

The Dust Bowl: The Blame Game, the Facts, the Problem that Remains



*By Alvin O. Turner**

During November 2012 public television stations across the United States broadcasted Ken Burns's latest documentary, "The Dust Bowl." The film successfully portrayed the struggles of a generation of people on the Great Plains and how they and their government dealt with the disaster. Sadly, both attendant publicity and the documentary itself highlighted how "unwise land policies and farming practices" unleashed the "the greatest man-made ecological disaster in American history." Burns's assessment echoed that of a generation of varied state and federal officials, journalists, and historians, but there are major problems with that conclusion. It is disputed by many historians; it ignores evidence from archaeology and paleoclimatology; and associated ideas such as a "blame game" can prevent an accurate understanding of the past and lead to flawed public policy discussions and actions.¹

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Burns evidently believed his documentary would contribute to the contemporary debate about global warming.² That concern and attendant arguments, however, are based upon the interpretation of scientific data linking the effects of increased carbon dioxide in the world's atmosphere to current evidence for changing climate. In contrast, there is no comparable scientific evidence that supports a direct tie between agricultural practices and Dust Bowl conditions. There are apparent historical correlations, but their respective strengths and contributions to Dust Bowl causes have been debated among historians for decades. Moreover, historical correlations never meet the standard of scientific proof.

Burns's documentary ignores both historical and scientific arguments about Dust Bowl causes. It features a number of Dust Bowl survivors, plus three historians and a journalist who have written on the Dust Bowl. The historians include Pamela Riney-Kehrberg and R. Douglas Hurt, but their appearances are limited and they contribute little to development or support of the film's thesis. That burden is carried by the historian Donald Worster and the journalist Timothy Egan. Egan's *The Worst Hard Time* won the National Book Award for nonfiction in 2006 and undoubtedly drew more national attention to the Dust Bowl disaster than any published source after John Steinbeck's *Grapes of Wrath*. Nevertheless, the key to understanding Burn's film is found in Worster's *Dust Bowl: The Southern Plains in the 1930s*. This 1979 study was the seminal source for Egan's book and gives the best-known account of those events among historians. His interpretation of the physical causes of the Dust Bowl has been largely accepted by Great Plains historians since the book received the Bancroft Award, the highest award given within the history profession. Worster's book also is recognized as a principal contributor toward the emergence of American environmental history.³

Worster's thesis was that the environmental disaster he described was the "inevitable by-product of a culture that deliberately, self-consciously, set itself the task of dominating and exploiting the land for all it was worth."⁴ The resultant overexpansion of agriculture then triggered the Dust Bowl. That argument and much of the content of his book echoed the ideas of a generation of US government officials who promoted a set of ideas that historian Richard Lowitt would call "the official New Deal Gospel." This view identified the federal government as the principal agency creating programs to alleviate human suffering spawned by the dust storms and for creation of a new conservationist ethic. Accordingly, the US Department of Agriculture and other fed-

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Dr. H. H. Bennett, chief of the Soil Conservation Service, discussing the alfalfa seed harvest with O. W. Tucker on his farm near Kenton in Cimarron County, September 11, 1940 (9323, T. Bone McDonald Collection, OHS Research Division).

eral agencies promoted the spread of improved agricultural practices and implemented programs to limit agricultural production to market demand.⁵

This explanation of the past has dominated studies of the New Deal and few historians have challenged it. However, many textbook authors and those focused on topics beyond the borders of the Great Plains have downplayed or ignored the issue of physical causation when discussing the Dust Bowl. This was unacceptable to those such as Harry C. McDean, a disciple of Worster's. His 1986 article lamented the failure of most college history survey texts to "grasp even the most elementary facts about the dust bowl." For McDean, those facts were that the "Dust Bowl was not a natural disaster, it was a disaster caused by what people did to nature." He went on to criticize several "otherwise superior articles and books," among them Lowitt's, for their failure to reflect that evaluation in their works.⁶ That criticism would also

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seem to apply to Dust Bowl-related books such as Riney-Kehrberg's two books and my *Letters From the Dust Bowl*, which tend to concentrate on depictions of the era rather than explanations of causes.⁷

In contrast, Hurt's *The Dust Bowl* identified varied factors, such as soil character, drought, and the incessant wind along with technological improvements that facilitated the rapid breaking of Plains soil. These reasons and other qualities make it the most nuanced and objective account of the southern Plains in the 1930s.⁸ Yet, he concludes that "cumulative effects of drought, prairie fires, and overgrazing caused the dust storms of the nineteenth century while the exposure of cultivated lands to drought and wind caused those of the twentieth."⁹

A book published the same year as Worster's offered different challenges to the New Deal consensus. Paul Bonnifield's *The Dust Bowl: Men, Dirt and Depression* was written to demonstrate that "the people of the dust bowl were not defeated poverty ridden people without hope."¹⁰ He also stressed that the farmers were using the methods consistent with the agricultural science of their time. This included techniques such as "dusting" their fields, which meant leaving thin layers of dust atop plowed areas that they had been taught would serve as a kind of mulch to conserve water. Plains farmers were also the first to recognize the threat of wind erosion and to attempt adaptations to correct its devastation. The remainder of Bonnifield's arguments tended to support the earlier writings of Walter J. Stein, who had portrayed Dust Bowl refugees as the victims of federal government policies rather than beneficiaries.¹¹

In accord with his thesis, Bonnifield did not address the physical causes of the Dust Bowl. However, McDean discussed the book extensively and went on to conclude that Bonnifield would agree that the Dust Bowl was "created by people, not by drought and wind."¹² McDean was able to reach that conclusion only by ignoring the attention and evident credibility Bonnifield gave the writings of James C. Malin, describing numerous and varied dust storms in the nineteenth century. Many of these took place long before the great plow-up of the 1920s, with some occurrences before either ranching or farming had made significant inroads onto the Plains.¹³

