

*America as Second Creation: Technology and Narratives of New Beginnings*, by David Nye (2003), Cambridge, Massachusetts: MIT Press, 371 pp.

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David Nye, a Professor of American Studies at the University of Southern Denmark, Odense, has written extensively about social aspects of technological change in the United States. In his most recent book, *America as Second Creation*, he has produced an insightful and wide-ranging review of narratives about technologies that not only greatly shaped the historical development of the post-revolutionary United States, but also continue to function as myths of national origin. Nye recognizes that the most important impacts of technology often result not from the nuts and bolts of the technology itself, but rather emerge from the discourse that affects how such technologies are employed. He demonstrates in detail how the construction of such discourse is a contested process in which the economic interests, social positions, and ideological predilections of numerous actors shaped narratives about the axe, the mill, canals, railroads, and irrigation, particularly during the 19th Century. To Nye's credit, he incorporates a great deal of information and historical analysis into a wonderfully readable text. It is a rare book indeed about technological narratives that one looks forward to reading by a fireside in the evenings – but his smooth-flowing prose, interesting examples, and liberal use of appropriate illustrations make this just such an enthralling read.

The book title refers to Nye's assertion that European settlers in the United States, like all people, needed to construct narratives to explain their own existence and how things come to be the way that they are. Unlike Native Americans whose creation stories are often inseparable from the creation of the world itself, settlers with roots in Europe could not tie their origin narratives to the places where they lived and were taking over. Instead of being tied to the first creation of the landscape, therefore, the narratives of most 18th and 19th Century Euro-Americans explained and justified what Nye describes as "second creation" – the transformation of the land through the use of technology. In the United States after 1776, such technological alteration of the landscape was often depicted as both essential to the construction of the new nation and also as a preordained fulfillment of a divine plan. Nye cites numerous primary sources that represent rivers as waiting to be dammed, prairies as waiting to be farmed, and deserts waiting to be irrigated. For most 19th Century middle- and upper-class white Americans, the purpose of new technologies was not necessarily to overrun nature; but rather, to complete the design latent within it. The idea, propagated through technological foundation narratives, that "the landscape contained latent within it the rudiments of a grand design, which it was man's destiny to carry out" (154) thus justified the clearing of forests to create farmland in the Appalachians, the construction of dams and spillways to power textile mills in New England, the ceding of rights-of-way to railroad companies in the Great Plains, and the diversion of rivers for irrigation in the deserts of the Far West. Nye also makes very clear that such narratives extolling "the technological transformation of an untouched space" have also functioned to invalidate the claims of previous inhabitants to the land, be they Native Americans throughout the continent or Mexican-American farmers in the Southwest and California, and to justify the exploitation of "untapped" natural resources with scant regard for the presence of other species dependent on local ecosystems. Because the second creation technologies such as the mill and irrigation dams (Nye points out the clear message in the name 'Bureau of Reclamation') were seen as completing the design left unfinished in the first creation, each improvement justified the taking of land that had 'lain idle' (285). In Nye's words, "The axe, the mill, the canal, the railroad, and the irrigation project all provided new ways for Americans to make use of 'God's favors.' This was the teleology of second creation. The natural world as God had made it was the first creation; man's constructions were supplementary completions of the order that lay dormant within it" (154). He also traces the emergence of technological foundation stories to underlying beliefs in the inexhaustibility of natural resources, limitless access to increasing mastery of force, a laissez faire faith in the operation of a free economic market, and the availability of apparently neutral geometrical space on the new national survey grid.

Nye usefully points out that the reality of many second-creation technologies consistently failed to live up to the predictions of the narrative. Often optimistic, technological foundation narratives commonly emphasized the egalitarian ideals of many 19th Century Americans. For

example, the axe was to provide opportunity for poor and independent farmers, mills were to spur the development of egalitarian and prosperous rural towns, the canal and railroad were to tie the nation together and lower transportation costs, and irrigation systems were to spur small homesteading in the arid West. Nye demonstrates, however, that many of these technological advances concentrated economic and political power in the hands of wealthy capitalists. The construction of small, independent mills along rural watercourses was initially touted as a healthy alternative to the deplorable labor conditions in England's large textile factories, but in practice as mill owners consolidated their power they resorted to increasingly violent measures to break incipient labor movements. Similarly, another narrative of progress (often fueled by land speculators' promotional claims) predicted that Western railroads would bring prosperity and ease of transport to small towns along their lines, but Nye argues convincingly that railroad monopolies often engaged in price-gouging and manipulation of federal authorities in order to obtain cheap land, and that railroads transformed settlement by white farmers in the American West from an individualistic process to a centralized corporate practice.

The technological foundation stories that Nye describes were created mainly through the writing, speech, and art of wealthy, white Americans, and he endeavors to contrast these narratives of the powerful with other perspectives. Each chapter describing a second creation narrative is followed by a chapter describing counternarratives to the dominant view. These counternarratives often emerged simultaneously as people were being dispossessed of their lands and resources were being exploited, although because they were often based on very localized knowledge or transmitted orally, they were generally less unified than the main technological foundation narratives. The axe narrative was to some degree countered by scholars protesting massive deforestation of the landscape, labor advocates worked to end the exploitation of child and female labor in mills, railroads and canal companies were criticized as unjust monopolies, and writers protested the eviction of small farmers and the increasing toxicity of wetlands caused by massive irrigation projects in the West. Nye additionally shows how in some cases (public anger over railroad monopolies, pressure from environmental groups on the Bureau of Reclamation), counternarratives to technological creation stories succeeded in that they partially supplanted the dominant narrative of "progress".

