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Facts Matter

Science, like any field of endeavor, relies on freedom of inquiry; and one of the hallmarks of that freedom is objectivity. Now more than ever, on issues ranging from climate change to AIDS research to genetic engineering to food additives, government relies on the impartial perspective of science for guidance.

PRESIDENT GEORGE H. W. BUSH, 1990

The U.S. government runs on information—vast amounts of it. Researchers at the National Weather Service gather and analyze meteorological data so they know when to issue severe-weather advisories. Specialists at the Federal Reserve Bank collect and analyze economic data to determine when to raise or lower interest rates. Experts at the Centers for Disease Control examine bacteria and viral samples to help guard against a large-scale outbreak of disease. The public relies upon the accuracy of such data and upon the integrity of the researchers who gather and analyze it.

Equally important, the analysis of fact-based data is pivotal to the government's policymaking process. When compelling evidence suggests a threat to human health from the presence of miniscule amounts of a contaminant in the water supply, the federal government may move to tighten drinking water standards to protect the public. When data indicate structural problems in aging bridges in the Interstate highway system, the federal government may move to allocate emergency repair funds. When the population of an animal species perilously declines, officials may opt to list it for protection under the Endangered Species Act.

Given the myriad pressing problems involving complex scientific and technological data—from the AIDS pandemic to the threat of nuclear proliferation—the public expects government experts and researchers to pro-

vide a high caliber of data and analysis, perhaps higher than ever before. One might imagine that impartial researchers with expertise in gathering and analyzing specialized data would be prized for the important role they play in laying the foundation for an informed policymaking process.

And yet the administration of George W. Bush has badly undermined this cornerstone of fact-based data. Scientists, policymakers, and technical specialists affiliated with nearly every federal agency have documented in detail the ways in which Bush administration officials, determined to push through particular political agendas, have systematically ignored, suppressed, or distorted the information gathered and analyzed on its behalf by federal agencies and advisory panels.

As this book will demonstrate, top administration officials have rewritten the work of government scientists on climate change. They have fired leading experts on scientific advisory panels and replaced them with ideologues whose credentials are often questionable at best. And they have routinely tried to shelve government reports whose findings conflict with administration policies.

Politics always plays a central role in science and technology policymaking. Every administration is influenced to some degree by political considerations on matters of science and technology—as it should be. What distinguishes the Bush administration, however, is a dramatic shift: its willingness to stifle or distort scientific evidence from its own federal agencies that runs counter to its preferred policies—and ideologies.

This is a troubling development, unprecedented in both scope and pervasiveness. At the highest levels, the Bush administration has allowed partisan considerations and the influence of special interests to permeate the traditionally nonpartisan mechanisms through which the government gathers, analyzes, and disseminates information. Reasonable people may well disagree over many of the Bush administration's political choices. There is, however, a crucial difference between disputes over policy and the manipulation of the policymaking process itself. Partisanship aside, there should be little disagreement about the need for credibility in the governmental policymaking process.

To understand this distinction, it is important to recognize the difference between policymaking and the practice of scientific assessment and analysis.

Policymaking is about making choices, often difficult ones. How much

of a given contaminant should be allowed in drinking water? Should the government require seat belts in automobiles? Should it invest in a new weapon system? To make policy choices, government officials frequently must balance the needs of one constituency against another—a process that embodies the very definition of “politics” itself. Proposed regulations to improve worker safety and health, for example, need to be weighed against the potential economic burden they might place upon small business owners. Tighter auto emissions standards must be considered against the added production costs they will impose upon the auto industry and, in turn, upon consumers if it means higher vehicle prices.

Scientific assessment and technical analysis are quite a different matter. These practices are about finding the best answers we can to specific questions about phenomena and causality in the world. They are, in other words, about identifying and understanding facts as accurately as possible. Scientific information and technical analysis thus provide the underpinning of the policymaking process. Most governmental policymakers understand the crucial importance of robust and impartial sources of information. Put simply, good decision makers seek the best facts they can get. The business of scientists and policy analysts is to try to provide decision makers with that crucial foundation.