Malin wrote extensively on Great Plains history and devoted much of his studies to dust storms and related issues. He was also one of the first historians to study ecology and especially was critical of those who defined the storms of the thirties as atypical or predictive of imminent desertification.¹⁴ McDean ignored Malin in his study, although he is cited by Hurt and Worster as well as Bonnifield. McDean's

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Photograph taken by the United States Department of Agriculture Soil Conservation Service of Sam Gillespie's "run-down" farmstead near Reydon, Roger Mills County, April 17, 1941 (10629, C. A. Tidwell Collection, OHS Research Division).

omission probably stemmed from his agreement with Worster's criticism of his fellow Kansas historian. Worster dismissed Malin's arguments because he believed them to be rooted in "intense ideological biases" and that he had "continued to rely on Adam Smith's unseen hand rather than the understanding of modern ecologists." In contrast Worster believed that history had proven that capitalism's "fierce, aggrandizing energy" would disrupt any state of balance or equilibrium.¹⁵

At first glance, Worster's disagreement with Malin about the causes of the Dust Bowl had some merit. Malin had asserted that the severity and frequency of dust storms in the nineteenth century pointed to climate rather than human action as the cause of both those storms and those of the 1930s. The problem with Malin's argument is that none of the nineteenth-century storms he documented were as prolonged or as widespread as those of the 1930s. His thesis gains credibility, however, when

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Photograph taken near Felt, Cimarron County, February 3, 1939 (9319, T. Bone McDonald Collection, OHS Research Division).

one looks to subsequent scientific understanding of regional drought cycles and to evidence from archaeology and paleoclimatology.

Both of the two major droughts of the twentieth century demonstrated signature characteristics of the El Niño Southern Oscillation (ENSO). This is a deterministic mechanism in the earth's climate system that affects Pacific Ocean temperatures, which then causes a shift in a region's seasonal climate from its long term mean. The effects of ENSO on the Great Plains produce cycles of extreme drought (La Niña) followed by periods with exceptional rainfall (El Niño). The ENSO signature was prominent in both the heavy rainfall ending Dust Bowl conditions in 1939 and record rains breaking a subsequent drought in the 1950s. The ENSO effect explains the prevalence of drought cycles on the Great Plains, but it does not define a link between drought and the kind of conditions that defined the Dust Bowl. Evidence for that correlation is found in abundant archaeological and scientific research that has documented a connection between droughts and dust cycles

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Boise City area, Cimarron County, May 22, 1939 (9318, T. Bone McDonald Collection, OHS Research Division).

in prehistoric periods, some of which dated to times with no significant human presence.¹⁶

Worster addressed this issue in his discussion of the work of Harry Weakly, who had constructed a drought calendar for Nebraska identifying four severe droughts in the fifteenth and sixteenth centuries, the shortest lasting fifteen years and the longest twenty-six. Worster acknowledged that such dry spells had undoubtedly killed crops and grasses “so that dirt was laid bare and began to blow, *though nowhere as severely as modern times* [emphasis added].” Weakly had stated otherwise. He thought it probable that the Plains had approached absolute desert conditions between 1539 and 1564 with great dust storms common and with resultant filling of canyons by wind-blown soil. His concluding words were even more telling: “Hence the destruction of native grass cover and the dust storms of the past few years do not

indicate a permanent change in the climate of this section, but more probably a recurrence of conditions that have prevailed before.”¹⁷

The strongest support for Weakly’s assessment of the data came from an analysis of the chemical composition of underlying dunes near Topeka, Kansas. These dunes were activated by a severe drought and corresponding reduction in vegetation cover between 500 and 1100 years ago. That period corresponds with megadroughts previously associated with the Nebraska sand hills, the Cimarron Valley, Duncan, and other Great Plains dune systems. Analyses of stream bed settlement in North Dakota by J. C. Clark of Duke University produced similar data. That study did not specifically address dune or other dust accumulations, but concluded that the Holocene period was characterized by decades of grass land productivity followed by decades of drought and erosion.¹⁸

Clark then led a multi-institutional study of prehistoric droughts in the Great Plains. His summation of the pattern he documented was that “the grass would disappear, so the fuel for fire would be lost. We’d see the erosion start. The chemistry of the lakes would change. We would see these *dust bowl effects* [emphasis added].” A subsequent study by Seth Munson and Jane Belknap of the United States Geological Survey reached an even more disturbing conclusion. Their findings “strongly suggest that sustained drought conditions across the Southwest will accelerate loss of grasses . . . and increases the likelihood of dust production on disturbed surfaces in the future.”¹⁹

Worster acknowledged that drought and wind were necessary for Dust Bowl conditions to develop but declared that “natural factors did not make the storms—they merely made them possible.”²⁰ Thus, he believed that human action remained the key to understanding their origin and persistence. That case rested on his correlations of data that pointed to a clear association between human action and dust storms. Other studies challenge both his data compilations and correlations.