It is in these counternarrative chapters that the reader finds one of the few weaker points of the book. Nye shows that both dominant and marginalized groups of people contributed to the emergence of counternarratives, but very few firsthand accounts from people in marginal social positions make their way into the text. Admittedly, such voices often go unrecorded and unpublished, but they are not nonexistent. Nye acknowledges the importance of millworker strikes and details several cases of the forcible eviction of Native Americans and Hispanic farmers from irrigable lands in the west, but the voices that appear in the text are mostly those of powerful people (Euro-American scholars, artists, and authors) who take these issues as their subject. Henry David Thoreau, Alfred Stieglitz, John Steinbeck, and Edward Hopper's works appear, among many others, but pamphlets printed by mill strikers or Native American poetry are not to be found. What Nye includes is useful and instructive, but incomplete in that it is limited only to what a talented researcher can find among the shelves of a library. He is a historian of texts, extremely well-versed in the classics of American literature and art, but the work could have benefited greatly from the inclusion of less traditional academic sources of knowledge, such as ethnographic accounts. Nye's book is a useful overall guide to the contested processes by which narratives about America's technological development were formed, but it should be read together with ethnographic and ethnohistorical accounts, and considered alongside traditions of Native American and Chicano artistic expression that respond to histories of dispossession and loss. Overall, however, it should be noted that within the traditional canons of American literature and art, Nye draws on an impressive range of media, including nonfiction, novels, film, paintings, photography, and even accounts of World's Fair exhibitions. This impressive breadth of sources greatly contributes to the engrossing nature of the text.

At the close of the book, Nye asserts that while second-creation narratives are no longer as dominant in the United States as they were in the 19th Century (as the reality of limited resources and the limitations of attempts at free markets became glaringly apparent), they are still very prevalent in the ways that Americans make sense of their history. Additionally, he argues convincingly that the theoretical underpinnings of second-creation stories still resonate in current American thought. Nye asserts that in the 20th Century, second-creation narratives have largely been replaced by the recovery narrative – the idea that land needs to be protected from corruption

and degradation to undo the damage of previous human misuse. This is also a technological narrative in that scientific management is used to restore the land to (or preserve it in) a more natural form, which can once again become useful as a renewable resource (the ghost of Gifford Pinchot as the US Forest Service) or as a wilderness (the ghost of John Muir as the Sierra Club). Yet even the concept of an “untouched” wilderness can be yet another way to deny Native American ties to the land (299) and to assert that human beings control the state and future of the natural world, just for a different kind of use than before. Envisioning people as outside the environment and manipulating it is common fundamental proposition in the ideologies of second creation, resource recovery, and wilderness, and Nye argues that all three facilitate thinking of “unprotected” land as a blank space ripe for human consumption. This provocative ending is a fitting close to a book that may inspire readers to reevaluate much of what they take for granted about American history.

***Ancient Maya Life in the Far West Bajo: Social and Environmental Change in the Wetlands of Belize.* By Julie K. Kunen. Anthropological Papers of the University of Arizona, no. 69. Tucson: The University of Arizona Press (2004), x, 174 pp.**

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Traditional archaeological studies of ancient Maya settlement patterns have historically incorporated questions regarding agricultural intensification and population density. For the first half of the 20th century, it was long assumed that the ancient Maya tilled the soil by the same slash-and-burn technique that is practiced today. At the height of Maya civilization (A.D. 550-800), however, population rose dramatically in the lowland tropical forests such that swidden agriculture, which requires extensive fallow field periods, could not have sustained such dense populations on the landscape. In recent years, scholars have dismissed these simplistic ethnographic analogies in favor of more rigorous field methods and advanced theoretical frameworks that examine how the ancient Maya supported a diverse society comprised of royalty, elite craftsmen, and commoners living together in an ecologically variable landscape. Kunen’s dissertation research, recently published in the Anthropological Papers of the University of Arizona as *Ancient Maya Life in the Far West Bajo*, contributes directly to this research agenda by examining wetland bajo farming communities who once thrived in the rural hinterlands of northwestern Belize. Not only does Kunen’s work show how these Maya farmers successfully adapted to a fluctuating environment, but she also forges new ground on the discourse of ancient Maya agriculture by offering insightful interpretations as to how these bajo farming communities integrated with larger political and economic systems of the La Milpa settlement in northwestern Belize.

Current interpretations of prehispanic Maya agricultural systems emphasize the geographic variability of land resources and the variety of adaptive farming strategies employed by Maya farmers. This model has been termed the “managed mosaic” approach to prehispanic Maya land use (Fedick 1996), but is based on concepts that have long been recognized and accepted by researchers studying Maya subsistence (Culbert, et al. 1978, Flannery and Coe 1968, Netting 1977, Turner 1978a, 1978b). This approach maintains that ancient Maya farmers took advantage of local-scale biological and environmental diversity by scattering their agricultural fields across these different landscape elements. Far from the classic view of the lowlands as a uniform and agriculturally limited landscape, the “managed mosaic” model depicts the Maya lowlands as a montage of landscapes that were perceived and managed in various ways across the region and through time, often in response to political and economic pressures. Kunen’s research uses this cross-sectional approach to examine the ecological and cultural variability of various microenvironmental zones surrounding the bajo settlements near La Milpa. Through transect and block surveys she describes topographic changes in modern bajo vegetation types and identifies several agricultural use zones of the prehistoric past. Additional fieldwork consists of mapping and recording nearly 700 agricultural features including terraces, berms and rock piles as well as