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Re-envisioning the Cultural Landscape Report:
Straddling the Nature/Culture Divide at Pecos National Historical Park

Robert Z, Melnick¹, FASLA
Department of Landscape Architecture, University of Oregon and + MIG, Inc.

Abstract
As professionals advance the conservation of natural and cultural resources, they often seem to be living in different worlds. Ecologists may pay homage to a landscape’s human history, viewing that history as an ‘invasive species’ interrupting a landscape’s natural systems. Landscape historians may envision the natural systems as a blank canvas upon which the human hand has fashioned a place of beauty, function, and delight. Each of these perspectives – presented in the extreme – leaves a hazy understanding of a landscape’s complexity and true resilience. In the United States, this circumstance, has been nurtured by federal agencies, especially the National Park Service, that built and maintained a wall between the programs, funding and professionals in natural and cultural resources. This results in a myopic view of a landscape’s meaning, value, and needs. Research, planning and stewardship priorities have often favored one side of that border over the other. The result, too often, is the sound of one hand clapping.

An innovative approach to this problem is being developed through an on-going Cultural Landscape Report (CLR) project at Pecos National Historical Park in New Mexico. The project team of cultural landscape historians, ecologists, archeologists, and others meets regularly to share professional insights with an emphasis on human history, ecological knowledge and vegetation management. It is a test case for a new vision for a CLR, being developed by partners who listen and learn from each other and work together to create a process and ‘landscape dictionary’ that facilitates crossing the professional and linguistic divide.

Keywords
nature/culture, cultural landscape report, National Park Service

1 Corresponding author’s email: rzm@uoregon.edu.
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In the world of cultural landscape documentation and stewardship, the Cultural Landscape Report (CLR) has become an essential ingredient, intended to produce a historical narrative and context, current landscape documentation, a detailed landscape analysis and evaluation, and – most importantly – a treatment plan. It is the “principle document for cultural landscapes and the primary tool for long-term management of those landscapes.” (Page et al., 1998). Since its publication in 1998, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Page et al., 1998) has served as the guiding document for CLR standards and direction. Often – but not always – the CLR is preceded by a Cultural Landscape Inventory (CLI), which provides inventory and analysis of a specific cultural landscape. The critical difference is that a CLR includes specific and detailed treatments for the cultural landscape and important features, while a CLI does not.

The historical thread of the CLR development did not begin in 1998, however. Its origins can be traced as far back as 1935, with the Historic Sites Act, but more recently to the late 1970s and early 1980s. In those decades, under the leadership of Hugh C. Miller, NPS Chief Historical Architect and with key support from NPS Associate Director Jerry Rogers, NPS began to recognize that there were historically significant landscapes people had lived in, settled and modified long before these were parks. Early in this process, Miller remarked that NPS was good at managing natural landscapes and historic structures, but there were all these other places that the agency did not know how to handle.³ Miller knew that NPS, as the federal agency responsible for historic preservation policy, worked both within and outside the parks. He, along with others, recognized the need to set standards and policy for what quickly became recognized as significant cultural landscapes, a term succinctly framed by geographer Carl Sauer in the

² This is a progress report (as of October 1, 2018) on development of the Cultural Landscape Report at Pecos National Historical Park, New Mexico.
³ Personal comment to author, 1980.
1920s (Sauer, 1925). Others, both in and outside NPS, played a major role, among them Tom Kane, a practitioner in New York and Vermont. The goal was to provide tools so that the National Park Service, and others, could understand the totality of the landscape, not only its component parts (Melnick et.al., 1984).

From the beginning, there were serious doubts about even the validity of this work. One (unnamed) NPS regional historian remarked that working with cultural landscapes was “like nailing jelly to a wall.” It couldn’t be done. Why waste the time? Among staff of the National Register of Historic Places there was belief that cultural landscapes would never be included in that listing. That is not to diminish the integrity or insight of those professionals. Rather, it is to highlight and appreciate the hard questions that they, and others, asked – questions that eventually elevated the quality of the effort.