It is worth noting that critics, on both the left and right of the political spectrum, often make astute points about the inherent biases that can taint scientific research. Conservatives frequently belittle governmental and academic scientists for essentially being too detached from reality: conducting esoteric studies with taxpayer funds and using the trappings of science and inductive reasoning to hide a liberal bias. Critics on the left, meanwhile, tend to emphasize the extent to which scientists, like everyone else, are enmeshed and influenced by their own political and financial ties. As Richard Lewontin asked in an article on the subject in the *New York Review of Books*: “Why should we trust scientists, who, after all, have their own political and economic agendas?”¹

Notwithstanding the validity of such critiques, they are largely irrelevant to the case studies of outright distortion and censorship presented here. Clearly, governmental scientists and technical analysts are not infallibly objective or unbiased. But the degree to which bias taints these practitioners—whether they are “too aloof in their liberal beliefs” or “too entrenched in the elite establishment”—fades to background noise

if an entire policymaking system is consciously manipulated for partisan gain. Discussing such issues, given the extraordinary circumstances reported by government scientists and technical analysts working in the Bush administration, is rather like conducting an argument about the extent to which pilots normally deviate from their flight plan while riding in an airplane that has just been hijacked.

AN UNPRECEDENTED POLITICIZATION

Consider one small but telling incident. In November 2003, a National Cancer Institute fact sheet was altered, over government scientists' objections, to lend credence to a favorite canard of some antiabortion Christian conservatives that there is a link between abortion and breast cancer. A number of scientific studies—most notably a highly respected Danish study in the 1990s involving 1.5 million women—have thoroughly refuted the link.² And yet, as has frequently occurred in the Bush administration, politics—whether out of ideological conviction or to appease political partisans—trumped peer-reviewed scientific evidence, and a federal agency was pushed to dispense misleading information about a vital matter of women's health. After a public outcry, including a *New York Times* editorial labeling the incident “an egregious distortion of the evidence,” the National Cancer Institute restored its public information to reflect the well-documented scientific evidence that no connection exists between abortion and breast cancer.³

The most notable thing about this incident is that it happened at all. This was not a question of bias or incompetence quietly creeping into the government's dissemination of scientific information; it reflects a wholesale effort to mislead the public on behalf of anti-abortion activists. It is one thing for such groups to peddle misinformation on the World Wide Web and elsewhere about the bogus cancer connection to try to frighten women out of having abortions. It is quite another for the National Cancer Institute to condone the politically motivated manipulation of data.

The issue of whether or not one opposes abortion is a moral and political question. The question of whether a link exists between abortion and breast cancer is *not* a political question. It is an empirical question about the most up-to-date and best-supported scientific knowledge.

In the extraordinary climate created by the Bush administration, though, it is not enough for scientists to investigate the facts of a given situation; they now must often explain to policymakers that facts matter in the first place. As the eminent Stanford University scientist Richard N. Zare wrote in the *San Francisco Chronicle* in 2005, “We must be willing to speak out against the threat of making science just a matter of opinion.” “Scientific theories are more than a special set of opinions that the scientific community is trying to push onto the public in opposition to religious beliefs,” noted Zare, who served on the National Science Board under presidents Clinton and Bush senior. “To pretend otherwise is to invite the decline of our nation.”⁴

To understand more about the current climate, consider the situation of a senior government scientist who has served both Democratic and Republican presidents. Speaking to me after-hours from his home because of fear of retribution, he cited eight instances in which his colleagues were denied the opportunity to present papers, prohibited from submitting their articles to journals, or ordered to significantly alter their findings for a government document or report. In each instance, he said, the actions were taken not because the researchers’ work was poorly executed but rather “because the findings were not consistent with administration policies.”⁵

“Scientific integrity is being badly impaired,” he told me, adding that he had seen nothing like it in nearly twenty years as a government scientist. I corroborated much of his story from other sources, but, alas, was unable to persuade him to allow me to go public with the particulars. The details of his story are so clearly identifiable that, even if I withheld his name, the source of the leak would be obvious. He agonized about the situation but ultimately felt he had to put the welfare of his family first; he could not risk losing his job.

Even so, this source, and many others like him, helped me to understand the climate of fear and demoralization that now pervades scientific work in many federal agencies. This particular scientist, for instance, explained that researchers at his agency are routinely subjected to tight control by the administration. He told me that each technical area in his agency has “political commissars”—all political appointees—whose job is to make sure that scientific and technical work conducted within the government does not conflict with the administration’s political agenda.

What makes this source particularly compelling is how fundamentally apolitical he is. He made it clear to me that his complaint lies not with the administration's policy choices but with its profoundly undemocratic processes. As he put it: "All government scientists want the same thing: a fair hearing for their research and a chance to put their data on the table." In the administration of George W. Bush, this chance is being systematically denied.

