the U.S. Fish and Wildlife Service.
Figure A3. Four miles from the PLC, the kiosk pictured above further situates the refuge within the Wildlife and Refuge systems and in information panels, from left, encourages visitors to visit the Prairie Learning Center where they can experience "Information, Restrooms, Interpretive Programs & Exhibits, Nature Trails, and Administrative Offices"; center, promotes Refuge Activities, noting the refuge's hours of operation, listing activities available and allowable at the refuge (nature trails, photography, wildlife observation, naturalist programs, and hunting) and reminding visitors of activities prohibited at the refuge: "To protect wildlife and habitat, the following activities are not permitted: vehicles off roadway, fires, camping, collecting plants, and picnicking"; and right, provides promotional information about the Wildlife and Refuge systems and the NSNWR's mission: "One of over 500 National Wildlife Refuges, Neal Smith NWR was established in 1990 to: Reconstruct 8,600 acres of tallgrass prairie; Provide educational programs and opportunities for public enjoyment; and Conduct research into the science of landscape restoration."
Figure A4. Visitors approach the Neal Smith NWR and Prairie Learning Center. The facility pictured above houses the refuge's administrative offices, a greenhouse, research area, orientation theater, a bookstore/gift shop, and an educational exhibition.
Figure A5. From the visitors' parking lot, exterior signage indicates the Neal Smith National Wildlife Refuge and Prairie Learning Center, but a small percentage of visitors attempt to enter the building from the staff entrance at the left side of the building rather than follow the sidewalk to the center's main entrance.
Figure A6. Visitors leave the prairie center and travel along a gravel roadway past the refuge’s maintenance building, pictured above. Cultivated fields lie within the refuge boundaries along this route, demonstrating one difficulty in achieving a timely restoration.
Figure A7. Here, visitors turn east and proceed into the fenced enclosure where small herds of elk and bison roam. The brown sign to the far right of this image reads: "Caution: Reduce speed ahead. Buffalo on roadway." The auto-tour route leads visitors along a straight but rolling gravel road. Small herds of bison and elk may roam on either side of the roadway through the enclosure.
Figure A8. Above, visitors are cautioned against interacting with the herds and are advised to stay on the roadway and in their vehicle. Interestingly, no mention is made of the elk, which share the enclosure.
Figure A9. In its purposeful design to blend with the landscape, the Prairie Learning Center blends in to the rolling landscape but is still visible to visitors as they travel along the Auto-Tour Route through the bison and elk enclosure. At times, refuge staff mow sections of the enclosure to provide fresh outgrowths of grasses for the herds.
Figure A10. Above, a portion of the two-mile Tallgrass Trail is visible from the Auto-Tour Route as it takes visitors along a gravel path and introduces them to prairie flora and fauna.
APPENDIX B: A PHOTOGRAPHIC TOUR OF THE EXHIBITION

Images in this appendix provide a photographic tour through the Prairie Learning Center exhibition and along the refuge’s Tallgrass and Overlook trails. The materials reflect three main emphases: first, selected displays associated with the PLC’s interior educational exhibition; second, displays associated with aspects of the exhibition that feature environment-friendly or sustainable design elements of the site and center; and third, reading rails, kiosks, and views associated with the prairie nature trails.

