SCIENCE AND LIBERTY

PATIENT CONFIDENCE IN THE ULTIMATE JUSTICE OF THE PEOPLE

by

John L. Cordani Jr.



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Painting on the left: The Alchymist, In Search of the Philosopher's Stone, Discovers Phosphorus, and prays for the successful Conclusion of his operation, as was the custom of the Ancient Chymical Astrologers, by Joseph Wright of Derby (1734–1797), 1771.

Painting on the right: Thomas Jefferson (right), Benjamin Franklin (left), and John Adams (center) meet at Jefferson's lodgings, on the corner of Seventh and High (Market) streets in Philadelphia, to review a draft of the Declaration of Independence. 1 photomechanical print: halftone, color (postcard made from painting). Postcard published by The Foundation Press, Inc., 1932. Reproduction of oil painting from the artist's series: The Pageant of a Nation. Artist: Jean Leon Gerome Ferris (1863–1930).

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My first job in high school was working at a movie theater. It was a small, independent theater with a handful of screens. Employees like me did a little bit of everything, as needed. I popped the popcorn and slung concessions. I sold tickets and ripped tickets. I cleaned the theaters and did the mid-show walkthroughs using flashlights with plastic cones on them. I loved movies then and have ever since.

As a small theater, sometimes we did not get to run the big blockbusters. By and large, the big chain theater on the other side of town got them. But there was one year where our theater was not only getting to run the new, big James Bond flick; we were also getting to host an early screening about a week before the official release date. While I did not know all the ins and outs, a lot of the special tickets to the screening were part of promotions around town. You could get one by winning a radio contest. Since Bond drove a BMW in the movie, I think the local dealership got a few promotional tickets for its customers.

I asked my manager for a shift to work that night. As the one and only evening showtime approached, people lined up outside to get good seats, excited for the opportunity. Before it was time to let everyone in, the manager went outside and returned with someone from the line. He was a film critic from our local newspaper. I served the guy some concessions that the manager comp'd, as the two of them talked about various "films." When the critic was all set and he was ushered into the theater to have his choice of seat, the manager turned to me and said, "ok, now go let the *hoi polloi* in." I opened the doors and remember the people having a very nice time that night. I even caught a few of the action set pieces standing at the back door of the theater with my cone-equipped flashlight.

As a kid, I did not know what "hoi polloi" meant. That might have been the first time I heard the term, or at least it was the first time it piqued my interest. I understood what the manager wanted from the context, but I looked it up later. Hoi polloi is an idiom borrowed from Greek. Today, it is generally used in a somewhat derogatory fashion to mean the masses, the common folk, the rabble. The theater manager and the movie critic writing for the local paper were not the hoi polloi. They were movie buffs. Better yet, they were film buffs. They could tell you what films were actually good and the deep layers of meaning created by auteur-directors. Looking back, the fact that the early screening that night was a James Bond movie makes the whole incident a bit

odd. The movie critic was not like a food critic coming to a restaurant. He was not coming to criticize or even review our theater. He was just there to watch the movie and review it. The manager did not need to treat him special to get a nice review. More to the point, the movie he was there to see was not some arthouse film. It was a blockbuster. Like life, it was made for everyone to enjoy and have a say in. No *B.A.* in film studies required.

I was reminded of that event again in college. While I took my major in science, I loved learning about the ancient Greeks. I was intrigued by the concept of the city-state, citizenship, the wars fought when western civilization was in its infancy, the famous 300 Spartans fighting at Thermopylae, and the like. There I learned that the idea of a "hoi polloi" went back to Athens' great leader and general, Pericles. The ancient Greek historian, Thucydides, recorded Pericles famous Funeral Oration for those Athenian citizens who had died in the Peloponnesian War against Sparta. In the speech, Pericles contrasted the polloi (the People) with the oligoi (the few, as in an "oligopoly"). For Pericles, the hoi polloi was not derogatory. It was good; it was of-the-essence for a democracy like Athens. He said, "Our form of government is called a democracy because its administration is in the hands, not of the few [hoi oligoi], but of the whole people [hoi polloi]....Everyone is equal before the law."