Scientists tend to avoid pinpoint explanations about causes and effects, particularly when dealing with a subject as complex as climate. For instance, the most recent climatological studies of the National Oceanic and Atmospheric Administration’s Earth System Research library concluded that the Dust Bowl drought was caused by a series of random changes in the atmosphere. Another study suggested a link between sea temperatures (ENSO) that altered wind systems and triggered a drought leading to dying vegetation, parched soil, and dust. Yet another study accepted the basic historical conclusions about the role of agriculture in creating the dust storms of the 1930s, but stressed “complex interactions between humans and the environment.”²¹

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The characteristic qualifications of research conclusions by scientists, plus the contradictory evidence seen in paleoclimatology and other studies, partly explain why a scientific journal contains the strongest and most concerted attack on Worster's *Dust Bowl*. Stanley Wayne Trimble, a historical geographer, panned the twenty-fifth anniversary edition of the book in a review for *Aeolian Research* as "long on ideology and short on rigor . . . knowledge of environmental science and just basic fairness and common sense." Trimble's wide-ranging critique was rooted in his own research on soil erosion, but he seemed most concerned about other aspects of Worster's book. For example, he disputed Worster's chronology depicting the spread of radio shaping consumerism on the Plains. He then accused him of condescending and "mean spirited" attacks on farmers for aspiring to own such bourgeois items as stoves and refrigerators, which they mainly wanted because they were "duped by clever advertising."²²

For Trimble, Worster's arguments best could be understood in terms of a "vendetta against capitalism."²³ Other reviewers have also rejected Worster's emphasis on capitalism. Even McDean acknowledged that Worster may have exaggerated its impact and that these characteristics tended to compromise his work, carrying his message beyond the boundaries of his study. Certainly bourgeois pursuits do not describe the lives of the families in Riney-Kehrberg's books or my book based on the letters of Caroline Henderson.

Will and Caroline Henderson had built a new home and purchased a combine and truck only after working their land for more than twenty years. Their purchases have to be exaggerated beyond any reasonable definition to meet Worster's description of Plains farmers' "all out dedication to cash" that "replaced a rural economy aimed at sufficiency with one driving toward unlimited wealth." No one can read Caroline Henderson's letters without appreciating that the primary motivations for her efforts were her love of the land and her hope to build in accord with the Jeffersonian vision of the frontier. Further, I can think of no example from a study of more than four hundred Oklahoma memoirs, many dealing with the Dust Bowl era, that would support Worster's thesis.²⁴

Trimble also critiqued Worster's discussion of contrasts between Great Plains and European agriculture because it dealt mostly with northwestern Europe and ignored southern Europe, "where most soil washed away three millennia ago from poor land use." Further, agriculture in northwestern Europe could not be fairly contrasted with that in the United States because of climate, cultural, and economic differences. The evidence from eastern Europe created even more

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Home of Eula Forman, twenty miles west of Guthrie, March 1936 (9324, T. Bone McDonald Collection, OHS Research Division).

problems for Worster's analysis. For example, he omits any discussion of the environmental destruction in Russia and Ukraine during the same period the Dust Bowl was proceeding in the United States. Likewise, he ignored the catastrophic impact of Soviet agricultural policies on Germany and other countries later encompassed by the Iron Curtain, which were clearly not driven by capitalist forces. Worster does mention Premier Nikita Khrushchev's disastrous decision to mandate plowing of forty million acres of virgin land in Russia during the 1950s, but somehow attributes that decision to the power of the American example. Presumably, he did not mean the example of the Dust Bowl.²⁵

At times the force of Trimble's critique seemed to affect his own objectivity.²⁶ That failing may account for his erroneous charge that Worster had not addressed Malin's research on nineteenth-century storms. Yet, he goes on to defend Worster's most important conclusion that the "dust bowl was mainly induced by modern and often unwise agriculture." He added, however, an important qualifier: that the impact of those practices had been "exacerbated by an extreme drought." He then gives an even-handed discussion of challenges to the scope and rigor of Worster's research.²⁷

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Dust Bowl farm scene (21160.371014.12, Oklahoma Department of Transportation Collection, OHS Research Division).

Worster had clearly identified his use of a sample, but Trimble questioned his reliance on a case study approach that analyzed data from only 2 of the 280 counties encompassed in the Dust Bowl. That decision seemed questionable by most research standards, especially when larger data collections were available. The sample was at best a small one and “case studies with small samples fail most tests of rigor.” A far greater problem was Worster’s neglect of a number of sources that might have challenged or modified his conclusions. Among these were US census reports and varied studies conducted through the Climate and Physiographic Research Group under the aegis of the US Department of Agriculture. The most important of these were directed by C. Warren Thorthwaite and dealt with soil erosion in arid and semiarid regions of the United States in the years immediately following the Dust Bowl.²⁸

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Dust storm (21160.371014.10, Oklahoma Department of Transportation Collection, OHS Research Division).

Two articles and a book by Geoff Cunfer, a historical geographer, met Trimble's call for comprehensive and rigorous analysis of available data. Cunfer compiled relevant information from agricultural censuses, soil surveys, and reports from weather stations for all of the 280 counties in the Dust Bowl region. He then linked that data with geographic information systems (GIS) and created a set of maps that allowed him to depict broad geographical patterns. Together his data challenged both Worster's correlations and conclusions.²⁹

Unlike Trimble, Cunfer defended Worster's use of a limited sample as the foundation for his narrative because of practical limits affecting access and data compilation during the 1970s when Worster was researching and writing his book. Nevertheless, Cunfer asserted that Worster's use of such a small sample had contributed to his misunderstanding of larger patterns affecting development on the Great Plains. That misunderstanding arose first from Worster's focus on the Dust Bowl decade rather than the history that preceded and followed that event. Where Worster saw ecological failure and constant destabilization spawned by capitalism, Cunfer saw long-term stability, as had James Malin and Paul Bonnifield.³⁰

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Sunday afternoon dust storm near Boise City, April 15, 1935, photograph by the Associated Press (21171.10, Minneapolis Public Library Collection, OHS Research Division).