VISITING THE EXHIBITION

Figure B1. Visitors to the PLC approach the main entrance—beneath the lattice-work—along this sidewalk. Embedded in the retaining walls along either side are plaques that feature a prairie plant or animal, including big bluestem, the prairie chicken, Indian grass, the American elk, compass plant, and the Indiana bat.
Figure B2. At times visitors have difficulty distinguishing between native prairie plants and non-native, invasive species. Although refuge staff attempt to keep the areas near the PLC as close to native prairie as possible, non-native species such as Queen Anne's Lace often accompany visitors' approach to the exhibition.
A modest white board to the right welcomes visitors and provides a tally of the elk and bison herds. The exhibition's exit lies just behind that board, although it is sometimes confused with the entrance to the educational exhibition, located just past the orientation theater, about midway down the path shown here. Colored bins, pictured on the right, are provided for groups of young visitors as part of their activities.
Figure B4. As visitors enter the Prairie Learning Center, they are greeted at the volunteer docents' information desk. Here, visitors may borrow guide sheets on wildflowers, butterflies, insects, and birds for walks through the restored prairie areas. Maps of Iowa and the United States and a globe allow visitors to place a red pin on the name of their hometown. A cutout of Teddy Roosevelt stands near the entrance to the Prairie Point Bookstore. Administrative offices for the refuge are located down a hallway to the left of the information desk.
Figure B5. Visitors may buy books, videotapes, and other reference materials about prairies, landscape restoration and preservation, birds, and fauna in the Prairie Point Bookstore. Small toys, mugs, T-shirts and standard gift shop fare are also for sale here.
Figure B6. The entry to the exhibit area is nearly hidden behind the orientation theater; the pillar shown near the center of this photo includes a small sign that points the way. One of the refuge's two newest exhibits, on the American elk, is featured at the beginning of the exhibition. Large windows at the end of the main entryway allow clear views of the refuge and sometimes glimpses of the elk and bison herds.
Figure B7. From the entryway, visitors may look into the middle pod of the exhibition; sometimes they enter through the exhibition exit, but doing so disrupts the narrative that refuge staff hope visitors will follow in order to most effectively piece together the prairie story.
Figure B8. The Prairie Center’s education area features a taxidermied bison, various skulls and bones, and bison pelts. The bison travels to the refuge’s exhibit at the Iowa State Fair as an educational tool promoting the restoration project and educational activities at the refuge and prairie center.
Figure B9. Visitors who forego the orientation film begin their tour of the exhibition here, at the American elk display. A ramp to the right of the display leads to the first main reading rails of the exhibition that define prairie, describe what happened to it, and ask "Will It Grow Back?"
Figure B10. Visitors approach the first reading rail by walking down a gradual slope, on their way to learning about the underground vitality of prairie flora and fauna. The first reading rail is visible at the end of this path.
Figure B11. The first of three segments at the exhibition's reading rail asks "What is Prairie?" The answer provided is necessarily abbreviated, according to the refuge's public use specialist, but offers visitors a starting point for understanding the complex relationships of the landscape under consideration at the PLC.
WHAT HAPPENED TO IT?

Tallgrass prairie once covered the Midwest. Now only bits and pieces remain.

Deep prairie roots left a great legacy—the best farm soil in the world. As we profit from this fertility, we realize that prairie might disappear forever. We're taking action to preserve our natural heritage.

