Gradually, then suddenly

Racism, climate denial, and coronavirus disease 2019 (COVID-19) are major crises standing in the way of a prosperous future for the United States, and resolution of all three could be enabled by science that is persistently ignored. In Ernest Hemingway’s novel *The Sun Also Rises*, a character named Mike is asked how he went bankrupt. “Two ways,” he answers. “Gradually, then suddenly.” The resistance of U.S. policy to science has followed a similar path: It gradually built up over 40 years, beginning with the election of Ronald Reagan, but suddenly reached a tipping point in the chaos of 2020. Will the path to resolution also be gradual and then sudden, and if so, at what cost?

A saying incorrectly attributed to Winston Churchill holds that Americans always do the right thing but only after all other possibilities have been exhausted. Whatever the source, the idea lives on because it resonates and is no more apparent than in the failure of the United States to aggressively deal with 400 years of racial injustice. Slavery ended, but only after a civil war and decades of delay. The civil rights movement created important positive change, but only after civil rights leaders Dr. Martin Luther King Jr. and John Lewis boxed in President Lyndon Johnson so that he had little choice but to champion legislation or be associated by history with staunch segregationist George Wallace. Will people of color in the United States have to endure yet more violence from white supremacists before the next inflection toward racial justice?

As for confronting climate change, the prospects seem distant. Support for climate science has been steadily undermined by politicians catering to businesses dependent on fossil fuels and by religious conservatives suspicious of science because it argues for evolution. When California’s Secretary for Natural Resources Wade Crowfoot challenged President Donald Trump on climate change, the president laughed and said, “I don’t think science knows, actually.” Perhaps Trump knew he was saying something untrue but that many Americans agree with. Will wholesale environmental destruction have to occur before the United States does something about climate change?

When it comes to COVID-19, White House Chief of Staff Mark Meadows admitted, “We’re not going to control the pandemic,” making clear that Trump’s only strategy is to wait for therapeutics and vaccines to soften the blow. Although prospects for both look promising, we are months, if not a year, away from reasonable supplies of either. In the same interview, Meadows said that we would defeat the virus “because we’re Americans.” Such nationalistic exceptionalism is embarrassing. The virus doesn’t “know” who is an American. Must hundreds of thousands more people die before the United States recognizes that humility in the face of challenge is the way to save lives?

Now that so many possibilities have been tried and exhausted, can science help push the country toward resolving these issues? Science must deal with the systemic racism that persists in our enterprise. There are scientifically sound measures that could promote greater racial justice in America, but the scientific community is in no position to advocate for racial justice if its own house is not in order, and that requires difficult soul-searching about the underrepresentation of racial and ethnic groups as well as norms and practices of science that are not inclusive. Scientists must continue to speak out. Skepticism of the peril of COVID-19 has brought forth the response of science in ways never before seen. Scientists must hold on to that voice once the world gets past the pandemic. The old ideal of keeping politics out of science has not served the United States well. And scientists must continue to do the best science. Eventually, society will ask for help. Let’s make sure science has the goods when they do.

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