Cunfer's data challenged Worster's depiction of the dust cycles of the era as well, indicating that a majority of the Dust Bowl counties had less than half of their land under cultivation. Even more startling, the data compilations depicted in his maps indicate that much of the dust came from unplowed land. For Cunfer, this meant the better understanding of Dust Bowl conditions pointed to the impact of drought and heat rather than misuse of the land. He agreed that human activity could have tipped the balance to favor dust storms, but tended to see that influence as short-term and localized. For Cunfer, as those in the natural sciences, no single explanation could fully account for the complex and ambiguous relations between people and nature.³¹

Historians and geographers alike have had some quarrels with Cunfer's study and his conclusions. For instance, Trimble believed that he had relied too heavily on Malin's study of nineteenth-century storms. Great Plains historians Sterling Evans and Tom Isern defined

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methodological questions as well. Evans ultimately rejected Cunfer's conclusions, siding with Worster's analysis. Isern identified statistical problems stemming from use of gross cattle numbers given the varieties of cattle raising practices on the Plains. He also argued that statistics could not capture the full picture of soil or crop diversity or range conditions, "that there is no substitute for boots on the ground combined with sensitivity to local specifics." These and other concerns aside, Isern praised the "enormous accomplishment" of Cunfer's book for moving "the continuum of argument" from overriding concern with the role of human abuse of nature on the Plains to a recognition of complex causes.³²

The ambiguities surrounding issues of causes and effects become even more complicated when the 1950s drought on the Great Plains is considered. That decade, rather than the 1930s, produced the deepest drought in recorded history. Neither historians nor others have studied the 1950s event as deeply as the earlier one, partly because it did not produce extended Dust Bowl conditions. Yet, Plains farmers compared the conditions they faced with those that they had witnessed two decades before and saw more parallels than differences, while the *Daily Oklahoman* regularly reported limited visibility because of the dust in Oklahoma City.³³

A major drought began on portions of the Plains in 1948 and the dust began to blow two years later. Conditions worsened in the next few years, prompting emergency responses by individual farmers, associations, and federal programs. By 1954, 244 Texas counties had been declared disaster areas. President Dwight Eisenhower visited Woodward, Oklahoma, to survey drought damage in January 1957. Unlike President Roosevelt's tour of drought-stricken Texas in July 1938, Ike's visit was not blessed with immediate rainfall. That happy development and the end of the drought took place that spring with May 1957 producing the wettest year on record, a case study example of ENSO effects.³⁴

Conservation measures may have saved the farmers from the dust storms in the 1950s as Hurt, Trimble, and others have asserted, but the evidence for that conclusion is arguable. As Worster noted, many of the measures adopted in the 1930s had been abandoned within years of their implementation. Shelter belts were in rapid decline by the time of the Second World War, the beginning of a trend that would see their virtual disappearance from the Plains within decades. By 1945, wheat acreage under cultivation had expanded by 2.5 million acres in sixty-nine of the original Dust Bowl counties. Many, if not most, counties

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had more land under cultivation in 1950 than they had twenty years previously.³⁵

Despite these trends, many farmers had persisted in using the improved dry land farming techniques that had been developed in response to the Dust Bowl. Their commitment to changed practices probably helped to account for reduced dust during the 1950s drought, but the relative agricultural prosperity of that decade and the spread of irrigation were probably more important contributors to soil conservation. The USDA and other federal subsidies, along with \$2 wheat, preserved the farmers' ability to adapt to new conditions even as they increased incentives for corrective action. Similarly, prosperity meant that there was no massive abandonment of land as there had been in the 1930s, while the impoundment of water and irrigation ensured both adequate water for crops and preservation of the grass during the 1950s. By this time, large portions of the Plains were becoming what Donald Green called the "land of underground rain."³⁶

Except for some attention to the long-term implications of irrigation, what Worster called "the beginning of a bad idea," Ken Burns's documentary on the Dust Bowl largely ignores any evidence that contradicted the New Deal version of its causes and solutions. Sadly, that failure is antithetical to Burns's stated goal of looking at history from different perspectives and sharing the process of discovery. Where R. Douglas Hurt offered nuance, Burns offered the simplistic mantra of "the greatest man-made ecological disaster in American history."³⁷

His documentary disparages the nineteenth-century scientists and others who prophesied beneficial climate changes on the Plains and prescribed the agricultural practices employed by farmers, but apparently assumes farmers should have known better. For farmers, that would also have meant acting in contradiction to their own experience producing record crops during the boom years in the 1920s. And, where scientists and geographers documented millennia of droughts and dust storms defining multiple explanations for causes, Egan seemed at the verge of tears, placing the blame wholly at the feet of the farmers who had just "killed" the land.³⁸

The differences between the facts and the blame game, analysis and histrionics are much more important than the typical struggles among academics, or the flaws in a particular documentary. The stories we tell about ourselves help to define who we have been and our present perception of our nation. They may also circumscribe our consideration of past and present choices. Burns's *The Dust Bowl* offers a one-sided view of the past that depicts Great Plains settlers as greedy despoilers of the pristine wilderness they encountered. This declensionist narra-

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Farmer during the Dust Bowl (21160.371014.5, Oklahoma Department of Transportation Collection, OHS Research Division).

tive mirrors a larger one depicting the American frontier movement as exploitative and inherently destructive of both peoples and the environment. In turn, it represents one side of larger debates about the meaning of the frontier experience and the continuing place of the region in American life and economy.