Figure B12. The second segment in the first reading rail asks "What Happened To It?" and calls the visitor to join in the progressive environmental action to preserve the prairie ecosystem. The tension that exists between the ecosystem's heritage and the state's economic reliance on agribusiness is hinted at in the panel's text.
Figure B13. The third segment in the first reading rail asks "Will It Grow Back?" and again encourages visitor intervention in the process of restoring and preserving the native tallgrass prairie and oak savanna ecosystems.
Figure B14. Following the introduction to the exhibition's overarching questions—the questions that frame the rest of the educational experience for visitors—we learn that "Most of Prairie Life is Underground" with glimpses of the plant and animal life that thrive in the deeper reaches of the landscape.
Figure B15. A tunnel-like effect takes visitors "into" the underground world of prairie, into an area that features a larger-than-life prairie burrower and maze for children.
Figure B16. In this "Rootscape" section of the exhibition, visitors read that the prairie landscape is "Much More Than Dirt" through a combination of illustration and panel text.
Figure B17. The satellite imaging technology used here to describe the landforms of the state seem incongruous with the message being presented, defying the warmth that the landscape provides in its more natural existence. The tension between technology and nature is just one of several analyzed in this study.
Figure B18. The first section of the educational exhibition is titled “Much More Than Grass” and explores definitions of prairie and how elements of the prairie ecosystem are interconnected.
Figure B19. One of the most striking comparisons in the exhibition's displays is between an ecosystem and a song (pink text panel). Visitors are encouraged to pull the colored levers at the end of the display to populate the ecosystem with diversity in plant and animal life and then crank the wheel to the left of the case to create the musical system that result. The text explains that "the music sounds richer when more notes are played; an ecosystem is stronger when it contains greater variety in life."
Figure B20. The notion of diversity in the prairie ecosystem explained here relies on not just the comparison between the ecosystem and a song but also between the ecosystem and the strands in a web. This use of metaphor to explain a concept is quite prevalent in technical communication.
Figure B21. The first pod also provides instruction on the various types of prairie ecosystems and the variety of fauna each type supports.
Further instruction about prairie predator/prey relationships is provided in another of the interactive displays in the first pod. In “Who Eats What?” visitors touch, first, the outline of a prairie animal and then touch its favorite food.
Figure B23. In "Prairie Bites," designers and staff draw further analogy, this time between prairie fauna and cutting tools. An elk grinds its food much like a mortar and pestle; a wolf chews like a pair of sewing shears.
Figure B24. The notion of environmental niche is explained in this hands-on display where contemporary references to jobs in a mocked-up Want Ad help explain how a plant's or animal's lifestyle affects "what it eats, where it lives, how it affects others around it."
Figure B25. The introductory panel to the Petersen exhibit on Native Americans—"Native To The Prairie"—says that "Long before anyone imagined a state called Iowa, the ocean of prairie that covered the middle of North America was as bountiful as any sea. To understand the way the prairie supported the people, we can look at the objects they made."
Figure B26. This semi-circular display exhibits objects made from prairie resources that were part of the daily life of Native Americans. This newest of the NSNWR and PLC's displays, it was provided by a gift from Charles and Mildred Petersen of Rockwell City, Iowa.
Figure B27. The pathway through the exhibition is not always clear. As visitors exited from the "underground tunnel," the positioning of the owl chasing the rabbit at the first cutout panel encourages visitors to follow a right-flowing path. Missing the first pod's displays, however, means that visitors receive an incomplete explanation of prairie ecosystems in general.
Figure B28. The ramp to the middle portion of the exhibition—the Fire Theater and pre-settlement and European development of the prairie—features small tile-like plates that young visitors may use for rubbings.
Figure B29. A diorama of prairie flora and fauna invites visitors to imagine animals and plant life in their natural surroundings. The display is positioned at the top of the ramp leading into the middle portion of the exhibition.
Figure B30. Visitors enter the middle portion of the exhibition with an opportunity to view a half-dozen video disks of varied topics concerning fire on the prairie and its use as a tool to reconstruct native prairie.
Figure B31. The Fire Theater provides a resting point and educational display that features carpeted platforms on which visitors may sit and view video disks; captions are available.
Figure B32. "Promise of the Prairie" is the title of the middle portion of the exhibition. Here, visitors learn about both pre-European and active settlement by Europeans as well as about the technologies of the plow, the railroad, and agricultural tiling that hastened the destruction of the prairie landscape.
Figure B33. Voices of settlers are provided in textual form along with descriptions of the types of vegetative resources on prairie land. Textual, visual, and spatial narratives, including hands-on activities, combine to cover a substantial variety of educational topics in this central part of the exhibition.
Figure B34. One of the central displays in this section of the exhibition is this farmhouse kitchen table and chairs where visitors may reflect in writing and through drawing on their impressions of the prairie. The present study argues that this three-dimensional representation of the past accompanies another prominent theme in the prairie center’s narrative—that of progressive environmental intervention or social action.
Figure B35. The work of the Prairie Learning Center cannot be accomplished without the active participation of communities and citizens. The narratives present in the visual, verbal, and spatial rhetorics of the NSNWR and PLC call on citizens to intervene in the loss of this heritage landscape.
Figure B36. The open design of the exhibition space allows visitors to touch base, visually, with the PLC's main entry hallway.
Figure B37. Visitors may engage hands-on activities to see the shrinking amounts of farmland that resulted from the introduction of the moldboard plow to the prairie landscape (right). The railroad and tiling systems (center and left) also contributed to the loss of native tallgrass prairie but substantially supported the development of the state's rich agricultural economy.
Figure B38. On the opposite side of the second pod's pathway sits the "People of the Prairie" viewing hut where visitors may watch more video disks about prominent prairie enthusiasts and inhabitants.
Figure B39. Another gently sloping ramp leads visitors to the final main segment of the exhibition area titled "Rediscovering Prairie." Although the American bison is a prominent visual icon at the refuge and prairie center, the elk is featured in this final stand-alone cutout.
Figure B40. This panel of photographs, and textual and graphical information—located along the rampway to the final exhibition area—explains the role of the U.S. Fish and Wildlife Service at the refuge.
Figure B41. Prairie chickens, considered by some to be a key note in the finely tuned symphony of the prairie ecosystem, are currently absent from the landscape. One ornithologist featured in the exhibition narrative says that the work the refuge will be a success when the prairie chicken returns. Currently, however, images of the more "charismatic" bison and elk predominate at the refuge and prairie center.
"In keeping every eye and mouth is the true promotion of intelligent thinking." Aldo Leopold.

