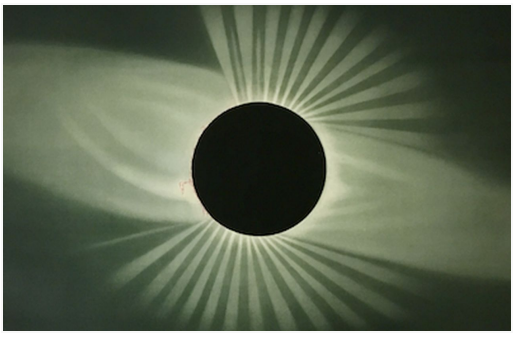
Title
Dark Transparency: Hyper-Ethics at Trump's EPA

Authors
Biagioli, Mario
Pottage, Alain

Publication Date
2022

Dark Transparency: Hyper-Ethics at Trump's EPA

March 19, 2022 • By Mario Biagioli, Alain Pottage



ANTI-SCIENCE HAS so far been dismissed as a fringe discourse, but that was in the past. Under President Trump, the EPA itself joined the fringe, challenging the credibility of scientists in disturbingly innovative and effective terms: by mobilizing the discourse of openness and transparency against them.

The remit of the EPA is to regulate greenhouse gas emissions, air and water quality, asbestos in buildings, and so on. Traditionally, those opposing agency regulation would challenge or cast doubt on the scientific evidence and models behind the EPA's policies. [1] What we're seeing now is something quite different: a deregulatory strategy, camouflaged as a defense of science's values of openness and verifiability, radicalizing those norms to the point where they turn against science itself, representing it as unethical and thus unfit for use in regulatory decisions. [2]

Once upon a time, transparency was at the heart of the scientific ethos. Scientists were expected to disclose their methodologies and funding sources because publicity ensured that their hypotheses would be exposed to a bracing climate of organized skepticism. The new deregulatory strategy turns this ethical principle against the ethos it once served. The rhetorical trick — and it is no more than rhetorical — is to turn transparency inside out. In the name of a value that science itself espouses, and cannot but defend, science is exposed as an inherently partisan enterprise. As such, it must, it is said, be counterbalanced by the corporate perspective. Deregulation becomes ethical by default. No longer do the critics have to do science better, nor show that the science behind regulation is incorrect, incomplete, or doubtful. As a result, we are entering a post-epistemic policy discourse that starts and ends not with evidence but with ethics, especially transparency and openness.

Although the courts and the Biden administration have repealed the policies adopted by the EPA under Trump, this rhetorical strategy continues to be mobilized in discourses denying climate change. In fact, because it hinges on the affirmation and manipulation of ethical norms rather than on the analysis of content, it exemplifies a *form* of discourse that can easily be mobilized in all sorts of political controversies that target the professional judgment of federal or local government employees, from scientists to teachers. Indeed, the strategy has already been explicitly adopted by the conservative campaign against critical race theory. The new "curricular transparency" movement demands that teachers disclose to parents the topics, teaching materials, and reading of each and every class — as a step toward preventing the teaching of whatever the critics take "critical race theory" to be. Sidestepping all complexities, the campaign tries to take control of the agenda of race by reducing politics to the cynical trick of transparency. As its chief advocate candidly puts it, "The strategy here is to use a non-threatening liberal value — transparency — to force ideological actors to undergo public scrutiny. It's a rhetorically-advantageous position and, when enacted, it will give parents a

powerful check on bureaucratic power." [3] From labs to classrooms, the subjects of controversy will vary but what we call "dark transparency" is likely to become a staple of politicized discourses.

Reinventing "conflict of interest"

In February 2017, at the very beginning of his tenure as administrator of the EPA during the Trump administration, Scott Pruitt announced to his staff, "process matters […], we need to be open and transparent and objective in how we do rule-making." [4] In October of that year, seemingly delivering on that promise, Pruitt issued a directive about "Strengthening and Improving Membership on EPA Federal Advisory Committees."

Parts of the directive read like a textbook depiction of good science practices, checking all the appropriate boxes — "integrity", "transparency", "objectivity", "reliability" — with special emphasis on the scientists' need to avoid conflicts of interest. [5] But then the narrative takes an unexpected turn:

> [I]t shall be the policy of the Agency that no member of an EPA federal advisory committee currently receive EPA grants, either as principal investigator or co-investigator, or in a position that otherwise would reap substantial direct benefit from an EPA grant. [6]

Scientists receiving research grants from the EPA are deemed to have a conflict of interest that prevents them from serving on committees like the Science Advisory Board (SAB), Clean Air Scientific Advisory Committee (CASAC), and Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel. These are key committees: the SAB advises the EPA in areas such as drinking water, fracking, and chemical risk assessment, while the CASAC advises the

agency on national ambient air quality standards, including those for particulate matter and ozone. [7]

Pruitt's message was starker when, a week prior to the official announcement, he delivered it in person to the Heritage Foundation. There he argued that while the EPA needed scientific advisors who were "objective, independent-minded and provide transparent recommendations," he had a particular concern:

> If we have individuals on those boards receiving money from the agency […] to the tune of tens of millions of dollars over time, that to me causes question on the independence and the veracity and the transparency of those recommendations that are coming our way. [8]

In the past, the EPA had sought to establish a separation between its advisors and the industries it regulated, [9] but Pruitt moved in the opposite direction, increasing the presence of corporate representatives on advisory committees while decreasing that of academic scientists. [10] Allegedly, he did so to keep conflicts of interest out of regulatory science. [11] The move was short-lived but impactful:

> According to an analysis by the Union of Concerned Scientists, the makeup of EPA's Science Advisory Board shifted from being 79% university scientists in 2017 to 47% in 2019. In the same time period, the percentage of industry scientists went from 6% to 22% and of consultants (mostly industry-affiliated) from 2% to 18%. [12]

What is striking is not Pruitt's friendliness to corporate interests so much as the nature of the justification he gave for this new rule. Reconceptualizing EPA research grants as payments, he then created a logic whereby recipients, as payees, were automatically disqualified from serving

on EPA advisory committees. The Office of Government Ethics guidelines do not in fact treat grant-funding as a disqualifying conflict of interest, which makes Pruitt's rule rather innovative. [13] More generally, grants from federal agencies are not considered to create a conflict of interest for their recipients because the funds are public and distributed through a peer review process, making the grantees accountable to the public but not beholden to private interests. Scientists and their institutions are proud to receive such grants, treating them as achievements to be publicized, not as compromising deals to be kept hidden.

But Pruitt's argument rests on assuming that all grant-funding creates ethical conflict, even though it is not clear exactly what kind of conflict of interest an EPA grantee would experience while serving on an EPA advisory committee. Typically, a conflict of interest (COI) emerges when a person receives funding from entity A while providing advice to entity B on matters of interests to entity A, not when the advice is given to the entity that is providing (and is publicly known to be providing) the funding. Pruitt's claim that scientists cannot advise the EPA if they receive EPA grants would seem to imply that we should not trust the advice of our physicians, given that we pay them, or that a university should not staff any of its advisory committees with its faculty because it pays their salaries.