The New Deal gospel promoted that version of the facts as well, most notably in the Pare Lorentz film *The Plow That Broke the Plains*. The film began with an Edenic scene of unbroken prairie extending as far as the eye could see. Soon, an invasion of plows destroyed that pristine landscape, replacing it with barren land and dust-filled skies. The documentary did not call for abandoning and returning much of the Plains to the public domain, as had Secretary of the Interior Harold Ickes, but its message was unmistakable: 40 million acres had been totally ruined and another 200 million acres had been seriously damaged by the plow. Both the film and its messages resonated powerfully with Congress and the general public alike, many of whom were

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USDA Soil Service photograph of an abandoned farmstead near Felt, Cimarron County, February 8, 1939 (9317, T. Bone McDonald Collection, OHS Research Division).

already predisposed to think of the Great Plains as a “great American desert.” Even Lorentz’s title had a ring to it, adding a special quality of its own. The film’s strengths were such that Plains people who resented its depiction of their region and experience still acknowledged its power.³⁹

Worster challenged Lorentz’s interpretation, insisting capitalism rather than the plow caused the Dust Bowl, but his book stands at the front of those applying the declensionist paradigm to the Great Plains. The overall qualities of his writing account for much of its continuing influence, but his thesis gained additional force from its association with the larger narrative that offers an integrated, coherent version of the national story that addresses regrettable aspects of American history. People, ways of life, and landscapes were destroyed by the impact of cultural practices and values carried by the pioneers.⁴⁰

One cannot write truthfully about American history without writing about such forces of destruction, but it is equally dishonest to deprecate the accomplishments and motives of individuals or groups in

doing so. The expansion of Plains agriculture undoubtedly contributed to environmental problems in the region. It also helped to ensure that there would be an adequate supply of food for a growing world for the first time in the history of humankind. The natural resources the pioneers made available, and even their stories, have enriched the nation beyond measure.

There were certainly individuals and groups who promoted the opening of the Plains for reasons that could be seen as capitalism run amok, but that story does not fit the vast majority of settlers on the Plains and prior frontiers. At times, the declensionist narrative distorts that truth about the past. Sometimes the untruths disseminated are little better than lies; at other times they approach silliness. The purported greed motivating the expansion of Plains agriculture is a case in point. At what point did the farmers' pursuits supposedly reach that standard? What evidence compels the conclusion that the settlers went out to dominate the land rather than pursue a living for themselves and their families?

Such questions and related concerns prompted one nonacademic correspondent to write that he believed Burns had presented only a partial and one-sided view of the past, leaving the "impression that the settlers in the drought area were either ignorant, greedy or both." The Western writer Elmer Kelton echoed my friend's concerns in a reflective piece on "Grandfather's Greed." He acknowledged the historic problems spawned by farmers and ranchers, but then wrote, "It was not greed that caused most of their forbears' mistakes. . . . They were doing the best they knew how, and trying to survive."⁴¹

Kelton then referenced a book caption that captured the inherent irony in blaming the farmers' greed for the Dust Bowl. The caption read, "It wasn't the plow that broke the plains. It was greedy ignorant farmers who in less than fifty years turned 97 million acres of the richest soil on the planet into a great Dust Bowl. . . ." The caption was juxtaposed with the famous Arthur Rothstein photograph showing Art Coble and his two sons fleeing a dust storm to what Kelton called their "miserable frame shack."⁴²

Both Timothy Egan's *The Worst Hard Time* and his comments in the documentary further define the extremes of hyperbole and blame typical of declensionist views about the Great Plains. *The New York Times* praised the book, but lamented his tendency toward "redundant outrage," and slipping from "inventive wonder-filled descriptions of the landscape to pure bluster."⁴³ That trait was seen again in his claim that the farmers "killed" the Plains. If so, the next generation witnessed a remarkable resurrection; in 1942 Great Plains farmers produced more

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wheat from significantly less acreage than they had for the previous record year of 1931.⁴⁴

The declensionist paradigm also leads to prescribed solutions with little apparent consideration of cost or other practicalities. Thus, Ickes could speak seriously of removing tens of millions of people to undetermined locations for even more vague destinies. A comparable example is found in Paul Sears's *Deserts on the March*, which Worster called the "most important popular ecological work of the day." Sears called for colleges and universities to respond to the need for trained ecologists to serve every community, even as he acknowledged the limits of science and governmental action.⁴⁵

Worster's response to the potential for science-based or governmental action is even more ambiguous. On the one hand, he blames federal programs for providing the incentives that triggered the first stages of the great plow-up leading to the Dust Bowl. On the other, he credits some New Deal programs for alleviating suffering during the Dust Bowl and promoting corrective actions based on new understandings of dry land farming. It would be difficult to disagree with the rough outline of those assessments, but neither the New Deal narrative nor Burns's documentary handle ambiguity well, even when related facts are acknowledged.

Whether intended or not, the documentary implies that the New Deal cure worked; the problem had been cured. The film dramatizes that belief with footage showing the rain that attended President Roosevelt's second visit to the drought-ravaged Plains in 1938. That happy note is followed by Worster resounding the guilt theme, lamenting the farmers' failure to admit they had caused the problems in the first place and to adopt the plowing techniques advocated by Howard Finnell. He does not explain how or what their acknowledgment of guilt would have contributed to a solution. Neither does he define what he would consider a reasonable time delay between Finnell's reports of his experiments and widespread implementation. The Department of Agriculture's *Yearbook of Agriculture* had been slow to offer any advice to the farmers, largely ignoring the topic of soil erosion until 1937 when the 1936 yearbook would have reached farmers. Despite that gap, many farmers, such as the Hendersons, had changed their methods in cooperation with field agents.⁴⁶

In short, the story told by *The Dust Bowl* distorted a complex problem and blamed those who were, at worst, following the best advice available to them. Despite the film's sympathetic portrayal of the suffering and courage of the people of the Dust Bowl, its most powerful and pervasive message was that they had brought it on themselves. That

is not a fair representation of all of the data, neither does it foster understanding of the complexities of individual and group action or of the environment and other problems they encountered on the Great Plains.