AN AFFRONT TO SCIENCE AND DEMOCRACY

It is easy enough to understand why the politically motivated censorship and distortion of scientific and technical research would be of overriding concern even to apolitical scientists: a doctrinaire allegiance to one set of conclusions violates the central premise of the scientific method. As the conservative philosopher Karl Popper famously explained in his classic work *The Logic of Scientific Discovery*, science achieves a deeper understanding of the world precisely by vigorously challenging hypotheses, a process Popper dubbed as "falsification." For scientists, Popper wrote, the method of research is not to defend previous findings but "using all the weapons of our logical, mathematical, and technical armory" to "try to overthrow them." As Popper put it, "Those among us who are unwilling to expose their ideas to the hazard of refutation do not take part in the scientific game."⁶

In this context, the reaction within the scientific community to the administration's actions is unsurprising. Pseudoscientific or "faith-based" interventions, in contradiction to observable evidence, are being promoted and funded with taxpayer money, while valuable lifesaving innovations are stifled or neglected. Many researchers now find their work censored by the administration, while others engage in self-censorship as a defense against losing their jobs. Many other scientists and technical specialists have left government service in despair or protest. The Centers for Disease Control have been hit particularly hard. As many as forty top CDC managers—in career positions—have left the agency since the start of the Bush administration, according to the *Washington Post*.⁷

As serious as these effects are for scientists and the scientific community, the impact is even more grave for the health of the nation's demo-

cratic processes. Consider, for instance, the assessment in 2004 of Rep. Brian Baird (D-WA), a member of the House Science Committee: “In countless subtle and not so subtle ways,” Baird contends, “the administration and Republican majorities who control the House and Senate are deliberately and systematically suppressing discussion and criticism and distorting the scientific process. The modalities of such distortions are manifold and collectively constitute nothing less than a coordinated attack on virtually every stage and aspect of the science/policy interaction.”⁸

In a campaign spanning virtually every federal agency, the Bush administration has employed an arsenal of tactics to undermine scientific integrity.

SUBVERTING THE WORK OF GOVERNMENT SCIENTISTS

By vesting unprecedented power in a small cadre of White House loyalists, the administration has censored and distorted the work of agency scientists throughout the government. As detailed in chapter 2, one of the clearest examples of this strategy has been to allow a close-knit group of industry-friendly nonscientists at the White House’s Council on Environmental Quality to tightly control all scientific research conducted throughout the federal government on the issue of global warming. The administration has required that virtually every piece of scientific research and assessment on climate change funnel through this small, politically motivated group. In so doing, the White House has subverted the independence of federal agencies by making sure any scientific assessments released by the government conform to predetermined administration policy positions.

SUPPRESSING ANALYSES THAT DIVERGE FROM PREFERRED POLICY

Whether in science or other technical arenas, when dissenting analyses *have* surfaced within the federal government, the administration has frequently squelched them. This happened, for example, in November 2003, just before Congress voted in favor of the administration’s massive Medicare reform bill. Richard Foster, the chief actuary for the federal Medicare program, sought to release to Congress his analysis showing that the bill would cost \$500 billion to \$600 billion over ten years, *as much as \$200 billion more* than the White House’s official estimate.

Thomas Scully, the administration's Medicare chief, threatened to fire Foster if he released his analysis. As a result, Congress passed a bill that was based on numbers the administration knew to be inaccurate. After the story broke but before Congress could complete its feckless investigation of Scully's behavior, he resigned to work as a lobbyist for the pharmaceutical industry. As an editorial in the *New York Times* lamented after the deception came to light: "it is a terrible policy to deprive legislators of information they need to make informed choices."⁹

INJECTING POLITICS INTO SCIENTIFIC DETERMINATIONS

In many scientific arenas, the Bush administration has made a habit of injecting overtly political considerations into decisions that are normally debated on their scientific merits. As discussed in chapter 4, for example, the Food and Drug Administration (FDA) is required by law to approve drugs that are found to be safe and effective. In an almost unprecedented repudiation of governmental scientific expertise, however, Steven Galson, acting director of the FDA's Center for Drug Evaluation and Research, overturned the recommendations of his own staff and two FDA advisory panels and refused to approve over-the-counter access to the emergency "morning-after" contraceptive pill levonorgestrel, sold under the brand name Plan B.¹⁰

Although members of the two FDA scientific advisory committees had voted overwhelmingly to recommend over-the-counter access and stated that such a decision would present "no issues" of concern to women's health, the normal process of approval was circumvented.¹¹ Through the intervention of Dr. David Hager, a highly controversial evangelist physician it had appointed to the FDA advisory panel, the Bush administration blocked easier access to this contraceptive and pandered to religious activists who oppose birth control.