This creative reconceptualization of COI is particularly consequential because corporations do not typically apply for EPA grants. According to Pruitt's definition, their representatives would experience no conflicts of interest when serving on the FCAs that are involved in regulating those same industries. By contrast, academic scientists with no ties to those industries are disqualified from serving on the EPA's FCAs if they received EPA grants.

Pruitt's strategy does not simply subvert ethical norms. It radicalizes a norm, expanding its reach by rendering it as absolute or generic as a Platonic idea. Accordingly, any award a scientist receives from an agency that this scientist might develop an advisory relationship with

constitutes a COI, no matter the origin of the funding, the research topic, or the conditions of the grant. Once a value or norm is made generic and all-encompassing, "violations" are bound to follow.

The trick of course is not to appear to weaken a norm that goes against one's interest. One could argue, for instance, that it would help industry to have a weaker definition of COI so that more corporate representatives would become eligible for serving on EPA committees that advise on industry regulation. But Pruitt never questions the concept of COI, nor does he try to weaken its enforcement. To the contrary, he makes it more absolute — any payment creates COI — to the point that the norm starts having effects that are very different, even polarly opposite, to its original ones. Weakening the definition of COI may have opened up membership in EPA panels to more experts with corporate ties, but radically strengthening that same norm has resulted in the exclusion of academic scientists from those same committees, thus fostering the exact same deregulatory goal while giving the appearance of being hyper-ethical rather than corrupt.

Pruitt's strategy thus hinges on the radical amplification — not weakening — of a canonical norm to the point of ethical inversion. But it also necessitates a putative justification, which is provided by the imaginary problem of academic scientists allegedly giving bad advice to the EPA as a result of receiving its grants. It is difficult to find one image or concept that can singlehandedly capture all the facets and steps of Pruitt's strategy. More than just turning ethics upside-down, Pruitt engages in ethical camouflage, dressing himself up as a defender of the norm he is subverting while confusing those likely to be harmed by his decision by warning them about other imaginary threats, which is like a wolf donning the skin of the sheep it has just eaten as it alerts all the other sheep to watch out for pumas. What we see is a simultaneous displacement and recombination of roles, of presumed dangers, and ethical polarities.

"It's sunshine, it's transparency!" [14]

Our second example takes us to Pruitt's successor, Andrew Wheeler. Under his leadership, the EPA introduced a new data transparency rule that was eventually published in the *Federal Register* on January 6, 2021, at the very end of the Trump administration. [15] (The Department of Interior's push to adopt a very similar policy — "Promoting Open Science" — at around the same time reveals that this was not an isolated development but part of a wide-ranging deregulatory agenda.) [16]

When originally presented in April 2018, the EPA "Strengthening Transparency" rule was:

> intended to strengthen the transparency of EPA regulatory science. The proposed regulation provides that, for the science pivotal to its significant regulatory actions, the EPA will ensure that the data and models underlying the science is publicly available in a manner sufficient for validation and analysis. [17]

Critics — and there have been many — have pointed out that, behind its facade of commitment to transparency, openness, and replicability, the new rule would in fact enable the EPA to dismiss critical information as it develops its regulations, effectively stopping "new public health protections by limiting what research the agency can consider." [18] For instance, studies concerning the health effects of environmental pollution do not typically make their raw data fully available because it could expose the identity of the patients:

> Had the transparency rule been in effect already, several people said, the E.P.A. could not have made the case to regulate mercury releases from power plants because it could not have shown that the heavy metal impairs brain development. Nor could the agency have

> successfully linked cloudy drinking water to higher rates of gastrointestinal illnesses, and then imposed more rigorous clean water standards. [19]

These concerns were nominally addressed in the final version of the rule, giving the administrator — a political appointee — the discretion of letting the agency use certain studies deemed "pivotal" for which the raw data was publicly unavailable. Also, other studies could be used, but their importance discounted, if their data was only partially available.

The emphasis on the EPA's ethical commitment to making the basis of its regulatory decisions transparent to, and auditable by the public is central to the text of the rule and the discourse that framed its introduction, starting with Wheeler's opinion piece in *The Wall Street Journal*. [20] Then, immediately following Wheeler's presentation of the rule at the Competitive Enterprise Institute, Myron Ebell, a prominent climate change skeptic, commented that the EPA's new data transparency rule made an important contribution to defending scientific integrity in general, helping to solve the irreproducibility crisis in science (currently the topic of lively debates among scientists), [21] but also to addressing the "secret junk science problem that is plaguing our society, and it really not only corrupts politics, corrupts the regulatory process and the legislative process, but it also corrupts science, and so this rule […] is a really great step forward." [22] As he put it, "scientific integrity and innovation die in darkness." [23] Wheeler agreed:

> The American people want to be more involved, and they want to understand […]. The American people's trust in government and their trust in the media is at an all-time low, and who can blame them when they see politicians argue over scientific facts and environmental activists masquerading as environmental reporters? Who are they to believe? That's one reason we have seen an increase in citizen science. [24]

In Wheeler's eyes, both citizen science and the EPA's data transparency rule become critical initiatives to create a non-status-quo science, by the people and for the people, against the hidden agendas of "secret junk science" (or, mutatis mutandis, "secret curricula"). [25]

What we see here, as we have seen in Pruitt's innovative definition of conflict of interest, is not a focus on the *content* of regulatory science but on traditional *ethical norms*: transparency, openness, independence, replicability, accountability, and peer review. Concerns with such norms are typically found among open science supporters, who skew liberal, but here we see them hijacked by Trump's EPA and Washington's conservative think tanks to support a broad deregulation strategy. And we find the same tactic mobilized by the conservative "curricular transparency" movement to "liberate" public education from the doctrinal constraints that bureaucrats have imposed on it. [26]

As in Pruitt's new definition of COI, the logic of Wheeler's manipulation of science ethics does not take the form of subversion but of radicalization. He does not soften data transparency standards — a move that might have favored the corporate sector by lightening their disclosure requirements and helping them preserve their trade secrets — but goes aggressively in the opposite direction, raising the threshold of openness to the point that much regulation-supporting data is rendered unusable, thus helping corporate interests through an allegedly enhanced research ethics. [27] (In both cases, we see how making norms absolute and generic achieves the same results that would have been produced by weakening those same norms, except that it now looks patently ethical rather than corrupt.)

Finally, both Pruitt's COI directive and Wheeler's open data rule need a trigger to justify its introduction, which comes in the hazy shape of "secret junk science," a science that encompasses most research conducted by federal agencies and, without public knowledge or accountability, is disseminated by a press populated by "environmental activists masquerading as

environmental reporters." [28] (In a striking parallel, the curriculum transparency movement also exposes "secret curricula" and the "fanaticism or abuse" that lies behind them.) [29]

From evidence to ethics

This shift from critiquing the content of regulatory science to manipulating ethical research values coincides with a shift from issue-specific to systematic deregulation. As an unapologetic deregulation activist put it, "Gridlock is the greatest friend a global warming skeptic has. […] We are the negative force, we are just trying to stop stuff." [30] Pruitt's and Wheeler's rules appear to aim for a future in which regulatory science is accountable to the public, but their actual goal seems to be to "stop stuff" as efficiently and systematically as possible. The endgame behind the introduction of these ethical-looking rules is the production of policies that are corporate-friendly *from the get-go*, minimizing regulation *across the board* by justifying the dismissal of crucial evidence — not just in one specific case but in many different contexts.