As troubling as these concerns may be to historians, they may have much worse effect on meaningful responses to present and future problems confronting the Great Plains. Related aspects of public policy affecting agriculture, energy, and even national defense are affected as well. That charge points to two primary concerns: the film's questionable definition of the major problem affecting the region, and its reliance on a declensionist narrative. The first concern may be stated succinctly: there may be another Dust Bowl, future droughts are certain. We may or may not be at the beginning of a major drought presently, but there will be others in the future. Some of those are likely to exceed major historical and even prehistoric drought cycles. Drought is the problem that remains.

Present conservation efforts could ameliorate future Dust Bowl conditions, but current public policy and agricultural practices virtually ensure a future water crisis. There is widespread recognition on the Great Plains that what John Opie called "the golden age of irrigation is ending." Almost twenty years ago, the US Geological Survey documented the rapid decline of the Ogallala Aquifer, the principal source of irrigation on the Plains. By 1995 one-third of the aquifer had been drained, with only another third accessible for future use because of unsuitable quality or depth in the remainder. Individual farmers and water districts responded accordingly, but Opie would also write of a "blitzkrieg" of usage triggered by interests seeking to exploit the limited resources still available.⁴⁷

Despite the kind of opportunism that could confirm Worster's concerns about the impact of capitalism, the draw down of water from the aquifer had actually decreased by about 50 percent by 2000. Then federal actions accelerated a dramatic increase in irrigated farming of corn which typically requires at least two times as much water as wheat. The federal incentive for that action came in the form of subsidies for ethanol manufacture from corn, which spurred an increase in corn production from 9.92 billion bushels in 2000 to 12.45 billion bushels ten years later. Even with the end of those policies that effectively result in reducing the aquifer to subsidize transportation costs, and continuing conservation efforts in many areas, one authority estimates the Ogallala will be depleted by 2030 on much of the Great Plains. A related study projects that fifty-two of Oklahoma's seventy-seven counties will have high or extreme water management problems by 2050 if global warming persists.⁴⁸

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The potential disaster those facts portend could result in precisely the kind of desertification projected by Worster, Sears, Burns, and others. But there is also the possibility for another story when societies look beyond the blame game. As William Cronon has noted, the declensionist narrative follows the conventions of a story that has its beginning in a pristine wilderness and points toward a dramatic and ugly conclusion. Cronon identifies a counternarrative associated with Frederick Jackson Turner, Walter Prescott Webb, and others whose story line begins with wilderness and culminates in the spread of civilization and effective utilization of resources, if not conquest of the land. He cites Worster and Bonnifield as the principal examples of writers who used those different frameworks for understanding of the Dust Bowl.⁴⁹

Cronon notes correctly that history may very well be confined to narratives, but there is no requirement that it follow a teleology or that it be tidy; history rarely if ever fits into neatly packaged paradigms. Humans do not live lives that follow straightforward trajectories and groups are even less orderly, taking two steps forward and sometimes three backward before correcting. Civilizations rise, fall, and stagnate. Almost certainly, today's heralded reform will require remediation, if not reversal.

Another way of defining this dilemma is found in the oft quoted dictum that one should not want to watch the making of either sausage or of laws. In fact, much of the content of history is about the making of laws, how they come into being, how they affect populations, how they fail, and how they succeed. Much of the remainder of our collective story corresponds to the making of sausage with its admixture of pieces and messy results. Such a version of the Dust Bowl story would discuss a deep, prolonged drought and overexpansion of agriculture, often with methods that were later proven inappropriate to the climate and soil. It would include an understanding of how the Great Depression increased the impact of those forces on the Plains.

It would incorporate both Malin-Bonnifield's and Worster's data, along with that provided by paleontologists, scientists, and Cunfer. It would agree with Richard Etulain that the Dust Bowl resulted from "exceptional climate change *and* profound human error [emphasis added]."⁵⁰ It would depict people working together; how their state, local, and federal governments assisted them even as it documented the resistance of individuals and groups; and the actions of wrong-headed leaders and opportunists as well as the sadly mistaken. It would remind the present that not only were our collective grandfathers greedy, but they were also people struggling to feed families and

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Two boys from the Chilocco Indian School operate the bostrun level, a standard piece of soil conservation equipment, 1955 (19050a, Florence Correll Collection, OHS Research Division).

provide a future for their descendants. They loved the land and took pride in wearing out farms. They were stupid, courageous, builders, destroyers; in short, flawed human beings as all are.

That kind of history would be true to the complexity of individual and collective stories and their environments. It would affirm that people have somehow managed to make meaningful, even painful choices in the past. That narrative could point to the path toward beneficial responses to present and future crises of the kind faced by the Great Plains and by humans in every time and place. In contrast, the blame game lends itself to guilt and hopelessness or an unwarranted confidence in some panacea. Messy history creates its own problems, but it also offers a kind of sausage, adding the spicy flavor of truth to our understanding, and food for thought and action.

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Ken Burns had the opportunity to add to understanding of the history and future of a region that could have served as the foundation for addressing the problem that remains: the certainty of future droughts. He offered instead a well-constructed but deeply flawed interpretation, well-prepared and well-presented but unpalatable. His documentary needed a lot less blame and much more sausage.

Endnotes

* Alvin O. Turner is emeritus dean of humanities and social sciences and professor of history at East Central University. He acknowledges the assistance of Drs. Kevin Davis, Davis Joyce, John Krause, and Don Wyckoff, who each contributed to aspects of this article.

¹ *The Week*, November 16, 2012, 13; *Oklahoman*, November 18, 2012; Ken Burns, *The Dust Bowl*, Parts I and II, aired on PBS November 18 and 19, 2012.