This belief is fundamental, and no one put it better than Pericles. In a few words, he had gotten to the heart of the matter. He understood the link between democracy, how a government is administered, and the ideal of equality in the eyes of the law. Of course, not all Athenians agreed with Pericles. Plato had watched his teacher and mentor, Socrates, unjustly executed at the hands of an Athenian jury. He believed that democracy was doomed to end in the *hoi polloi* in the worst sense—with the anarchy and tyranny of an inflamed, emboldened, and selfish rabble. Plato's ideal state was one run by a philosopher king, an expert who would know best what to do. On the other hand, Plato's student, Aristotle, turned out to be a bit more bullish on democracy like Pericles. Aristotle theorized that, if we could properly channel the people's power in a democracy, their collective judgment could be even better than "those who have special knowledge."²

While America's Founding Fathers would have agreed with Pericles and Aristotle, with some qualifications, today we seem to be siding with Plato more

¹ Thucydides, "Pericles Funeral Oration for Athenian War Dead," Rjgeib.com, Accessed May 28, 2021, https://www.rjgeib.com/thoughts/athens/athens.html

 $^{^2}$ Aristotle and B. Jowett, trans., $Aristotle's\ politics\ and\ poetics\ (New York: Viking Press, 1974), Politics III. 11.$

and more. Except now, the proposed kings are not philosophers; they are an idealized form of benevolent scientist.

Scientific Success

Since the Age of Enlightenment and the Industrial Revolution it helped create, the successes of science have been unparalleled. No one could dispute that, in the last two hundred years and with the help of science, we have learned more about the natural world and how to harness it to improve our lives than in all the other years of human existence combined. Harvard psychologist Steven Pinker ably marshalled, cataloged, and touted all of these undeniable benefits of science in his 2018 bestselling book, *Enlightenment Now: The Case for Reason, Science, Humanism and Progress.* His 576-page treatment makes good on its dust-jacket promise of "seventy-five jaw-dropping graphs, [by which] Pinker shows that life, health, prosperity, safety, peace, knowledge, and happiness are on the rise, not just in the West, but worldwide...[based on] the conviction that reason and science can enhance human flourishing." Science has been a true success story with all the objective, chart-based data you could shake a stick at to show for it.

It is easy to see, then, how tempting it is for us to ask more of the scientist. On the one hand, channeled through business and academia, scientists have proven themselves capable of true progress by objective metrics. On the other hand, we have the seemingly eternal rancor of politicians who never seem to make any progress. The democratic pendulum seems to swing left or right every few years, but the same underlying disputes remain. The positions of both sides seem incommensurable and incapable of compromise, and sometimes it seems like we are stuck in some episode of the Twilight Zone. The People and, accordingly, their representatives just seem to fundamentally disagree on what is good, and right, and just for government and political administration. Ah, but if scientists have been able to use objective measurements to achieve concrete, undeniable results, why not give them a shot at making the calls in the political sphere? Sure, we can keep the politicians around and preserve our basic Constitutional institutions (Congress, the President, the courts), but maybe that all can just be a bit of play acting-smoke and mirrors for the scientist standing behind the curtain pulling the levers of administration, getting things done efficiently and in everyone's best interest. In short, let's just have our politicians "follow the science."

This idea—that science is the best mechanism for society to determine their normative or political values—is known as scientism. Even setting Plato aside,

³ S. Pinker, *Enlightenment Now* (London: Penguin Books, 2019).

this concept is not a new one. It has been prevalent for quite some time in continental Europe and was imported to American academia around the turn of the Twentieth Century. And though it was once a fringe idea at least in the American system, scientism is gaining more and more ground today. For example, during one of the 2020 Presidential debates, then-candidate Joe Biden was asked whether he would lock down the United States economy if scientists concluded that it was necessary to contain the spread of coronavirus. He said, "I would shut it down. I would listen to the scientists." During a later town-hall event, he reiterated, "I said I'd follow the science." "We are following the science" became a mantra in the world's greatest democracies on how politicians responded to conditions of pandemic, sometimes despite protests from the scientists about the distinction between facts and values.

Maybe desperate times called for desperate measures. Some may argue that a little sacrifice of democratic ideals could be tolerated to overcome an unprecedented crisis, and it is beyond the purpose of this book to speak to this recent crisis specifically. Nonetheless, the emergency responses recently deployed by democratic countries is just the visible tip of a scientism iceberg that has been forming for quite some time. It is part of a trend where scientists are not just called upon to opine on the facts, but to take responsibility for setting rules and policy based on those facts. More to the point, it is just one more instantiation of a world that is being silently absorbed into administrative law and the so-called administrative state.