Undermining scientific consensus by questioning the motives and values of individual scientists has been part of the playbook of regulation opponents for decades. These new EPA policies, however, are more effective precisely because they move *away* from the tried-and-true tactic of undermining scientific consensus by, say, character assassinating specific scientists. [31] That older strategy has been shown to be neither necessary nor efficient. Instead of *questioning the consensus* about the *content* of science, the new strategy emphatically and uncontroversially foregrounds the *undisputed consensus* about the *ethical norms* of science — openness, transparency, independence — and then manipulates those norms (while apparently affirming them) to make it look like the only ethical regulatory science is one that supports deregulation. Again, the "curriculum transparency" movement seems to have learned from the strategy of the anti-science movement: it mobilizes a unanimously accepted ethical value to pressure teachers to censor their syllabi to avoid controversy, [32] or perhaps to drop out of an increasingly

burdensome and unrewarding profession. [33] Conservatives can achieve the "deregulation" of the curriculum simply by invoking transparency, freeing it from what they see as the ideological stronghold of critical race theory without having to define, read, or factually contest it.

The shift is highly consequential. Technical and scientific controversies are difficult, time-consuming, and costly to win. Ethical norms are not only much easier and cheaper to claim and mobilize, but they can have powerful long-lasting epistemic effects, as when they exclude evidence deemed to have been unethically gathered or curated. (One could compare this to throwing criminal evidence out because it was improperly obtained, rather than neutralizing it with labor-intensive counterevidence, which in some cases may be impossible to gather.)

It helps that these rules are presented as utterly disconnected from any specific regulatory issue — asbestos in buildings, mercury in drinking water, particulates in the air, and so on. At the moment of their introduction, these rules had no prima facie connection to empirical scenarios and to the possible corporate interests invested in them. While framed by a political agenda, they come across as neutral in terms of content. They are paraded as much-needed improvements to EPA protocols, and thus as an internal matter concerning the ethics and process, not the objects of regulation. As Wheeler put it, "We want the EPA to be able to say, 'you can check our work'" [34] and, "By shining light on the science we use in decisions, we are helping to restore trust in government." [35] The specific object of the EPA's work or of the science it uses is utterly irrelevant here, which casts these rules as being above and beyond any specific issue or dispute. That makes them *more general and disinterested-looking* — and, as a result, also *more beneficial to deregulatory interests*.

The ethical norms of transparency and openness mobilized in these policies have become so general, and so virtually devoid of any specific referent, that they enable the EPA to claim that those who argue for evidence-based industrial regulation are in fact practitioners of "secret junk

science" simply because they may not want, for instance, to identify the patients participating in environmental exposure studies. [36] Potentially, this would allow for the dismissal without refutation of any empirical claim put forward against industrial deregulation. More than just epistemologically questionable, such evidence can be categorized as ethically tainted *ab initio*: as something that would be dangerous for public-protecting institutions like the EPA to even consider.

Post-epistemic expertise

The agnotologists, scholars studying the intentional production of ignorance and doubt, have described how the media's construction of "a fair and objective exchange" rests on staging discussions of socially impactful scientific issues between representatives of two different points of view, even when the consensus among scientists on that subject is so secure that there is no actual alternative point of view. [37] They have also shown how the experts for the other point of view (say, global warming skeptics) rarely have the relevant credentials to responsibly engage in debates with climate scientists. They simply "play scientist on TV," as one such lobbyist cheerfully admits. [38] Broadcast media conventions about fairness thus enable deregulation lobbyists to self-stage as experts without bearing the costs associated with becoming an actual expert, easily leading the public to believe that the "experts" are disagreeing and that, therefore, scientific consensus is wanting. (Given their substantial media training and the constraints of the format, they are also likely to outperform scientists in those debates.)

But that was then. According to Pruitt's and Wheeler's discourse, one would not even need to pretend to be an expert or to "play scientist on TV" because scientific expertise — real or imagined — is not the point. There are no educational or professional requirements for arguing about basic values: "conflict of interests" is bad and "openness and transparency" are good. Anybody can legitimately participate in such discussions. Given the topic, they do not need to

pretend they are experts. They *are* experts. They can state the morally obvious and agree with the morally obvious while mobilizing narratives about science being threatened by bad actors — e.g., rogue activist scientists, environmental extremists camouflaged as science journalists, or researchers and institutions that do not prize open debate. No longer having to engage with evidence, they can repeat generic narratives of immorality and malfeasance. In the end, the moral of the story (pun intended) is that we should not regulate industry but control ethically wayward pretend-scientists — academic and government scientists who, while perfectly credentialed, do not seem to believe in openness and transparency.

Consensus as conspiracy

The tilting away from targeting evidence to manufacturing hyper-ethics has not happened suddenly. It can be traced back at least to November 2009 when, just before the Copenhagen Climate Summit, a large cache of emails and documents hacked from the Climatic Research Unit (CRU) at the University of East Anglia was made public. What unfolded was "Climategate," probably the environmentalists' most damaging PR disaster ever. [39] The CRU at East Anglia was the prime and, until then, trusted provider of climate science expertise and of long-term data about global temperature trends. Incorporated in the comprehensive reports of the Intergovernmental Panel on Climate Change (IPCC) [40] — an international body tasked with monitoring climate change — was the work of the CRU and their international networks of collaborators, giving it great potential global regulatory impact.

The timing was seen as a blessing for global warming deniers. Within days of the hack, Mohammad Al-Sabban, the Saudi lead climate negotiator at the Copenhagen Summit, rushed to claim that: "It appears from the details of the scandal that there is no relationship whatsoever between human activities and climate change." [41] The damage inflicted by Climategate, however, did not result from scientific evidence exposed by the hack but from the sustained

claim that the emails documented the scientists' unethical mindset and conspiratorial behavior. This was based on a few lines culled from a handful of the more than 1,000 emails; critics quickly claimed that the emails in toto revealed "a global conspiracy by scientists to dupe the world about man-made climate change." [42] Myron Ebell (whom we met earlier discussing EPA data transparency with Wheeler) concurred: "Some of the e-mails that I have read are blatant displays of personal pettiness, unethical conniving, and twisting the science to support their political position." [43] Sarah Palin chimed in too:

> The e-mails reveal that leading climate "experts" deliberately destroyed records, manipulated data to "hide the decline" in global temperatures, and tried to silence their critics by preventing them from publishing in peer-reviewed journals. What's more, the documents show that there was no real consensus even within the CRU crowd. Some scientists had strong doubts about the accuracy of estimates of temperatures from centuries ago, estimates used to back claims that more recent temperatures are rising at an alarming rate. [44]

For reference, these are "the most contentious quotes" [45] selected by *The Telegraph*, a reliably climate skeptic newspaper [46]:

From: Phil Jones. To: Many. November 16, 1999

"I've just completed Mike's Nature [the science journal] trick of adding in the real temps to each series for the last 20 years (ie, from 1981 onwards) and from 1961 for Keith's to hide the decline."