² Email from Gerry Grimes to author, December 24, 2012, author's files. My friend Gerry Grimes, who is not a historian, first called my attention to the evidence for Burns's connection of the two issues. Grimes's points were later echoed by Dr. Bob Blackburn and others who heard an earlier version of this paper at the annual meeting of the Oklahoma Historical Society, April 17, 2013.

³ Donald Worster, *Dust Bowl: The Southern Plains in the 1930s*, 25th anniversary edition (New York: Oxford University Press, 2004); Timothy Egan, *The Worst Hard Time* (Boston: Houghton-Mifflin, 2006); John Steinbeck, *The Grapes of Wrath* (New York: Viking, 1939).

⁴ Donald Worster, *Dust Bowl*, 5, 184-87.

⁵ Richard Lowitt, *The New Deal and the West* (Norman: University of Oklahoma Press, 2003), 42-46; Harry C. McDean, "Dust Bowl Historiography," *Great Plains Quarterly* (spring 1986): 118-20, 124, accessed March 4, 2013, <http://digitalcommons.unl.edu/greatplainsquarterly>.

⁶ McDean, "Dust Bowl Historiography," 118-24.

⁷ Pamela Riney-Kehrberg, *Waiting on the Bounty: The Dust Bowl Diary of Mary Knackstead Dyck* (Iowa City: University of Iowa Press, 1999); Pamela Riney-Kehrberg, *Rooted in Dust* (Lawrence: University of Kansas Press, 2007); Alvin O. Turner, ed., *Letters From the Dust Bowl* (Norman: University of Oklahoma Press, 2001).

⁸ R. Douglas Hurt, *The Dust Bowl: An Agricultural and Social History* (Chicago: Nelson-Hall, 1981), 30, 154; McDean, "Dust Bowl Historiography," 123-24.

⁹ Hurt, *The Dust Bowl*, 156.

¹⁰ Paul Bonnifield, *The Dust Bowl: Men, Dirt and Depression* (Albuquerque: University of New Mexico Press, 1979), 201; Danney Gobel, "The Great Depression," in Charles Robert Goins and Danney Gobel, *Historical Atlas of Oklahoma* (Norman: University of Oklahoma Press, 2005), 180.

¹¹ Bonnifield, *The Dust Bowl*, 13-19, 44-46. Bonnifield continued to stress his belief in the farmers' reliance on the best available information in response to a phone call from the author, January 10, 2013. Walter J. Stein, *California and the Dust Bowl Migration* (Westport, CT: Greenwood Press, 1973).

¹² McDean, "Dust Bowl Historiography," 120.

¹³ *Ibid.*, 121; Bonnifield, *The Dust Bowl*, 13-18.

¹⁴ James C. Malin, *The Grasslands of North America: Prologomena to its History with Addenda* (Lawrence: n.p., 1961); James C. Malin, "Dust Storms Are Normal," *University of Kansas Alumni Magazine* 52 (March 1954): 4-5, 54; James C. Malin, "Dust Storms," Parts I, II and III in *Kansas State Historical Quarterly* 14, (May, August, and November, 1946).

¹⁵ Worster, *Dust Bowl*, 240-41.

¹⁶ John Krause, phone conversation and email with the author, March 24, 2013; John Krause of the Cooperative Institute for Mesoscale Meteorological Studies in the National Weather Center at the University of Oklahoma indicated that there is no other meteorological explanation for the droughts described in this paper. "Global Consequences of El Niño," accessed March 25, 2013, http://www.pmel.noaa.gov/tao/el_nino/impacts.html; "El Niño is Back but What Does it Mean?" accessed March 25, 2013, <http://kocoweatherblog.wordpress.com/200907/09/el-nino-is-back-but-what-does-that-mean/>.

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¹⁷ Worster, *Dust Bowl*, 75; Harry E. Weakly, "A Tree-Ring Record of Precipitation in Western Nebraska," *Journal of Forestry* 41 (January 1943): 819.

¹⁸ P. R. Hanson, A. F. Arbogast, et al., "Megadroughts and late Holocene dune activation at the eastern margin of the Great Plains, north-central Kansas, USA," accessed March 24, 2013, www.msu.edu/faculty/arbogast/documents (this is an undated net version of a 2009 publication in *Aeolian Research*); J. S. Clark, E. C. Grimm, et al., "Drought Cycles and Landscape Responses To Past Aridity On Prairies Of The North American Great Plains, USA," *Ecology* 85, no. 3 (2002): 595-601; Connie Woodhouse, "Droughts of the Past, Implications for the Future?" in Sherry L. Smith, ed., *The Future of the Southern Plains* (Norman: University of Oklahoma Press, 2003), 95-114.

¹⁹ Monte Basgall, Duke University News Release, August 2, 2004, accessed March 24, 2013, www.sciencedaily.com/releases/2011/02/110; United States Geological Survey, "Drier Conditions Accelerate Dust Storms in the Southwest," February 24, 2011, accessed March 24, 2013, www.sciencedaily.com/releases/2011/02/110.

²⁰ Worster, *Dust Bowl*, 13.

²¹ "Predicting Droughts with Greater Certainty," March 26, 2013, sciences.org/articles.php?article_id=5297; B. I. Cook, R. L. Miller, and R. Seager, "Dust and sea temperature forcing of the 1930s 'Dust Bowl' drought," *Geophysical Research Letters* 35, Lo8710. doi:10.1029/2008GL033486.PDF; *Sunday Oklahoman*, October 18, 2009, 12A.

²² Stanley Wayne Trimble, "Donald Worster's Dust Bowl," *Aeolian Research* 2, no. 1 (June 2010): 1-4.

²³ *Ibid.*; McDean, "Dust Bowl Historiography," 22.