Today, America's democracy is governed by a legion of public servants tasked with following the science every single day. No citizen ever cast a vote for them. And often, even the President cannot fire them unless they have been seriously derelict in performing their duties. For the most part, they do not appear on television or give interviews in the press to tell the People what they are doing and why. We have expert economists working at the Federal Reserve Bank and the Federal Trade Commission. Expert biologists, botanists, and veterinarians work for the United States Department of Agriculture. Expert physicists and chemists are at the United States Department of Energy; expert teachers are at

⁴ CBS News, "Biden says he would shut the U.S. down if recommended by scientists," Cbsnews.com, Accessed: May 28, 2021, https://www.cbsnews.com/news/biden-shut-us-down-coronavirus-if-recommended-scientists/

⁵ ABC News, "Read the full transcript of Joe Biden's ABC News town hall," ABCnews.com, October 15, 2020, Accessed: May 28, 2021, https://abcnews.go.com/Politics/read-full-transcript-joe-bidens-abc-news-town/story?id=73643517.

⁶A. Stevens, "Governments cannot just 'follow the science' on COVID-19," *Nature Human Behaviour* 4, 6 (2020): p.560.

the United States Department of Education; expert sociologists are at the United States Department of Housing and Urban Development. There is no need to continue; we all know how the list goes on. These scientists are all hard at work producing laws that they call regulations. In 1950, the federal government alone produced over 9,000 pages of them for the Code of Federal Regulations.⁷ If you think that's a lot, then in 2019, the figure was 185,000 pages. Federal agencies have produced over 100,000 pages of regulations each and every year since 1980. A lot of these regulations carry criminal penalties, punishable by steep fines or imprisonment.

By and large, all of these scientists, bureaucrats, and other public servants are doing their level best to act in what they see as the best interests of the American people to produce good, worthwhile, and scientifically founded regulations. I am certainly not saying that there are no good ideas in those hundreds of thousands of pages of regulations. Nor am I saying that science does not have a role to play in policy, politics, or government. Before becoming a lawyer, I studied science as an undergraduate and worked in industry as a scientist. I love science. I think the scientific method was the single best process ever devised by humans to study the natural world. Having said that, however, the question addressed here is a different one. No matter how much I admire science, the issue is whether we are asking too much of science, for things that it cannot or should not be tasked with providing us. Is there is an inconsistency between what we have asked from science and what America's Constitution asked from the People themselves? And if so, is the Constitution's way is actually better when it comes to the realm of values, judgments, and the sphere of the political?

The answer seems to me to be that the unrestrained expansion of the sphere of science threatens both science and liberty. Suspicions of bias and tyranny are bred and nurtured when science is extended beyond its legitimate sphere, as a method for the determination of fact, to being an arbiter of human values and policy. Michel Gove, a UK politician who was one of the staunchest promoters of Brexit, was questioned ahead of that 2016 referendum about whether any economists supported Britain's exit from the European Union. He responded simply that the "people in this country have had enough of experts." Gove turned out to be right. He had put his finger on an increasingly

⁷ GW Regulatory Studies Center, "Reg Stats," Regulatorystudies.columbian.gwu.edu, Accessed: May, 28, 2021, https://regulatorystudies.columbian.gwu.edu/reg-stats

⁸ H. Mance, "Britain has had enough of experts, says Gove," Ft.com, June 3, 2016, Accessed: May 28, 2021, https://www.ft.com/content/3be49734-29cb-11e6-83e4-abc22d5d108c.

prevalent populist movement that thinks "the science" cannot provide the sole justification for bureaucratic action.