From Phil Jones. To: Michael Mann (Pennsylvania State University). July 8, 2004

"I can't see either of these papers being in the next IPCC report. Kevin and I will keep them out somehow — even if we have to redefine what the peer-review literature is!"

From: Kevin Trenberth (US National Center for Atmospheric Research). To: Michael Mann. October 12, 2009

"The fact is that we can't account for the lack of warming at the moment and it is a travesty that we can't. […] Our observing system is inadequate"

From: Phil Jones. To: Many. March 11, 2003

"I will be emailing the journal to tell them I'm having nothing more to do with it until they rid themselves of this troublesome editor."

From Phil Jones. To: Michael Mann. May 29, 2008

"Can you delete any emails you may have had with Keith re AR4? Keith will do likewise." [The AR4 is an IPCC report.]

From: Michael Mann. To: Phil Jones and Gabi Hegerl (University of Edinburgh). August 10, 2004

"Phil and I are likely to have to respond to more crap criticisms from the idiots in the near future."

None of the investigations launched in the UK and US in the wake of Climategate found academic misconduct, even in those instances involving apparently incriminating references to "tricks" [47] pulled by the scientists, to the need to "hide [temperature] decline," [48] or to the "travesty" of being unable to explain lack of warming in the short term. [49] Read in context, all the red flags vanished, or at least stopped flapping. [50] Still, on the first anniversary of Climategate, the editors of *Nature* commented that: "Never mind that almost all of the accusations thrown at the researchers involved have been proven baseless. […] And never mind

that the scientific basis for the global-warming problem remains as solid as it was a year ago. Huge damage has been done to the reputation of climate science."

One should add that the damage was done *without anyone having to show that the alleged ethical lapses had actually led to the production of bad data*. The analysis stopped well short of that. By pointing to a few emails, the critics were able to question the existence of scientific consensus about climate change without firing one evidential shot. The clincher was not the data but the scientists' apparent capacity for conspiracy. As in the EPA's recent rules, ethics trumped content.

Even sympathetic commentators could not ignore the bad optics:

> [T]here is plenty of evidence of a bunker mentality among many of the scientists, grousing and plotting against the handful of climate skeptics who, as they saw it, were trying to grab "their" data and then trash it on web sites and in op-ed articles that had far greater influence than the journals in which the scientists usually reported their work. [51]

Similarly:

> [T]he e-mails have cast those scientists in a political light and given new energy to others who think the issue of climate change is all overblown. The e-mails don't say that: They don't provide proof that human-caused climate change is a lie or a swindle. But they do raise hard questions. [52]

The hack was likely meant to spawn a media event, not a scientific controversy. And certainly the media and the blogosphere helped disseminate the impression that epistemic consensus could be a cabal run by an international cadre of tight-knit academic and government scientists.

That impression was made possible by the evidentiary nature of Climategate, which was not a snapshot of one politically committed scientist writing a few articles overclaiming some aspect of global warming but a panoramic window on several years of the private conversations among the entire network of scientists in charge of producing the influential IPCC reports. Allegations that consensus over global warming was a conspiracy by academic and government scientists were nothing new, [53] but Climategate could be pointed to as a smoking gun in the form of publicly available emails in which the scientists did indeed seem to talk about bending peer review protocols, deleting important documents, putting pressure on uncooperative journals, hurling insults at external critics, and even of sharing the temptation to "beat the crap" out of them up if they showed up at conferences. [54]

In other words, Climategate made it possible to reconceptualize consensus not as an index of truth but as an *anomaly* that could only be produced by a cabal powerful enough to suppress dissenting voices. It became negatively identified as the result of the "status quo," because it is only "status quo science" or "secret science" that has the means to set up the cabal that is then paraded and maintained as consensus.

References to "secret junk science" or "secret science," found both in the presentation of the EPA data transparency rule and in general discussions of regulatory science, are the discursive progeny of Climategate. [55] Another import from Climategate is the assumption that animates both the EPA COI and data transparency rules: you cannot trust government scientists or academic scientists funded by the government. Forcing transparency on them is the only way to make them accountable. According to Wheeler, "Increasing polarization around scientific questions stems in part from too many public policy debates setting science in a category apart from normal discussion or standards." [56] "Polarization" is the result of setting science apart, or above, the public. Hyper-transparency will democratize science by bringing it

down from its pedestal, making it open to review and criticism according to the standards of any other "normal discussion."

Climategate did not engage in the production of the kind of hyper-ethics fleshed out by recent EPA rules, but it created their conditions of possibility by establishing the imaginary ethical problem that transparency rules would seem to be the solution to. Both Climategate and the EPA rules suggest that peer review (scientists' review of scientists' work) should be replaced or at least complemented by "citizen audits" — the last defense against conspiratorial scientists. [57] (Similarly, some curriculum transparency bills call "for cameras in classes or allowing taxpayers to observe classroom instruction 'at any time requested'" [58] because "we should be deeply skeptical of schools and teachers who would rather keep their curricula a secret.") [59] The science produced by the CRU was deemed unscientific because of its being conspiratorially shielded from the light of criticism, which was then called "the problem" that Trump's EPA claimed to solve with its data transparency rule, whose purported aim was to make all regulatory science ethically and politically responsible — i.e., transparent and dismissible by the public.

In both cases we see a pivot from evidence to ethics, specifically the ethics of criticism. While the EPA data transparency rule was claimed to guarantee that only good data would be used for regulatory decisions, it did not in fact emphasize the production of good data but only the possibility of criticism of allegedly bad data. "You can check our work," says Wheeler, by which he means: "People will actually be able to take us to court if we don't follow this regulation today." [60] The real goal, therefore, is to "stop stuff" by giving the public the tools to sue the EPA if it falls short on its promise to use hyper-transparent data. A paralyzing double bind is introduced. If the EPA were to use "hyper-transparent" data, it will likely produce weak regulations, if any. If, instead, the EPA slips up and uses "secret" data, then it will violate its

own rules, thus allowing the public (or, rather, the corporations hiding behind that term) to sue to stop or reverse those regulations. ("That's why I thought it was important to do it as a rulemaking instead of just as a memo," says Wheeler.) [61]

But then, perhaps feeling he had overstated his message, he quickly pulls back:

> If the American people are to be regulated by interpretation of these scientific studies, they deserve to scrutinize the data as part of the scientific process and of American self-government. *Transparency is a defense of, not an attack on, the important work done by career scientists at the EPA*, along with their colleagues at research institutions around the country. [62]

But the tension between defense and attack is inherent in Wheeler's discourse, down to the optical metaphors — "sunshine" and "transparency." Is sunshine what makes truth visible by vanishing darkness and all the secrets it hides? Or is sunshine more like a laser beam meant to vaporize truth out of existence, rendering it so transparent that it disappears? The discourse of the deregulation lobby dances between trying to look like it is *bringing the truth out* of darkness while in fact *making truth disappear from* the regulatory equation. [63] Making truth disappear does not mean questioning or doubting it, but simply making it irrelevant. It does not matter whether the EPA uses good or bad data but whether that data is transparent or secret. If it is transparent, it will be useless, and if secret then it will not be useable. Either way, nothing happens. "Stuff will be stopped."