²⁴ Worster, *Dust Bowl*, 4-7, 96; Alvin O. Turner, "Vanity, Vanity, . . . Thy Name is History," *The Chronicles of Oklahoma* 63, no. 2 (Summer 1985); "Probing the Soul of Oklahoma" for Let's Talk About it Oklahoma, Oklahoma Department of Libraries reading series, 1995, author's files; "Oklahoma Non-elite Autobiographies and Diaries: History from the Inside Out," Mid-America Historical Association, 1997; The author presently has more than 250 of these sources annotated for eventual location in a research file at the Oklahoma Historical Society and/or a web page; Turner, *Letters From the Dust Bowl*, 99-100; Worster, *Dust Bowl*, 96.

²⁵ Trimble, "Donald Worster's Dust Bowl," 1-2; Worster, *Dust Bowl*, 7.

²⁶ The strident tone was pervasive enough that I checked both his academic vita and the standing of *Aeolian Research*.

²⁷ Trimble, "Donald Worster's Dust Bowl," 1, 3.

²⁸ *Ibid.*, 1.

²⁹ Geoff Cunfer, "Causes of the Dust Bowl," in Anne Kelly Knowles, *Past Time, Past Place, GIS for History* (ESRI Press, 2002): 93-104.

³⁰ Geoff Cunfer, *On The Great Plains: Agriculture and Environment* (College Station: Texas A&M Press, 2005), 9-10.

³¹ Geoff Cunfer, "Scaling the Dust Bowl," in Anne Kelley Knowles, *Placing History: How Maps, Spatial Data and GIS Are Changing History* (ESRI Press, 2008), 98- 108, 117.

³² Trimble, "Donald Worster's Dust Bowl," 1; Thomas D. Isern, review of *On the Great Plains*, by Geoff Cunfer, *Journal of Interdisciplinary History* 38, no. 2 (Autumn 2007): 308-09; Evans shared his concerns in a series of discussions with me during February and March 2013.

³³ Hurt, *The Dust Bowl*, 140-46; *Daily Oklahoman*, December 30, 1956, and January 12, and 15, 1957.

³⁴ *Daily Oklahoman*, December 30, 1956, and January 12, and 15, 1957; Burns, *The Dust Bowl*, Part II; http://climate.ok.gov/index.php/climate/weather_timeline/1950_1959.

³⁵ In fall 2012 I toured western Oklahoma looking for shelter belts and only found one that retained the character and size of the original wind breaks; Hurt, *The Dust Bowl*, 137; Worster, *Dust Bowl*, 224-27.

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³⁶ Worster, *Dust Bowl*, 224-27; Hurt, *The Dust Bowl*, 153-154; John Opie, "A Tale of Two Water Management Districts," in Sherry Smith, ed., *The Future of the Southern Plains* (Norman: University of Oklahoma Press, 2003), 136-39; Donald E. Green, *Land of the Underground Rain* (Austin: University of Texas Press, 1973).

³⁷ Burns, *The Dust Bowl*, Part II.

³⁸ *Ibid*; Ken Burns, interview broadcast on OETA, November 13, 2012.

³⁹ Isern, review of *On the Great Plains*, 308-09; Cunfer, *On the Great Plains*, 9-10; Brad Lookingbill, *Dust Bowl USA: Depression American and the Ecological Imagination* (Athens: University of Ohio Press, 2001), 4; Reports from the Stephen Long expeditions of the early nineteenth century first applied that term to the Great Plains. David Moon's recent book, *The Plough that Broke the Steppes* (Oxford: Oxford University Press, 2013) illustrates the power of Lorentz's title. Moon's book was not available at the time of this writing.

⁴⁰ Worster, *Dust Bowl*, 96.

⁴¹ Gerry Grimes, email correspondence with the author, December 24, 2012, author's files; Elmer Kelton, "Grandad's Guilt," *Montana: The Magazine of Western History* 44, no. 3 (Summer 1994): 61.

⁴² Kelton, "Grandad's Guilt"; the photo and caption appeared in the "Wild West" issue of *Life*, April 5, 1993.

⁴³ *New York Times*, February 24, 2011; Worster, *Dust Bowl*, 225.

⁴⁴ Worster, *Dust Bowl*, 200; Paul Sears, *Deserts on the March* (Norman: University of Oklahoma Press, 1935), 160-67.

⁴⁵ Burns, *The Dust Bowl*, Part II.

⁴⁶ Bonnifield, *The Dust Bowl*, 42; US Department of Agriculture, *1936 Yearbook of Agriculture* (Washington, DC: Government Printing Office, 1937), 18-19, 59-61.

⁴⁷ United States Geological Survey, US Department of the Interior "Fact Sheet FS-215-95," 1995, accessed April 8, 2013, http://water.usgs.gov/wid/FS_215-95/FS_215-95.html; John Opie, "A Tale of Two Water Management Districts," 120-21; John Opie, *Ogallala: Water for a Dry Land*, second expanded edition (Lincoln: University of Nebraska Press, 2000), 258-59, 324-26.

⁴⁸ Opie, *Ogallala*; Wil S. Hylton, "Broken Heartland," *Harper's Magazine*, July 2012, 28-29; accessed April 8, 2013, http://www.ethanol.org/pdf/contentmgmt/ACEFact_Sheet3_The_Expansion_of_Ethanol_Production_and_the_Nations_Corn_Supply.pdf.

⁴⁹ William Cronon, "A Place For Stories: Nature, History and Narrative," *Journal of American History* 74, no. 4 (March, 1992): 1347-75.

⁵⁰ Richard Etulain, *Beyond the Missouri* (Albuquerque: University of New Mexico Press, 2006), 321.