

You don't need me to tell you how unusual this primary season has been. Every day, more news sites offer more commentary seeking to explain how American politics reached its current, seemingly surreal state.

But here at 13.7, our goal is to offer commentary on places where science and culture intersect. From that perspective, one key aspect of this season's political upheaval can be traced back a decade or more. That aspect is "reality," or at least the part we're all supposed to agree on.

Over the past five years, I've written many times about the rising tide of science denial in this country and the dangers it poses. As last year's spread of measles at Disneyland demonstrated, denying real facts has consequences in the real world. Viruses don't care whom you vote for or what Facebook groups you join. And the facts about viruses — the "what-should-we-do-now" kinds of facts — are best revealed through science. That is why, as a nation, we give it value. When the methods of science are pursued as intended, what is returned is public knowledge. This knowledge, composed of facts and an understanding of their limits, are critical for a functioning democracy. The founders of the American experiment in self-government understood the urgency of public knowledge. It's why they held science in such high regard. It was, for them, the principle means of establishing the background needed for our public life, a background composed of a shared reality.

Unfortunately, over the past 10 years, we have seen the viability of public knowledge eroding in the public sphere for all the wrong reasons. More than anything else, the pressure driving this erosion can be summed up in two words: climate change.

Before we go any further, it is crucial to note that the Republican Party was, for decades, a champion of the U.S. scientific effort. Republican presidents created NASA, NOAA and the EPA. These lawmakers understood how science served as the engine of national security, stability and economic vitality.

Then came climate change.

On this issue, the Republicans did not start out uniformly denying global warming was a problem. For a time, there was consideration over proper responses from all players. But over the past 16 years, one half of the American political establishment came to be aligned with what can only be called denialist positions. Time and time again, the nation's premier scientific organizations (NASA, NOAA the AAAS) issued unequivocal statements about climate change and the threat it posed. Even the military weighed in, as it understands the destabilizing global threat climate change poses. And yet, over and over again, Congressional leaders have rejected the authority of these sources.

It can be argued that the denial of climate change is simply part of a longer trend in turning away from science. For example, the battle of evolution and creationism has a long history in this country. And, in many ways, the forces seeking to cast doubt on climate science took a page from the playbook of creationism in their choice of tactics. But the debate over evolution has never had the scope or the reach of what has happened with climate. In particular, we have never seen the kind of wholesale political attack on a science (particularly a physical science) that has come with the climate debate.

In the decades that followed World War II, politicians understood the ways in which science contributed to the national good. There was an implicit agreement that science should be left to determine its results, and the role of policymakers was to absorb those results within their own policy debates.

But that agreement was broken with climate science. An entire field of research whose results have dizzying implications has been rejected as a whole. The work of thousands of researchers spanning decades is claimed to be wrong or, worse yet, a hoax. And, unlike the debate over evolution, the claim is made at the highest levels and seems to span the whole of a political party. This is something new in our history.

Our ability to deal with climate change has clearly been adversely affected by this rejection of scientific endeavor. But facing into the winds of this strange primary season, we can see how this denial yielded other consequences, too.

If the point of science is to provide us with a method for establishing public knowledge, then its rejection is also the rejection that such public knowledge is possible. If we hold science in esteem because it represents a best practice for establishing shared facts that hold regardless of ethic, religious or political background, then denying science means denying the possibility of such facts. It implies there can be no means for establishing facts about the world and no reason to award authority to mechanisms that deliver those facts.

This wholesale rejection of a shared reality was always the great danger lying in organized, politicized climate science denial. After all, why stop with climate science? Once you get started down this road, who or what determines that it's gone too far?

When the current president was elected, a new variety of conspiracy theory emerged called birtherism. It held that the president was not a U.S. citizen, as demanded by the Constitution, and was therefore holding power illegally. The release of the president's long-form birth certificate did not end the theory. In 2011, a CNN poll "showed that roughly 25 percent of Americans — including over four in 10 Republicans — believe Obama was definitely or probably not born in the United States."

The birther movement certainly can be seen as just another conspiracy theory living in the same fog-shrouded realm as Kennedy assassination plots and claims that the moon landing was a hoax. But the current political season shows us something more. In it we can see how much the landscape of shared reality has been fractured.

American politics has, of course, always had its conspiracy theories and its fringes on the left and the right. And it was always the role of good leadership to act as the adult in the room and maintain the sanctity of our shared realities. John McCain embodied this role when he famously corrected a voter claiming Obama was an Arab.

But as of today, the front-runner in the Republican primary is a man who repeatedly fanned the birther fire. In past elections, it would have been unthinkable for a candidate who held views so at odds with the shared reality of public documents and their veracity to be taken seriously.

Not this time around, however.

For many people in both parties, to find ourselves in this situation seems incredible and more than a little unreal. But that is the point. As a scientist, I've been watching with dismay how reality, as delivered by science at least, has fared in politics. To me, the slide into the gray zone where all facts about the world are up for grabs is the logical consequence of organized science denial.

Without doubt, politics will always be about more than facts. The advocacy for different policy choices can have as much resonance with personal values as it can with numbers established through science or other mechanisms. There can — and should — be vigorous debate about how our values shape public policy from immigration to economics.

But that debate has to be couched within a landscape whose contours are shared as public knowledge. The active, organized denial of climate change science opened the doors to a very public retreat from the principle that a shared public reality could be the basis for our debates. For a nation whose greatness has so often been synonymous with its scientific and technological prowess, that retreat is something we must now take very seriously