When data is not about information

Some Climategate emails show that several members of the CRU network were eager to withhold data from people they judged to be tied to deregulatory agendas, and whose work

traveled almost exclusively outside of peer-reviewed journals. Much has been made of this eagerness, and of the fact that the scientists worked hard to dismiss the many freedom-of-information requests filed in the United States and the United Kingdom, which undoubtedly helped cast their behavior not just as unethical but as potentially unlawful.

Our point is not to judge whether the CRU scientists' response was ethical or not, but to suggest that data requests and data denials may have been only partially about gaining or giving access to information. In other words, what connects Climategate to the regulatory discourse instantiated by the EPA rules is not just the figure of "secret science," or of "conspiratorial scientists," or the redefinition of truth that these figures enable, but also the non-epistemic role played by data requests and data denials. The EPA's data transparency rule, as we have seen, is about ethics — not content. Its apparent ethical focus is aimed at excluding data for the purposes of stalling or weakening regulation. Similarly, data requests (informal or via the FOI process) to the CRU network were not, we argue, necessarily aimed at accessing and making knowledge but at "stopping stuff."

The emails do show that the scientists were quite exercised about the flood of data requests they were receiving, that they worried the requests would be used against them, and that it was not fully clear to them or to some of their superiors whether data produced collaboratively by different institutions supported by different granting agencies could be lawfully shared beyond the immediate stakeholders. Nor was it clear whether the IPCC and the UN (on whose behalf the CRU was working) were subject to freedom of information requests.

In any case, the reasons that made the scientists worry about these requests may have been, we argue, more mundane than epistemic. A common concern behind the scientists' attempts to withhold data was not so much the fear of irresponsible criticism but something closer to parasitism. Some emails convey their profound resentment at having to waste precious research

time finding and preparing the data requested by outsiders — people they did not see as colleagues or as potential contributors to climate science. (The leading requester was Steve McIntyre, a Canadian mining industry executive with a good undergraduate training in math.) Compliance with just one data request concerning an important publication could use up tens or even hundreds of hours. Given that much of this data was already available in the public domain, some scientists thought that these requests were not just fishing expeditions but aimed at materially slowing down their research or, in some cases, about making them do the work for people who, while casting themselves as "citizen auditors," were in fact parasites with the ability to slow down their hosts while feeding on them.

These requests helped the critics no matter whether the scientists complied or not. If they did comply, the critics could study the data, blog critical commentaries, and most likely ask for more data, further depleting the CRU scientists' research time and resources. [64] And if the scientists refused or ignored the request, the critics could escalate the matter to a higher level, write to the scientists' superiors, their funding agencies, their senators, or file freedom-of-information requests, threaten legal action or make accusations of scientific fraud, and otherwise denounce the scientists' secretive and conspiratorial ethos in blogs and talks. As for those who demonize critical race theory, they have sharpened this tactic of "baiting" the victim: "[B]y moving to curriculum transparency, we will […] bait the Left into opposing 'transparency,' which will raise the question: what are they trying to hide?" [65]

Some may characterize this as psychological warfare, but its wasteful effects may have been the real target. With a few emails the critics managed to slow down the scientists, stressing them, and pushing them to make errors, which they did. It may be impossible to change people's beliefs, but it is not only possible but more effective and efficient to slow them down. Freedom of information requests helped.

This strategy — if indeed it was one — did not hinge on data as an epistemic object but on catching climate scientists in the kind of double bind produced by the new discourse of hyper-ethics. If scientists refused to share their data, the fact of refusal was triumphantly broadcast by the skeptics as proof of unethical behavior, and as evidence of a broader conspiracy. If they complied with each and every one of these endless demands for data, they seriously compromised their ability to do the science. Just a handful of people with limited but not dismissible credentials (like McIntyre) could thus do significant mundane — not epistemic — damage. McIntyre has been accused of being on the payroll of the fossil fuel industry, but that probably does not matter. What is more important is that one did not need access to the deep pockets of the oil industry to trigger or spin Climategate. With a good plan and a certain relentlessness, a smart retired executive with some math background could do it, either singlehandedly or with the help of a few like-minded individuals with comparable skills. Again: Nobody needed to prove anything. The goal was not information-gathering but throwing sand in the gears by asking for data.

Run out the clock

Climategate was not a scientific controversy. Its central focus was on the appearance of conspiracy, which may have then informed the development and content of EPA rules concerning the ethics of data availability and the need to avoid conflicts of interests. The discourse of conspiracy, however, was not meant to mobilize an actual search for the covered-up truth, but simply to run the clock while pretending to seek the truth; it was to kill time, not produce knowledge. Marc Morano's dictum — "We're the negative force. We are just trying to stop stuff." — best captures the non-epistemic nature of this discourse. This is categorically different from science and technologies studies' definition of knowledge as the consensus established by the closure of a controversy. His party does not win by winning an argument: by

producing knowledge, by bringing a debate to closure, by establishing the existence of a new object, or by making science-informed decisions. The goal is to keep things open and dodge consensus, which is knowledge's conspiratorial twin. This might look like fighting knowledge with doubt, but the real goal is just to run the clock, whatever it takes. Epistemically speaking, running the clock is neither a win nor a loss but constitutes an essentially different modus operandi that looks like scientific controversy but is not one. Even if the skeptics knew or sensed themselves to be on the losing side of the scientific debate about climate change, that would not make them losers because they don't need to win an epistemic battle to achieve their goal of stopping stuff.

One could, for instance, hack emails and fuel an ethical scandal like Climategate that will set back the environmentalist cause by several years; fund alternative science so as to produce claims that would take time to debunk; slow down climate research and regulation by wasting climate scientists' time and resources with FOIA requests for data and calculations; stuff the EPA's advisory boards with industry representatives that will take time to rotate out, or introduce pro-industry "ethical" norms for rule-making that will have to be challenged and vacated. *Anything* that can let the skeptics run out the clock is a successful tactic. The production of epistemic doubt is only one of them. As a result, science is not going to be an effective weapon against "stopping stuff" because stopping stuff is not reducible to falsehood winning over truth, or distraction over attention.

Effective waste

Is there a figure that precisely captures the tactics embedded in both Climategate and the rules developed by Trump's EPA? We have emphasized some of their common denominators: the pivot from scientific content to ethical norms, and the radicalization of such norms to the point of turning them against their original function. We have also remarked how this amounts to

more than turning ethics upside down. Corporate interests vampirize the public's grievances (in particular, its calls for transparency, openness, and fairness), absorbing and performatively mimicking those grievances to give their own agenda a shiny veneer of morality, a cover for its absence. The norms of the adversaries are appropriated and then turned against the adversaries themselves, as is happening in the curriculum transparency movement. Climategate provides a further example of these tactics, showing the ethics of data disclosure being radically amplified and turned against the climate scientists, a move that may prefigure the EPA's subsequent open data policy.