A 2019 study by the Pew Research Center examined Americans' attitudes towards science and its role in politics.9 Some areas of skepticism seemed to bridge the political divide. No more than twenty percent of Americans believe that scientists are transparent about potential conflicts of interest or trust scientists to admit their mistakes and take responsibility for them. On the other hand, sixty percent of Americans believe that scientists should play an active role in policy debates about scientific issues. The more fundamental divide appears, however, when it comes to scientists' role in politics and matters of value and judgment. According to Pew, "Americans are divided along party lines in terms of how they view the value and objectivity of scientists and their ability to act in the public interest." While most Democrats are likely to want experts involved in matters of policy and will trust their judgment, most Republicans "say scientists should focus on establishing sound scientific facts and stay out of such policy debates." Ultimately, the question that seems to divide people ideologically comes down to who should be entrusted with political power. The majority of Democrats responded that scientists are generally better at making decisions about policy that other people; while most Republicans "think scientists' [political] decisions are no different from or worse than other people's."10

It is that last issue that poses the existential issue about democracy and the true sovereignty of the People. Who should be entrusted with the power to rule: the People or the Experts? The answer to that question is in no way simple. Both sources of power have a tendency toward corruption. As Plato knew and as Socrates experienced, an elected legislature run on majority-rule can turn tyrannical just as easily as a King. Indeed, for hundreds of years before America's founding, the track record of democracies was abysmal. James Madison was haunted by the small republican experiments where dreams of democracy had quickly turned into nightmares of appalling tyranny. Recalling the Republic of Venice, he wrote that "[o]ne hundred and seventy-three despots would surely be as oppressive as one [king]." On the other hand, many of the horrors of the Twentieth Century were accomplished at the cold hands of

⁹ Pew Research Center Science & Society, "Trust and Mistrust in Americans' Views of Scientific Experts," Pewresearch.org, Accessed: May 28, 2021, https://www.pewresearch.org/science/2019/08/02/trust-and-mistrust-in-americans-views-of-scientific-experts/

¹⁰ Pew Research Center Science & Society, "Trust and Mistrust in Americans' Views of Scientific Experts."

¹¹ A. Hamilton, J. Jay, and J. Madison, *The Federalist Papers*, 1788, at Federalist No. 48.

bureaucratic "experts." "[A]mong all the various political regimes and movements of the twentieth century, Communism, especially in its initial Soviet incarnation, happened to be the one most favorably predisposed toward science, believing most utterly...in science's power and value."¹² And yet, just as an example, it was centralized planning by "wise" Soviet economists and agricultural scientists that led to the *Holodomor* and the deaths of millions of Ukrainians in the 1930s.

The American Experiment

Arising out of the graveyard of failed experiments on both sides (rule by the People in democracies and rule by the Experts in oligarchies), the one undeniable success story has been the creation of the United States of America. The answer given by its founders is summarized in the large, bold letters of the first three words of the Constitution they wrote. It was their particular, historically unique, philosophy, combined with a novel feat of political engineering, that allowed America's founders to create a nation that is truly ruled by "We the People" while avoiding the historical tendency of democracies to devolve to tyranny.

Their philosophy was one based on individual liberty. Drawing from the greatest figures of the English Enlightenment, they believed that each person had a right to liberty that originated, not from any government, but from the law of nature itself. This right was inalienable. The entire purpose of government is just to *secure* the Blessings of Liberty. A legitimate government only enhances liberty, such as by providing fair, equal ground rules so that the People are freer—freer to associate, to enter contracts, to live life without interference from the evil or negligent actions of others, etc.

To accomplish this, the founders set out to engineer a structure for the nation's government that empowered it to create laws that secured liberty, while restraining it from enacting laws that would undermine individual liberty even if they were desired by the majority of people. The key stratagem they employed was genius. It was a type of political *jujitsu* as the founders channeled the worst, tyrannical instincts of the People and their representatives to ironically serve the interests of liberty. They wanted the various branches of government to be so busy fighting amongst themselves that they could not turn their tyrannous eye against the People. And they wanted every special interest, point of view, and political faction to have the freedom to be expressed frustratingly to the fullest, not in the form of law, but against the *countervailing* special interests, viewpoints

¹² A. Kojevnikov, "The Phenomenon of Soviet Science," Osiris 23, 1 (2008): pp.115-135.

and factions. The Constitutional structure they devised was meant to make it hard to pass laws. Debate among the country's factions was to be kept boiling, cancelling each other out for the sake of the people's liberty. Only a clear "winner" of an idea would become law, and that idea would necessarily not serve the interests of a faction, but rather the People as a whole and thereby preserve individual liberty as best as possible.