This history reminds us that, within the historic preservation community, cultural landscape work derived from a historical and humanities tradition. Although early versions of cultural landscape guidelines included dynamic landscape processes, and were not limited to physical features, over the years the processes sections were dropped. The standards seemed to take more guidance from historical architecture and archeological research and associated field methods than they did from an understanding and analysis of dynamic landscape systems. This has become a major issue, and presents an important challenge.

Early on, cultural landscape documentation and treatment proposals were primarily viewed through a lens of site history, existing conditions, stability and constancy. (Landscape Lines) While there is no doubt that historical architecture and archeology, as fields, recognize changes over time, the overall result, from a landscape perspective, limits the ability to engage the essential dynamic nature of these resources. Most importantly, these investigations and projects did not adequately engage the ‘natural’ features or processes as qualities of the cultural landscape, or engage that arena of the NPS mission and professional expertise.

4 Personal comment to author, 1980.
An on-going project at Pecos National Historic Park, conceived and initiated by the National Park Service, offers a demonstration of a more integrative approach. The project is being jointly conducted by the Cultural Landscape Research Group at the University of Oregon, Colorado Mesa University, and NPS staff at both Pecos NHP and Fort Union National Monument. It includes support from the Southern Plains Network, and is in close consultation with park staff regarding the Pinon Juniper study from Colorado State University. It is a complex team because it is a complex landscape.

This is an exploratory effort to rethink the structure of the CLR, while staying within the proscribed format, and an effort to re-think the CLR process, team structure, and even the questions that we are asking. As explained below, there is a commitment to truly collaborative work, among professionals who often seem to speak different languages, use different graphic tools, and who see the world through different lenses. Importantly, this is an NPS-led collaborative project that was conceived and constructed over a two-year period. It is intentionally developing a model on how to design a team effort that suits a particular cultural landscape, in this case with strengths in cultural landscape history, documentation, and management; archeology; ecology, and fire management.

Briefly, the case study site, Pecos National Historical Park, is located in the upper Pecos River basin, part of a broad pass through the Sangre de Cristo Mountains, New Mexico. Historically, the Pecos River valley was a diverse area where Paleo-Indian and Ancestral Puebloan people left evidence of early use and settlement. The Spanish first established a mission at Pecos in 1617, and economic contacts continued through the 1600s and 1700s. By the late 1700s, Hispanic settlers occupied most of the land in the Pecos Valley around the Pecos Pueblo. The Spanish abandoned the Pecos mission in 1812, though the Pecos people remained until 1838 when the last survivors emigrated to Jémez Pueblo. From 1821 to 1880 this route was the prime means of national trade and transportation between Mexico and the United States. Stage stops and trading posts were established along this trail - the Santa Fe Trail - and the route was also used for
military expeditions during the Mexican War (1846-1848) and the American Civil War (1861-1865), particularly for the Battle of Glorieta Pass in March 1862.

![Figure 1. Monument commemorating the Colorado Volunteers at the Battle of Glorieta Pass, March 25-28, 1862. Photograph courtesy of the author © 2017.](image)

With the advent of the railroad in the Pecos Valley in 1880, trade and transportation along the Santa Fe Trail decreased as the railroad became the preferred means of transport. During the late 19th and early 20th century, the railroad dominated commerce and the potential for large-scale ranching operations and tourist enterprises within the Pecos Valley became known. Large tracts of lands, including previous Hispanic homesteads were bought and consolidated into large cattle ranches that also served as dude ranches for guests. In 1935, the pueblo and Spanish mission complex were designated as a state monument, which was later converted to a national monument in 1965. In 1990, the national monument was re-designated as a national historical park as additional lands were added. Overall, the region defined within the park unit served as a strategic crossroads that represents the cultural heritage of the Southwest (National Park Service, 2013). At the present time, there are a few key points and approaches that inform this effort. As
we continue with this work there may be more. This is a collaborative team effort, building across multiple disciplines that include historic (military) archeology, ecology, natural resources and vegetation management, and fire management, in addition to the expected areas within cultural landscape investigations, such as landscape history, GIS mapping, and field documentation, analysis and evaluation.