Another common denominator: *parasitism*. Not just ordinary appropriation but highly efficient targeted appropriation of the host's resources. Deregulation advocates not only turn their adversaries' norms against them and harm the public interest while pretending to defend it, but they do so economically, by skillfully maximizing the bang and minimizing the buck. Mobilizing ethics to change rule-making protocols is a lot cheaper than fighting epistemic controversies; criticizing science is infinitely easier than producing an alternative science; playing scientist on TV to make it look like there is no scientific consensus on global warming is remarkably less time-consuming and skill-intensive than becoming a scientist; demanding data and calculations is a lot less resource-intensive than producing them from information available in the public domain, and while many people can "stop stuff," far fewer can produce knowledge. The problem with conspiratorial thinking is not so much that it is false but that it is extraordinarily efficient. It's a cheap way of wasting the world.

¤

We thank the participants to the SciencesPo–LSE Planetary Responsibility Conference, the Innovation Law and Policy Workshop at the University of Toronto, and the UCLA History of Science Group for all their comments and criticism. Stanley Kim Robinson, William Boyd, Christine Borgman, Kriss

Ravetto-Biagioli, and Philip Raucci provided much food for thought and support. Very special thanks to Michele Pridmore-Brown.

¤

Mario Biagioli, a professor at UCLA, lives and works in Los Angeles.

Alain Pottage is a professor in the law school at Sciences Po, Paris. His current work focuses on questions of law and governance in relation to climate change.

¤

[1] "Doubt Is Our Product," in Robert Proctor, *Cancer Wars* (New York: Basic Books, 1995), pp. 101–132; Robert Proctor and Londa Schiebinger (eds), *Agnotology: The Making and Unmaking of Ignorance* (Stanford: Stanford University Press, 2008); Naomi Oreskes and Eric Conway, *Merchants of Doubt* (New York: Bloomsbury, 2010); Janet Kourany and Martin Carrier (eds) *Science and the Production of Ignorance* (Cambridge, MA: MIT Press, 2020). See also Robert Kenner, *Merchants of Doubt* (2014), a documentary film inspired by Oreskes and Conway's book by the same title.

[2] The strategy of turning science against itself has been discussed by Oreskes and Conway, who have conceptualized it in epistemic terms: "[Y]ou could use normal scientific uncertainty to undermine the status of actual scientific knowledge. As in jujitsu, you could use science against itself." Or, "the industry first began to use science to fight science, when the modern era of fighting facts began." Oreskes and Conway, *Merchants of Doubt*, pp. 34, 14. What we describe, instead, is a post-epistemic scenario: turning the ethical values of science against the content of science.

[3] Cristopher F. Rufo's January 7, 2022, tweet reproduced in Nicole Gaudiano, "A Key Conservative Instigator of the Critical Race Theory Controversies Says He Now Wants to 'Bait' the Left into Fights over Republican-Led 'Transparency' Efforts in Schools," *Business Insider*, March 8, 2022, at: https://www.businessinsider.com/critical-race-theory-curriculum-transparency-christopher-rufo-conservative-school-education-2022-3?r=US&IR=T. Gaudiano also quotes Jeremy Young of the free-expression organization PEN America: "[Rufo's] idea is that because the term [transparency] seems so common-sense and so popular, that it's a political winner for his team."

[4] "Process matters […] we should take that seriously [… and we need] to avoid abuses that occur sometime […] in guidance to rule-making, the use of guidance to do rule-making […] We need to be open and transparent and objective in how we do rule-making," Scott Pruitt, *ABC News*, "Scott Pruitt Full Speech to EPA Staff," February 21, 2017, at: https://www.youtube.com/watch?v=X6SqgG9OSOM at 11:41.

[5] "A vital part of ensuring integrity and confidence in EPA's PACs comes from guaranteeing that FAC members remain independent of the Agency during their service." Scott Pruitt, "Strengthening and Improving Membership on EPA Federal Advisory Committees," October 31, 2017. https://www.epa.gov/sites/default/files/2017-10/documents/final_draft_fac_memo-10.30.2017.pdf.

[6] *Ibid*. at Section "A," p. 2.

[7] Clean Air Scientific Advisory Committee Homepage at https://casac.epa.gov/ords/sab/f?p=105:1

[8] Scott Pruitt, Heritage Foundation, October 17, 2017 at: https://www.youtube.com/watch?v=ZdDPw0Wi8GM, starting at 0:55. Discussed in Rebecca Trager, "Uproar Over EPA's Plan to Ban Its Grantees from Science Committees," *Chemistry World*, October 23, 2017, at https://www.chemistryworld.com/news/uproar-over-epas-plan-to-ban-its-grantees-from-science-committees/3008162.article (last accessed 3/20/21).

[9] Stuart Shapiro, "EPA's Scott Pruitt Isn't Helping His Conflict-of-Interest Image," *The Hill*, November 3, 2017.

[10] "This is nothing more than a thinly veiled attempt to try to exclude sound scientific expertise from these advisory committees, and is consistent with efforts to pack these committees with non-science-based interests," Mark Weisner as quoted in Rebecca Trager, "Uproar Over EPA's Plan to Ban Its Grantees from Science Committees," *Chemistry World*, October 23, 2017. Room for the quick implementation of this new policy was prepared by the Trump administration's declining to reappoint many of the FACs members earlier in the year. Rebecca Trager, "US Environment Agency Advisory Board in Turmoil," *Chemistry World*, May 11, 2017.

[11] Representative Lamar Smith (R-Texas), who chaired the House Science Committee. At the event Smith remarked, "For eight years, the EPA has had science boards filled with members who have had conflicts of interest. […] Administrator Pruitt's actions today enable us to put the principles of this bill into practice. Americans can thank Administrator Pruitt for advancing honest government, sound scientific opinions, and a more responsive EPA" (quoted in Will Thomas, "EPA Bars Grant Recipients from Serving on Science Advisory Panels", *AIP Bulletin*, November 10, 2017 at: https://www.aip.org/fyi/2017/epa-bars-grant-recipients-serving-science-advisory-panels).

[12] Shaun A. Goho, "Courts Strike Down EPA Advisory Committee Directive," Newsletter of the Emmet Environmental Law and Policy Clinic, Harvard Law School, April 28, 2020, at: https://clinics.law.harvard.edu/environment/2020/04/28/courts-strike-down-epa-advisory-committee-directive/. Also: "On Nov. 3, EPA announced updated membership lists for SAB, CASAC, and BOSC, with a number of the new additions hailing from industry," Will Thomas, "EPA Bars Grant Recipients from Serving on Science Advisory Panels," *AIP Bulletin*, November 10, 2017.

[13] Representative Bill Foster (D-Illinois), a member of the House Science Committee and former Fermilab physicist, led 60 other Democrats and one Republican in writing to Pruitt arguing that, "Receiving an EPA grant, which is given with no expectation of particular results, does not constitute a conflict of interest — and no such limitation has been proposed on advisory board members who receive industry funding for their work," Will Thomas, "EPA Bars Grant Recipients from Serving on Science Advisory Panels," *AIP Bulletin*, November 10, 2017.

[14] Andrew Wheler, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," January 5, 2021, at https://cei.org/event/cei-online-forum-featuring-epa-administrator-andrew-wheeler/, at 49:01.

[15] "Strengthening Transparency in Pivotal Science Underlying Significant Regulatory Actions and Influential Scientific Information," *Federal Register*, January 6, 2021, at https://www.federalregister.gov/documents/2021/01/06/2020-29179/strengthening-transparency-in-pivotal-science-underlying-significant-regulatory-actions-and. Also in Wheeler's lecture at the CEI, he refers to "sunshine, transparency" https://cei.org/news_releases/epa-administrator-wheeler-unveils-final-science-transparency-rule-during-cei-forum/ at 49:10.