The problem is that the Constitutional structure that the Founders devised simply does not mix well with rule by experts. Delegating power to expert rule by scientific consensus throws oil onto the waters of constitutional democracy. The Constitution runs on debate over the best policy. Sure, science can help with the facts. But the Constitution anticipated that the domain of values, judgments, and policies would be left to free and healthy debate between factions whose special interest would, for the most part, cancel each other out. A claim that a certain policy is objectively, scientifically right does not bode well for debate and voting. If you think that your preferred policy proposal is as objectively "true" as 5+7=12 or the claim that the earth is round, you will think that debating your proposal is pretty foolish indeed.

The Administrative State

In fact, that is precisely what started to happen in America in the decades after the Civil War. Weary of never-ending and inefficient debate while the nation was rapidly industrializing, progressive reformers began to argue that there was a distinction between "politics" and "administration." Congress can endlessly struggle over the big ideas, but, they thought, let's have a corps of experts who can efficiently and scientifically "administer" Congress's basic policy prescriptions. For example, Congress can simply pass a law saying something uncontroversial like "we want fair competition," and a federal trade "commission" of experts will let us all know what that means scientifically by issuing regulations.

These administrative reformers of the late nineteenth and early twentieth century were completely candid and forthcoming about their disdain for the Constitutional structure. For them, the Constitution was either misguided from its start, or it was a relic of a bygone era that had little value for a complex, modern, and industrialized nation. Preeminent among them was the man who would become our 28th President, Woodrow Wilson. Before entering politics, Wilson was an academic. His scholarship claimed that America's founders had committed "the error of trying to do too much by vote." He believed that, compared to rule by Experts, the voice of the People is "meddlesome...a clumsy

nuisance, a rustic handling delicate machinery."¹³ "[A]n intelligent nation," according to Wilson "cannot be led or ruled save by thoroughly trained and completely-educated men" who have "special knowledge" and "disinterested ambition."¹⁴

Wilson's view eventually prevailed in the twentieth century, so much so that in 1948, political science professor Dwight Waldo memorably concluded that we now live in *The Administrative State* in his book of the same name. He identified the central conflict between the two sides' ideals of government and political power. According to his book, the disagreement was "between those whose hope for the future was primarily that of a planned and administered society, and those who, on the other hand, remained firm in the old liberal faith in an underlying harmony, which by natural and inevitable processes produce the greatest possible good." Should we trust the People, properly constrained by the Constitutional structure, to exercise a sort of natural wisdom of the crowd? Or should we trust the Experts to use objective science in service of our collective march towards a greater society?

Outline

This book will examine that basic question—the one that divided Plato and Aristotle—from five different perspectives: American (chapter 2), historical (chapter 3), philosophical (chapter 4), scientific (chapter 5), and moral (chapter 6). And my answer will coincide with those first three words of our founders' Constitution.

America's founders believed deeply in the People and the value of self-rule. But they were realists about it. They would have concurred in Winston Churchill's observation that democracy is the worst form of government, except for all the others. They agreed with Aristotle that, if the danger of majoritarian tyranny and factional special interests can be properly controlled, the wisdom of the People will exceed even the wisest expert of administration. By examining the history of the progressive movement, it is clear that those that created and shaped America's administrative state were overtly opposed to the Constitution's founding principles. They made no bones about it. Rather than seeing rights as preceding government and originating in our status as individual human beings "endowed by our Creator" with inalienable liberty, they believed that it is the government itself that creates, provides, and protects

 $^{^{13}}$ W. Wilson, "The Study of Administration," $\it Political \, Science \, Quarterly \, 2, \, 2$ (1887): p.197.

¹⁴ Quoted in R. Pestritto, "The Birth of the Administrative State: Where It Came From and What It Means for Limited Government," *First Principles Series* 16 (2007).

¹⁵ D. Waldo, *The Administrative State* (The Ronald Press Co., 1948).

rights. Accordingly, such rights exist only to the extent that they serve the interests of the society, whose collective will is supposedly expressed through their government. Moreover, through study, they believed that experts and scientists can measure and predict collective outcomes of policy and administer government efficiently to optimize them.