The team recognizes and acknowledges that there are different ways to speak about, understand and approach landscape questions, each of which is legitimate, if not always shared. Landscape historians, for example, may view settlement as a defining process and a critical cultural landscape characteristic; ecologists may view settlement as a disturbance event, even adversely affecting wildlife, plant species, and the natural order of systemic change. We seek in our collaborative process to unearth a common vocabulary, recognizing that we are viewing the same landscape, but often through different filters. We meet regularly and strive to break the silo walls that have defined our respective fields for too long.

In this collaborative process, an understanding of a cultural landscape can include a variation of the ecotone concept, straddling strictly ‘natural’ and strictly ‘human’ systems. This should not be confused with a scientific definition of that term, but rather a cultural landscape application of a natural systems concept. Cultural landscapes can be seen as a transitional zone between strictly cultural resources (i.e., built structures) and strictly natural resources (i.e., ecological systems) with some characteristics of each. Most importantly, in this discussion, the character-defining features of the cultural landscape benefit from inclusion in both the cultural resources zone and the natural resources zone to better understand, analyze and manage its critical features.

5 The other team members: Julie McGilvray, Cultural Resources Program Manager, Guadalupe Mountains National Park; Robert E. Bennetts, NPS ecologist and thinker, NPS Southern Plains Network; military archeologist Doug Scott, Colorado Mesa University; and Laurie Matthews, cultural landscape specialist with MIG, Inc., and the University of Oregon. The team is supported by Landscape Architecture PhD student Noah Kerr, University of Oregon; and MLA student Emma Stone, University of Oregon.
The conceptual idea of a cultural landscape as a type of ecotone carries with it the explicit expectation that landscape history, documentation, analysis, evaluation and even treatment will include not only the impacts of human decisions and actions, but the ongoing results of, and on, natural systems dynamics as well. While the cultural landscape report process has given some attention to this, it has not been integral to the method, and is too often presented as ‘context.’

As David Lowenthal has reminded us often (Lowenthal, 2015), the impulse to protect the natural and human systems of a cultural landscape derives from values, not from absolutes. Landscapes present us with a major challenge, as they are composed of elements and character-defining features that are visibly dynamic by their very nature. In a CLR, landscapes are identified, analyzed, recorded, and evaluated using standardized methods. There is a recognized need, in one sense, to codify our approach to historic resources with the intention of providing uniform standards by which to achieve the goal of historic landscape preservation or protection.

Guidelines for cultural landscape reports, however, consider the landscape within a constant or predictable context and fail to fully appreciate or duly recognize the dynamic nature of the larger environmental milieu. The guidelines implicitly assume that the larger ecological context is predictable, within an acceptable historic and future dynamic range, such as seasons, warm or cold years, or wet or dry summers. Thus, each of the directions for recognizing, evaluating and ‘treating’ cultural landscapes anticipate a greater level of constancy than we now experience or might reasonably anticipate into the future, especially in light of climate change impacts. This is just one of many ways in which the CLR process can collaborate with ecological investigations.

**What are the goals of Pecos NHP cultural landscape report, and how are we proceeding?**

In the immediate, the goal is to produce documentation, a historical narrative and context, a landscape analysis, and a treatment plan for the Park. This will include a better understanding of how the landscape evolved and how extant features reveal patterns of use; and how they are linked to the larger regional landscape. Treatment recommendations and management strategies will focus on the preservation of landscape character for the entire park unit, with detailed
treatment recommendations focusing on historic agricultural land use and the delineation and protection of the Glorieta Battlefield, a Civil War site. In scope and intent, this is, frankly, not fundamentally different than other CLRs.

In the larger sense, however, we aspire to provide a CLR example that goes beyond current CLR expectations, but does not reject them. As a team, for example, we are exploring work being done in other countries, such as the ‘landscape’ diagram from Scottish Natural Heritage (Swanwick, 2002; Tudor, 2014).

**Figure 2.** What is landscape? The various characteristics of landscape according to the (UK) Countryside Agency and the Scottish Natural Heritage. Source: Tudor, 2014.