[16] Timothy Cama, "Interior Dept. Implements New Science Policy," *The Hill*, October 4, 2018; Michael Doyle, "Interior Department Moves to Impose New Rules on Use of Science in Decision-making," *Science*, February 17, 2020. See also Wendy Wagner, Elizabeth Fisher and Pasky Pascual, "Whose Science? A New Era in Regulatory 'Science Wars,'" 362 *Science* 636, 2018.

[17] "Strengthening Transparency in Regulatory Science," *Federal Register*, April 30, 2018, at https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science.

[18] Juliet Eilperin, "Judge Throws Out Trump Rule Limiting what Science EPA Can Use," *Washington Post*, February 1, 2021, at: https://www.washingtonpost.com/climate-environment/2021/02/01/trump-secret-science/. See also Genna Reed, "EPA Advisory Board's Restricted Science Advice is Too Little, Too Late, and Comes During a National Crisis," *Union of Concerned Scientists,* April 29, 2020; Juliet Eilperin and Brady Dennis, "EPA Finalizes Rule to Limit Science Behind Public Health Safeguards," *Washington Post*, January 5, 2021; Lisa Friedman, "A Plan Made to Shield Big Tobacco from Facts is Now E.P.A. Policy," *The New York Times*, January 4, 2021.

[19] Lisa Friedman, "A Plan Made to Shield Big Tobacco from Facts is Now E.P.A. Policy," *The New York Times*, January 4, 2021.

[20] Andrew Wheeler, "Why We're Ending the EPA's Reliance on Secret Science," *The Wall Street Journal*, January 4, 2021.

[21] John Ioannidis, "The Reproducibility Wars: Successful, Unsuccessful, Uninterpretable, Exact, Conceptual, Triangulated, Contested Replication." *Clinical Chemistry* 63 (2017): 943–945; Daniele Fanelli, "Is Science Really Facing a Reproducibility Crisis, and Do We Need It To?" *PNAS* 115 (2018): 2628–2631.

[22] Myron Ebell, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://www.youtube.com/watch?v=EBzl4Llvx2Q, starting at 12:30.

[23] Ebell, *Ibid.* at 12:58.

[24] Andrew Wheeler, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://www.youtube.com/watch?v=EBzl4Llvx2Q, starting at 4:31.

[25] *Ibid.*, at 5:03.

[26] "At my lunch with Rufo, I'd asked what he hoped this movement might achieve. He mentioned two objectives, the first of which was "to politicize the bureaucracy." Rufo said that the bureaucracy had been dominated by liberals, and he thought that the debates over critical race theory offered a way for conservatives to "take some of these essentially corrupted state agencies and then contest them, and then create rival power centers within them." Benjamin Wallace-Wells, "How a Conservative Activist Invented the Conflict over Critical Race Theory," *The New Yorker*, June 18, 2021.

[27] Among the works pointing to problematic deployments of openness and transparency see Marilyn Strathern, "Improving Ratings," *European Review*, 5 (1997): 305–321; Sabina Leonelli, "Open Science and Epistemic Pluralism: Friends or Foes?," forthcoming in *Philosophy of Science*; Paul N. Edwards; "Knowledge Infrastructures under Siege: Climate Data as Memory,

Truce, and Target," in Didier Bigo et al. (eds), *Data Politics* (London: Routledge, 2019), pp. 21–42; Philip Mirowski, "The Future(s) of Open Science," *Social Studies of Science*, 2018, Vol. 48 (2): 171–203.

[28] Wheeler, Competitive Enterprise Institute event at 28:10. He repeats the exact same statement later, suggesting it was perhaps a memorized one-liner. Ebell shares Wheeler's sentiment and refers to the publisher of *Science* magazine — the American Association for the Advancement of Science — as a "pressure group," and to the research produced by the National Oceanic and Atmospheric Administration as "secret science." ("CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at 32:30 and 45:30).

[29] "We should be deeply skeptical of schools and teachers who would rather keep their curricula a secret […]. That's the classic warning sign for incompetence, fanaticism, or abuse" Christopher Rufo quoted in Nicole Gaudiano, "A Key Conservative Instigator of the Critical Race Theory Controversies Says He Now Wants to 'Bait' the Left into Fights over Republican-Led 'Transparency' Efforts in Schools," *Business Insider*, March 8, 2022.

[30] Marc Morano, in Robert Kenner, *Merchants of Doubt*, at 1:09:41.

[31] "We went after James Hansen and Michael Oppenheimer and had a lot of fun with it. We mocked and ridiculed James Hansen. I was authorized, I can't believe they let me do it, I did a 10,000-word scathing critique of James Hansen […] I am not going the question the scientific work. […] The scientific work is not in question," quoting Marc Morano, in Robert Kenner, *Merchants of Doubt* at 1:02:30.

[32] "But teachers, their unions and free speech advocates say the proposals would excessively scrutinize daily classwork and would lead teachers to pre-emptively pull potentially contentious

material to avoid drawing criticism," Tyler Kingkade, "They Fought Critical Race Theory. Now They Are Focusing on 'Curriculum Transparency,'" NBCNews.com, January 20, 2022, at: https://www.nbcnews.com/news/us-news/critical-race-theory-curriculum-transparency-rcna12809.

[33] "The concern […] is that it chills teaching and creates an administrative burden for educators that will drive more from the profession," Nicole Gaudiano, "A Key Conservative Instigator of the Critical Race Theory Controversies Says He Now Wants to 'Bait' the Left into Fights over Republican-Led 'Transparency' Efforts in Schools," *Business Insider*, March 8, 2022. One could imagine that the teachers who replace those leaving will be more amenable to the parents' demand for transparency, thus adopting more conservative curricula without the need to engage in any substantial conversation about the content.

[34] Wheeler, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://cei.org/event/cei-online-forum-featuring-epa-administrator-andrew-wheeler/, 49:01

[35] Wheeler, "Why We're Ending the EPA's Reliance on Secret Science," *The Wall Street Journal*, January 4, 2021.

[36] Lisa Friedman, "A Plan Made to Shield Big Tobacco from Facts is Now E.P.A. Policy," *The New York Times*, January 4, 2021.

[37] For older periods see Oreskes and Conway, *Merchants of Doubt*, pp. 16, 18–19, 214. For more recent examples see Robert Kenner, *Merchants of Doubt*, at 57:54–59:52.

[38] Marc Morano, in Robert Kenner, *Merchants of Doubt*, at 1:04:12.

[39] A good overview is Fred Pearce, *The Climate Files* (London: Guardian Books, 2010).

[40] https://www.ipcc.ch/reports/

[41] Richard Black, "Climate E-mail Hack 'Will Impact on Copenhagen Summit,'" *BBC News*, December 3, 2009.

[42] Fred Pearce, "Climategate: Anatomy of A Public Relations Disaster," *Yale Environment 360*, December 10, 2009.

[43] Quoted in Juliet Eilperin, "Hackers Steal Electronic Data from Top Climate Research Center," *Washington Post*, November 21, 2009.