ALLOWING INDUSTRY AND OTHER INTEREST GROUPS TO INTERFERE IN GOVERNMENTAL PROCESSES

The Bush administration has frequently allowed private industry representatives to intervene in—and even dictate the outcome of—governmental policymaking. For example, as detailed in chapter 5, reports by

both the Government Accountability Office (GAO) and the inspector general of the Environmental Protection Agency (EPA) determined that top officials interfered with EPA scientists to suppress and distort analyses of mercury emissions from power plants. As part of this policy-making process, the EPA's proposed rule on mercury emissions contained no fewer than twelve paragraphs lifted, sometimes verbatim, from a legal document prepared by industry lawyers. Chagrined EPA officials explained that the language had crept into the preamble to their proposed rules "through the interagency process."¹² But the example underscores the lack of public input in the process and the tight and often secret circles of influence that operate routinely in the current administration.

STACKING SCIENTIFIC ADVISORY PANELS

The Bush administration has dramatically politicized the process through which appointments are made to science advisory panels. Although the appointment process has always involved political considerations, past administrations have historically looked for some political breadth and great scientific depth. Such considerations have been virtually ignored in the current administration. In one well-documented case in 2002, Tommy Thompson, as secretary of the Department of Health and Human Services, summarily rejected three well-qualified ergonomics experts from a peer review panel at the National Institute for Occupational Safety and Health (NIOSH).¹³ The three nominees in question had been selected to join a study section of the Advisory Committee on Occupational Safety and Health that evaluates research grants on workplace injuries.¹⁴ The committee chair and panel staff had chosen the three based on their credentials and reputations in the field, and the director of NIOSH had initially approved the appointments.

What makes this example so noteworthy is that so-called study sections are responsible for conducting peer review of ongoing research, not for advising on policy matters, and therefore changes of administration have almost never affected them. Traditionally, scientists in such positions are chosen strictly for their relevant expertise, just as their peer review work requires them to assess research solely based on its scientific merit. In this case, however, Thompson rejected at least two of the nom-

inees because of their support for a workplace ergonomics standard, a policy opposed by the administration.¹⁵

These are just a few examples of how the Bush administration has altered the way scientific and technical information is handled by the federal government. These changes have enormous and widespread effects on the practice of science within the government and in society at large:

They limit what questions scientists and other government staff are allowed to ask.

They place constraints on what methods can be used to seek answers.

They restrict the selection of who is permitted to ask questions, seek answers, or give advice in government agencies.

They suppress findings solely on the basis that they conflict with administration policies.

They sanction misleading and unjustified claims to bolster results that are “approved of” by the administration;

They routinely place ideologically rigid nonscientist supervisors in charge of government scientific research programs.

They have a chilling effect on the scientific community by exacting retribution, including dismissals, against scientists who ask unapproved questions or produce unapproved-of results.¹⁶

INCONVENIENT FACTS

In retrospect, there were ominous signs from the start that George W. Bush had little use for “inconvenient” factual information—whether strictly scientific or otherwise. On the campaign trail Bush appeared notably disinterested in policy details and highly selective in the often misleading factual examples he offered. His numbers frequently didn’t add up, and he didn’t bother to correct them when the discrepancies were brought to his attention. Equally troubling, when the bitterly divisive 2000 election between Bush and Al Gore hit a stalemate in the debacle over the disputed Florida voting results, George W. Bush’s surrogates argued forcefully against a recount, even going to the Supreme Court to prevent one from being conducted. What kind of candidate for high elected

office, the nation might well have asked, would argue *against* conducting the most accurate vote count possible? Sadly, the incident was a harbinger of things to come: eschewing factual and expert information would soon become a hallmark of the George W. Bush presidency.

Upon his election, Bush quickly made it clear how his administration would handle scientific information. First, he took an unprecedented eight months to name a science advisor. Then, when Bush finally did name John H. Marburger III—a respected physicist from Brookhaven National Laboratory—the president took the unusual step of symbolically demoting his new science advisor by stripping him of an office in the Executive Office Building and the title of “Assistant to the President.” Unlike his recent predecessors, Science Adviser Marburger does not normally report to the president himself but rather must go through White House aides.¹⁷

Slowly but surely over the course of Bush’s first term, a series of defectors began to speak out about the president’s contempt for factual information and expert judgment. Former Secretary of the Treasury Paul O’Neill recounted, for instance, that when Bush’s first speech to a joint session of Congress was being prepared, the president was so “distrustful of the agendas of expert staffers in the various departments” that he removed them from the speechwriting loop. As a result, O’Neill said, Treasury economists had no opportunity to correct Bush’s egregious \$700 billion understatement of the amount of redeemable U.S. debt—an understatement that conveniently made the president’s proposed tax cut more palatable.¹⁸

