## The Dust Bowl: Combining art, literature and science

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 $oldsymbol{T}$ his issue of The Southwest Respiratory and Critical Care Chronicles has focused on the Dust Bowl era. Thomas Gill's article on the science of dust is a concise guide for health care providers about the structure, properties, and movement of dust.1 There is a very nice figure illustrating how dirt on the ground becomes a dust cloud or storm. This primer is essential to understanding dust storms, but numbers cannot convey the enormity of this human tragedy. Art, whether realism or caricature, uses symbols for emotions to give viewers a visceral feel for a physical event; these symbols provide a shared frame of reference for understanding the event. The painting by Alexander Hogue, Drought Survivors, conveys human suffering which cannot be fathomed by statistics on how many storms covered how much geographic area and affected how many people.2 Contrast this painting and the emotion that it evokes with a photograph of a dust storm<sup>3</sup> which provides a realistic sense of a force of nature using houses as a pathologist's ruler. Literature and film present the effects of Dust Storms on people by telling stories about recognizable individuals and families to which the reader or viewer can easily relate.3 By examining the topic of the Dust Bowl through all these lenses, we get a more humanly complete picture than we would have by a table of the size and velocity of every particle within a dust storm even though the table would be scientifically comprehensive. Art distills the scientific information so that it can be absorbed by human minds using sensory perception, emotions, and cognition.

The purpose of this endeavor is to understand the depth of the tragedy so that we do not repeat it. The science informs us what we must do to avoid repeating the same mistakes. The art and literature tell us why we

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must not repeat the same mistakes, no matter how much we are tempted to do so. The primary cause of the dust bowl was over farming. Why did the farmers systematically make the mistake of over farming? Governments caused natural shortages through the deprivations during World War I. The U.S. government guaranteed the high prices as an incentive for farmers to cultivate more land. Cultivate they did, increasing the number of acres for wheat production by 70% from 1917-1919.4 The recently formed Federal Reserve compounded the problem by making credit artificially cheap, encouraging farmers to expand their farms and to buy new equipment thinking the high prices would be forever. The crash in crop prices caused by the glut produced under the price guarantees would have bankrupted the farmers even without the problems of the Dust Bowl. The dust storms resulting from plowing land that should have been left as grass prairie compounded the misery. Financial bust always follows the credit induced booms.

Rather than eliminating the financial incentives to over farm, the U.S. government created additional incentives to not farm. These payments to do nothing are given the lofty title of Conservation Reserve Program. More recently, the U.S. government decided to combat Global Warming by encouraging ethanol production from corn. The ethanol subsidies were enough to encourage farmers to forgo their subsidy to not farm and, once again, plow the prairie grasslands.<sup>4</sup> If enough prairie land is cultivated, the predictable result will be another Dust Bowl. As Santayana famously said, "Those who cannot remember the past are condemned to repeat it."

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