[44] Sarah Palin, "Sarah Palin on the Politicization of the Copenhagen Climate Conference," *Washington Post*, December 9, 2009.

[45] "University of East Anglia Emails: The most Contentious Quotes," *The Telegraph*, November 23, 2009 (no author listed).

[46] See Christopher Booker, "Climate Change: This is the Worst Scientific Scandal of Our Generation," *The Telegraph*, November 28, 2009.

[47] Juliet Eilperin, "Penn State Clears Mann in Climate-gate Probe," *Washington Post*, July 1, 2010, at: http://views.washingtonpost.com/climate-change/post-carbon/2010/07/by_juliet_eilperin_a_pennsylvania.html.

[48] A preliminary assessment was offered on the first anniversary of Climategate by the editors of *Nature*: "Never mind that almost all of the accusations thrown at the researchers involved

have been proven baseless. Never mind that much of the media has retreated from the aggressive stance it adopted during its 'comment first, ask questions later' approach to the content of the e-mails. And never mind that the scientific basis for the global-warming problem remains as solid as it was a year ago. Huge damage has been done to the reputation of climate science…" ("Closing the Climategate," *Nature*, November 21, 2010).

[49] "It is quite clear from the paper that I was not questioning the link between anthropogenic greenhouse gas emissions and warming." Kevin Trenberth, "Kevin Trenberth on Hacking of Climate Files and 'Climategate,'" *Climate and Global Dynamics*, July 2009, at https://www.cgd.ucar.edu/staff/trenbert/emails/.

[50] One email from CRU director Phil Jones refers to "Mike's *Nature* trick" to "hide the decline." This has been widely represented to reveal efforts to secretly hide a real decline in temperatures to promote a falsehood about global warming. (Fred Pearce, "Climategate: Anatomy of A Public Relations Disaster.")

[51] It continues: "And even if the data are regarded as tainted by association with Jones, the graphs he has produced of global temperatures over the past 150 years are almost identical to those produced by, among others, two U.S. agencies, the National Oceanic and Atmospheric Administration and NASA's Goddard Institute for Space Studies" (*Ibid*). Also, writing after the leak of additional emails, James Taylor saw three themes emerging: "(1) prominent scientists central to the global warming debate are taking measures to conceal rather than disseminate underlying data and discussions; (2) these scientists view global warming as a political 'cause' rather than a balanced scientific inquiry and (3) many of these scientists frankly admit to each other that much of the science is weak and dependent on deliberate manipulation of facts and data," James Taylor, "Climategate 2.0: New Emails Rock the Global Warming Debate," *Forbes*,

November 23, 2011, at https://www.forbes.com/sites/jamestaylor/2011/11/23/climategate-2-0-new-e-mails-rock-the-global-warming-debate/?sh=66aaae2b27ba

[52] David A. Fahrenthold and Juliet Eilperin, "In E-mails, Science of Warming Is Hot Debate," *Washington Post*, December 5, 2009, at: https://www.washingtonpost.com/wp-dyn/content/article/2009/12/04/AR2009120404511.html?sid=ST2009120404540

[53] Naomi Oreskes and Erik Conway, *Merchants of Doubt*, pp. 197–213.

[54] Ben Santer to Phil Jones, October 9, 2009, at http://eastangliaemails.com/emails.php?eid=1045&filename=1255100876.txt

[55] Ebell refers to the research produced by the National Oceanic and Atmospheric Administration as "secret science". Ebell, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://www.youtube.com/watch?v=EBzl4Llvx2Q at 32:30 and 45:30.

[56] Andrew Wheeler, "Why We're Ending the EPA's Reliance on Secret Science," *The Wall Street Journal*, January 4, 2021.

[57] On data audits in climate science see Paul N. Edwards, "Knowledge Infrastructures under Siege."

[58] Nicole Gaudiano, "A Key Conservative Instigator of the Critical Race Theory Controversies Says He Now Wants to 'Bait' the Left into Fights over Republican-Led 'Transparency' Efforts in Schools," *Business Insider*, March 8, 2022.

[59] Christopher Rufo quoted in *Ibid.*

[60] He continues: "This empowers the American people, demands future transparency from the agency going forward. That's why we thought it was important to do it as a rulemaking instead of just as a memo," Andrew Wheeler, "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://www.youtube.com/watch?v=EBzl4Llvx2Q, starting at 23:48.

[61] *Ibid.*

[62] Wheeler, "Why We're Ending the EPA's Reliance on Secret Science", *The Wall Street Journal*. He repeated that statement verbatim in "CEI Science Transparency Forum Featuring EPA Administrator Andrew Wheeler," at https://www.youtube.com/watch?v=EBzl4Llvx2Q, at 8:50.

[63] A new notion of truth needs to be introduced that is decoupled from any knowledge-making protocols or from consensus, so as to allow one to dismiss regulatory science without appearing to be against truth. In this case, that is best achieved by simultaneously arguing that strong scientific consensus is too good to be true (it can only be conspiratorial, as Climategate has shown), and by passing off the undermining of science as the proper exercise of the right to accountability that any free citizen is entitled to (as exemplified by the EPA data transparency rule). This is not a type of truth one mobilizes to confirm or refute a statement but simply to make "stopping stuff" look like the only responsible thing to do. It is an "ethical" definition of truth.

[64] Similarly, "[t]he legislation [introducing curricular transparency] also makes it easier for angry parents to find additional conflicts with teachers, said Jeremy Young," Nicole Gaudiano, "A Key Conservative Instigator of the Critical Race Theory Controversies Says He Now Wants

to ‘Bait’ the Left into Fights over Republican-Led ‘Transparency’ Efforts in Schools,” *Business Insider*, March 8, 2022.

[65] Christopher Rufo, quoted in *Ibid*.

Mario Biagioli

Mario Biagioli is a professor at UCLA’s School of Law and its Department of Communication. He is the author, most recently, of *Gaming the Metrics: Misconduct and Manipulation in Academic Research* (MIT Press, 2020) (with Alexandra Lippman) and *Academic Brands: Distinction in Global Higher Education* (Cambridge University Press, 2022) (with Madhavi Sunder).

LARB CONTRIBUTOR

Alain Pottage

Alain Pottage is a professor in the Law School at Sciences Po, Paris. His current work focuses on questions of law and governance in relation to climate change.

LARB CONTRIBUTOR

RECOMMENDED

Weird Science

From anti-vaxxers to Flat Earthers, the public’s (and scholars’) perception of science shifted sometime between 1990-2010, writes Michael Gordin....

Of Viruses and Licenses: Lessons from COVID-19 Vaccine Patent Debates

Mario Biagioli takes on the heated debates currently being enacted in op-eds around the compulsory licensing of COVID-19....

Anti-Anti-Anti-Science

A gentle critique of Andrew Jewett's "Science under Fire," and a nuanced exploration of science-hesitancy....

Fraud by Numbers: Metrics and the New Academic Misconduct

UCLA professor of Law and Communication Mario Biagioli dissects how metric-based evaluations are shaping university agendas....

Is There a Crisis of Truth?

Historian of Science Steven Shapin turns the screw on the notion that "truth" is in crisis....