Philosophically speaking, however, science is an excellent servant, but a terrible master. As the Scottish Enlightenment philosopher David Hume observed, science is equipped to tell us what "is," but it cannot deduce or infer what "ought" to be. That is exclusively the domain of moral values, a matter of debate of human judgments, opinions, and beliefs. Underlying any moral or political prescription that is supposedly based on science will be an unstated "metanarrative" based on values. This goes for the "right" side of the political spectrum as well as the "left." It is just as much true for "trickle-down economics" as it is for socialist programs and wealth redistributions. At some point, the scientist must be utilizing an underlying system of values to arrive at a policy prescription.

Accordingly, rule by Scientists must be based on the presupposition that individual scientists will have better systems of values, *i.e.*, better metanarratives, than the average person, or more accurately, than the People. Since science provides no special insights on questions of value, this position is nothing more than Plato's yearning for the philosopher-king. But by wrapping the philosopher-king in the garb of "science," an additional upshot can be had. The claim to "science" in policy debate will provide an unearned cudgel to the scientist-philosopher-king to quash debate and dissent as "anti-science." In governments that are purportedly democratic, it also allows elected politicians to hide behind the scientists for unpopular decisions, dismissing criticisms with the seemingly bullet-proof retort, "the science made me do it."

We will see that this is a problem because the People have a role to play in employing a critical eye to even the factual assertions of science. They need not be just passive receptors of indelible scientific truths. In the Seventeenth Century, the founder of modern empirical science, Sir Francis Bacon, believed that there were four "idols" that would tempt and distract experts from conducting true science. He called these the Idol of the Tribe, the Idol of the Cave, the Idol of the Marketplace, and the Idol of the Theater. Science may be as good as gold, but scientists are human and therefore fallible. Biases, undue deference to authority figures, career advancement and ambition, headline grabs, political or metaphysical preconceptions and prejudices, and the allure of statistical sleights-of-hand all threaten the objectivity of the scientific method. Since people are just as human now as they were in Bacon's time, these idols are still alive and well, and we will see numerous examples from both the hard and the social sciences. But in the final analysis, healthy skepticism, fair critique, and free and open debate are the Enlightenment's tools that the

People should be allowed to employ, not as a weapon against science, but as a fair and beneficial tool in its service.

Finally, as demonstrated by the examples of the eugenics movement and the Soviet *Holodomor*, a "scientific" administration of government tends toward inhumanity and a muting of the natural law as received by the individual moral consciences. Science has no choice but to view people as "objects." The ends of a "scientifically" administered government are objective: decreasing poverty, eliminating illness, increasing food production to feed the cities, etc. An ideology—whether from the political right or the political left—must always underlie a scientific administration. By contrast, America's founding principles are organized around the natural law. Each individual is treated as an end in him or herself, deserving of his or her own life, liberty, and dignity. Government is only legitimate to the extent it protects and enhances those things intrinsic to our humanity. The inhumanity of a scientific approach to government functions will be discussed with examples provided. Ironically, it can even be proven scientifically, through Stanley Milgram's famous experiments in psychology.

After examining these American, historical, philosophical, scientific, and moral topics, my proposed conclusion will be as straightforward as it is fundamental. To quote one of our greatest presidents, it is that America was "conceived in Liberty, and dedicated to the proposition that all men are created equal" and that, therefore, "government of the people, by the people, for the people, [should] not perish from the earth." The People are sovereign, and they can, should, and must rule themselves, keeping science in its worthy, important, and well-earned sphere as a fair arbiter of fact, not values.

Before proceeding, however, I will provide a few notes about how this book is written. Consistent with its democratic ideal, this book is meant to be by a person and for the people. For the most part, I have cited the "primary" sources where possible. You will see the real words of the Founding Fathers, the Progressives, the Enlightenment philosophers, the actual scientists whose studies are discussed, and other relevant historical figures. Indeed, this book is chock-full of direct quotations, often at some length. My hope is that this book's value will be primarily in how I have curated, organized, and marshalled this history and the thoughts and insights of these significant historical figures. Almost all of their writings are public domain and reviewing the full context of the quotations in these original works and/or historical artifacts is always an option. Ultimately, it does not really matter what I think about them or my subjective characterizations. You can make up your own minds after reading their actual words, and so I erred on the side of quotation rather than paraphrase or characterization.

Accordingly, my hope is that the style of writing employed by this book is a microcosm of its message. You have the power, and therefore, must be entrusted with the background "facts" to draw your own normative conclusion.

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