Figure B42. One of the most pressing questions for visitors—essentially, why does the work of the refuge matter?—is introduced toward the end of the exhibition's narrative. The answer involves preserving cultural heritage along with preserving environmental ecosystems.
Figure B43. The final portion of the exhibition instructs visitors in three areas. "What Was Here?" reads: "A diverse landscape humming with life, records say. We combine historic records, current science, and experience to understand what was here." The second area reads "Neal Smith NWR is a Process... to bring back a prairie. For decades to come, we'll be working to coax an ecosystem from former farmland." And, finally, "Regaining Lost Ground" reads "Protecting vanishing species and restoring clear water—bringing back prairie can help us in many ways."
Figure B44. One of the central hands-on activities in the final portion of the exhibition is "Grow For It!" which depends on visitors' patience and perseverance to "grow" the diversity of a vital prairie ecosystem.
Figure B45. What might be perceived initially as a lesson in the return of particular prairie flora and fauna is, instead, a reminder that infuses the narratives of the NSNWR and PLC of the imperative for community intervention. The text for this interactive display works rhetorically in several ways: The hands-on icon reads “Turn the wheel to bring back prairie. What happens if you stop working?” The question implies that without diligence, the project will not be fully realized. The panel text headline reads “Grow For It!” and the subhead reads “Prairie needs time and people’s help”—still further reminder of the requisite involvement from visitors and community members and the long-term scope of the restoration effort. The body text reads “People have to help prairie get started at Neal Smith NWR. With time and effort, we’ll see more richness and diversity in our prairie. At Neal Smith National Wildlife Refuge, the Fish and Wildlife Service has made a long-term commitment to maintain the prairie ecosystem.” Again, the complexity of the project and its dependence upon active engagement for success get reiterated in this panel.
Figure B46. The equipment illustrated by the mannequins and in the display cases in this area of the final portion of the exhibition are not the only technologies at work at the refuge but do serve to show some of the tools available to refuge staff and volunteers who work to gather, sort, and sow seeds and small prairie plantings.
Figure B47. The subheading for this wall panel titled "Prairie Forecast" reads "It's hard to pack to visit a place you've never been before," casting the restoration of native tallgrass prairie in the light of a journey. Not only is the "journey" of restoration like visiting an unknown place, the underlying assumption is that the journey will take an unpredictable amount of time. The body text reads "In 1991, we predicted we could plant the entire Refuge to prairie within 20 years. Many factors, such as seed availability, weather, and land ownership affect what we can do and when we can do it. It will take decades after the last acre is planted for prairie to become truly reestablished."
Figure B48. To the left of the "Prairie Roll Call" mural are responses from a geologist, a teacher, prairie ecologists, a student, a zoologist, ornithologist, and a newspaper editor to the question: "Neal Smith NWR will be a success if..." According to Gladys Black, an ornithologist: "When bobolinks, marsh hawks, and short-eared owls nest here. The return of prairie chickens would mean it's a great success."
Figure B49. This display titled "Rebuilding the Prairie Landscape" educates visitors about the difference between reconstruction and preservation. The subheading reads "Sometimes there's no prairie left, so we start from scratch." Indeed, for much of the refuge the act of reconstruction must precede preservation.
Figure B50. Now empty, this greenhouse area adjacent to the final portion of the educational exhibition is often full of young seedlings.
Figure B51. The refuge is home not only to the educational exhibition, Prairie Point Book Store and gift shop, and greenhouse but also to research facilities. The subheading reads "Neal Smith NWR is breaking new ground in the science of prairie restoration."
Figure B52. A volunteer works in the PLC's research area, sifting and sorting seeds. This area is made visible to visitors by large windows that allow them to observe activities often kept behind the scenes at conventional museums.
Figure B53. Visitors exit the educational exhibition past these pelts of native prairie animals. Often, artwork created by young visitors hangs on the wall past the panels visible on the left.
Figure B54. Open ceilings and exposed ductwork lend an industrial feel to the interior space at the Prairie Learning Center. Throughout sections of the exhibition, sky-blue banners printed with images of clouds hang to provide visual representation of the outdoors and to block degrees of sunlight.
Figure B55. Throughout the exhibition, visitors encounter wall panels such as the one pictured at left that explain the environment-friendly elements incorporated into the PLC’s design. These reminders of sustainable design work to engage visitors in the progressive environmental action of the refuge and prairie center.
Figure B56. More specifically, the panels often illustrate how a process works. In this case, visitors learn about the energy-efficient heating system employed at the Prairie Learning Center. Although architects may have aimed to strike a progressive pose by attending to such sustainable design elements in the construction of the PLC, such conservation practices fit neatly with the region's heritage as land stewards.
Figure B57. This wall panel and cutaway view show and tell visitors about the insulation used in various layers of the PLC's construction. Another "Sustainable Design" panel present in the exhibition but not pictured here explains the building's use of "high performance glass" used in windows throughout the center. The windows are made of three layers of glass "with inert argon gas between them" to assist with insulation.
Figure B58. Informational panels about the refuge’s environmental design exist even in visitors’ restrooms. This wall panel titled “Follow The Flush” explains how the refuge supports a constructed wetlands to filter waste water from the center so that the natural balance of the refuge land is left relatively undisturbed.
Figure B59. This view from the refuge's trail system shows a building purposefully designed to fit into the natural landscape. Two main trails, the Overlook Trail and the Tallgrass Trail, allow visitor access to small portions of reconstructed prairie, views of Iowa's expansive landscape, and of the bison and elk enclosure to the north.
Figure B60. In late summer, the path through which the trails pass is colorful and alive with wildflowers in bloom, butterflies, and birds.
Figure B61. Trail information is posted where the two trails converge.
Figure B62. Along the shorter Overlook Trail, visitors encounter additional educational reading rails while looking north toward the enclosed bison and elk area.
Figure B63. A small amphitheater provides an open-air space for educational programs along the Tallgrass Trail.
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