Individually, and as a reflection of our varied disciplines, we don’t necessarily agree with each of the descriptive terms for a cultural landscape, such as ‘sight,’ or ‘texture.’ We do, however, see the benefit of this model. This leads us, at Pecos NHP, to question and explore the ways in which the landscape has changed ecologically as well as by human action. And then ask, in the context of project goals: when is the “resource” condition acceptable or unacceptable? And what does that mean?
There are a number of components of this project, each of which will be represented in the CLR but which, together, have the capacity to provide a model for advancing the CLR concept. To be clear, we are not proposing to change the established structure of the cultural landscape report. Rather, the intention is to illustrate how a broader collaborative and integrative approach can advance cultural landscape thinking, understanding, and – especially – treatment and protection.

The main organizing component is the established structure of the cultural landscape report, including the cultural landscape characteristics and features. This is basic to the process, and includes: natural systems and features; spatial organization; land use; cultural traditions; cluster arrangement; circulation; topography; vegetation; buildings and structures; views and vistas; constructed water features; small scale features; and archeological sites. The list of characteristics is designed to ensure that nothing in the landscape is forgotten, left out or overlooked. It is not a checklist or a cookbook.

The project includes a detailed archeological survey based on a standard military analytical tool, the KOCOA process. KOCOA is an acronym, adapted from military training manuals, for identifying key aspects of battlefield terrain or landscape. The original intent, as stated in United States Army Field Manuals, (Babits, 2013; McNutt, 2014) is to inform commanders and junior leaders about their area of concern in order for them to make informed decisions on their courses of action in battle. The military teach battlespace concepts as part of large level command and control decision making and the KOCOA model at the most basic unit levels, squad and platoon of small unit tactics. Importantly, this analytical tool postdates the Battle of Glorieta Pass by approximately 50 years. While it is useful to understand the military dynamics that affected, and were affected by, the landscape, it was not a tool for military decision-making during the Civil War.

KOCOA analysis is one subset of three military formats that both guide and explain battlefield activity and are presented as small unit leadership. Together with the principles of war, these frameworks provide a key for understanding behavior during battle. The Levels of War model
has multiple components to include: Strategy, Tactics, Operations, and Logistics, then KOCOA, and finally, the Principles of War. Military historians and archaeologists have employed these concepts to inform their findings in conflict and battlefield sites. Essentially, they use the concepts in a reverse manner to the military as a means to either find the sites of conflict as a predictive model or as an analytical tool to aid in the interpretation of why a conflict site is in a certain place or explain the outcome of a battle in terms of a landscape theme or analytical process.

KOCOA has five key factors that aid in explaining a military unit’s terrain and the potential or actual use of that terrain (Scott, 2018).

![Figure 3. Portion of KOCOA military terrain analysis. Source: Scott, 2018.](image-url)
The elements are defined as:

**Key Terrain** depends on the mission. It is any land form or localized area that provides an advantage if held by one side or the other.

**Obstacles**, both natural and manmade, restrict terrain use by creating problems for an advance, withdrawal, or the movement of support elements.

**Cover and Concealment** are different. Cover is protection from enemy fire. Concealment is protection from enemy observation.

**Observation and Fields of Fire** are inter-related. The first is viewscape, defined as what can be seen from a position. Fields of fire relates to both sides’ weapons capabilities, including direct and indirect fire.

**Avenues of Approach** are the routes by which a force can attack a defensive position. Cover and concealment must be considered so as to protect attackers and allow no dead space to interfere with a defense.

The KOCOA analysis is crucial to understanding the cultural landscape at a key moment in its history; a time from which it derives specific significance, but a time that is otherwise not integral to the landscape’s long term history or even its current condition and management. This presents the entire cultural landscape report team with a structural dilemma, as often occurs on commemorative battlefield sites: should the landscape be celebrated for that important event, or should it be recognized for its longer history and dynamic development. At Pecos NHP, one goal is to recognize the moment in time without forgetting the historic trends in the non-military landscape.

Different from other CLR projects, the Pecos team is purposely moving outside our comfort zone by engaging and reviewing ecological and vegetation data that, in the normal course of the CLR process, is neither required nor usual. For example, from the start the team has worked closely with Rob Bennetts, an ecologist and plant scientist, to include lessons from his work at other
parks, notably as part of the NPS Southern Plains Inventory and Monitoring Network. This includes a multi-phase study of prairie restoration at nine parks on the southern plains.

Figure 4. Vegetation analysis, Pecos National Historical Park.°
National Park Service © 2018

Another resource for this project has been a viewshed analysis at Fort Union National Monument, situated nearby Pecos NHP (Strickfaden et al., 2015). Unlike most CLR view and viewshed analyses that rely on qualitative data and humanistic methods, the Fort Union project was based more solidly on quantitative data and scientific methods. Without applying evaluative criteria to either process, the team has worked to understand the value of integrating qualitative and quantitative data. The Fort Union study quotes from the ‘eloquent’ Cultural Landscape Inventory, describing current views in all cardinal directions. Borrowing from US Forest Service techniques, the Fort Union study differentiates between scenic integrity, the state of naturalness or disturbance caused by human activities, and historic integrity, the authenticity of a site’s historic identity as evidenced by the survival of physical characteristics from the period of

significance. The latter, of course, is closely aligned with integrity as defined by the National Register of Historic Places. Importantly, the Fort Union study successfully integrates the two; but this was not a cultural landscape report. Furthermore, the Pecos NHP CLR project is testing some key ideas, and asking some challenging questions, as expressed by different members of the team, Bennetts and McGilvray:

How can the CLR process break out of compartmentalized disciplinary silos and be truly collaborative? When and how are the silos built by intellectual barriers, operational limits and organizational priorities, or even personal mistrust? This includes reducing inefficiencies, duplication of effort and inconsistent or conflicting management direction. Too often, we seem to be working on the same landscape resource, at the same time, but not really talking with each other. How can we break through our different languages and definitions?

How can a team reach agreement on the ‘desired state’ for the cultural landscape, even though it is dynamic by nature? What are the driving forces of change, and what are the forces of resistance in a given cultural landscape?
How can we create a more collaborative culture for resource management, based on perceived need and values, and inspired by other relevant efforts? Where is that common meeting places between different methods and behaviors?

Linked to the previous question, what is the nature of change in the landscape? and how does integration and collaboration on a team composed of differing professional expertise and skills influence consideration of this question? How can those perspectives be better harnessed to protect the cultural landscape? (Lunenberg, 2010; Kritsonis, 2004)

The Pecos NHP effort will be enhanced by a collaboration of the cultural landscape process, that provides deeper contextual and historical information and perspective on a given landscape; and the natural landscape process that provides better assessment of dynamic landscape issues (systems and processes) and more consistent methods for on-going monitoring of landscape change. These two perspectives are not necessarily in conflict or competition, although at times
they have seemed to be so. The team is working towards agreement of landscape priorities and specific site issues.

Landscape, indeed *cultural landscape*, is a noun, a place, a thing; but it is also a verb, a process, a system. How can qualitative values and quantitative data inform each other? And how can this collaboration extend to various landscape and site landscape scales, a problem that we have not yet fully tackled, but that we recognize is present in this, and every, landscape (Bennetts, et.al. 2016).

The Pecos NHP Cultural Landscape Report project, still in its early stages, is focused on documenting, understanding, evaluating and protecting this significant landscape as a place and a process. To do so requires talking and listening, constantly seeking a learning environment, engaging a broad range of diverse tools and accepting a wide expanse of familiar and unfamiliar knowledge and expertise.

**References**


**Biographical Notes**

Robert Z. Melnick, FASLA, is professor of landscape architecture at the University of Oregon and Senior Cultural Resource Specialist with MIG, Inc. Working in cultural landscape studies - research, planning, and stewardship - since the 1980s, Melnick was the first Historical Landscape Architect in the National Park Service, and wrote the original guidelines for documenting and protecting cultural landscapes in the national parks. His most recent award-winning work, as PI for the UO Cultural Landscape Research Group, addressed the impact of climate change on cultural landscapes. Melnick is co-editor of the award-winning book *Preserving Cultural Landscapes in America*, published in 2000.