In May 2003, when Christine Todd Whitman resigned as head of the Environmental Protection Agency, she lamented to a reporter: “In meetings, I’d ask if there were any facts to support our case. And for that, I was accused of disloyalty!” During the 2004 presidential election Whitman denied having made the statement, but by then other Bush advisers had come forward with similar tales.¹⁹

Dr. Rosina Bierbaum, for instance, a Clinton administration appointee to the Office of Science and Technology Policy (OSTP) who continued to serve into 2001, recalled that from the start of the Bush administration, “The scientists [who] knew the most about climate change at OSTP were not allowed to participate in deliberations on the issue within the White House inner circle.”²⁰

Perhaps most persuasive—and disturbing—of all was the 2004 testimony of Richard Clarke, the Bush administration’s senior counterterrorism adviser on the National Security Council until 2003 and a national security advisor to three previous presidents as well. In 2004, he wrote that, immediately following the terrorist attacks in the United States on September 11, 2001, President Bush became fixated on retaliating against Iraq even though there was no factual evidence that the regime of Saddam Hussein had anything to do with the plane attacks. As Clarke recalls: “The president dragged me into a room with a couple of other people, shut the door, and said, ‘I want you to find whether Iraq did this.’ Now, he never said, ‘Make it up.’ But the entire conversation left me in absolutely no doubt that George W. Bush wanted me to come back with a report that said Iraq did this.”²¹

Clarke reviewed all available intelligence data and found virtually no link between Iraq and the Al Qaeda terrorist network. But, even on such a vital security matter, the facts didn’t impinge on the Bush administration’s preset determination. As Clarke explains: “We got together all the FBI experts, all the CIA experts. We wrote the report. We sent the report out to CIA and found FBI and said ‘Will you sign this report?’ They all cleared the report. And we sent it up to the president and it got bounced by the National Security Advisor or Deputy. It got bounced and sent back saying, ‘Wrong answer. . . . Do it again.’”²²

A TOXIC MIXTURE FOR SCIENCE POLICY

One has to wonder why George W. Bush takes such an antagonistic stance toward the nonpartisan business of gathering and analyzing scientific and technical information. Despite all that has been written about the lack of scientific integrity in the Bush administration, the president’s motivation remains open to speculation. After all, scientific and technical information informs political decisions, but never mandates them. The Bush administration could presumably justify its opposition to caps on greenhouse gas emissions on economic grounds, for instance, without resorting to the distortion and censorship of the government’s scientific reports on climate change.

By way of explanation, some critics contend that Bush's long years as a lackluster underachiever at some of the nation's most prestigious schools bred in him the pronounced brand of swaggering anti-intellectualism he displays today. According to this theory, Bush's experiences in college, business school, and in the private sector led him to such vehement disdain for the liberal elitist establishment that it would virtually define his governing style.²³

Others, such as Ron Suskind, who has written extensively about the Bush administration, emphasize Bush's born-again Christian religious beliefs. Calling this a "faith-based presidency," Suskind suggests that Bush's religious beliefs place little value on open debate and dialogue. Suskind quotes Bruce Bartlett, a Republican policy adviser to Ronald Reagan and a former treasury official, who noted that George W. Bush "dispenses with people who confront him with inconvenient facts," because, as Bartlett puts it, "he truly believes he's on a mission from God. Absolute faith like that overwhelms a need for analysis."²⁴

While these psychological and religious factors arguably play a role in the Bush administration's approach to policymaking, there is also little doubt that many administration policies reflect straightforward influence peddling and cronyism. Bush has strong and deep ties both to the religious right and to many powerful leaders in the energy industry, and he has afforded both constituencies unprecedented access to the policy-making process in his administration.

The view that the administration's ties to industry explain many of its policy stances is given added credence by the almost Orwellian cynicism in the language Bush policymakers often choose for their proposals: a "Clear Skies Initiative" that undermines the emission regulations of the original Clean Air Act, a "Healthy Forests Act" that increases private logging on public lands.

Particularly troubling in this respect are administration officials' frequent espousals of their commitment to "sound science." As the public health researchers Stanton Glantz and Elisa Ong have chronicled in detail, the call for "sound science," the use of the term itself, has the most cynical of corporate roots, pioneered by the tobacco lobby. Using documents procured in litigation against the tobacco companies, Glantz and Ong show that, in the early 1990s, cigarette companies formed a coal-

tion designed to challenge every aspect of government science, from its studies of global warming to auto safety. They called their group, formed in 1993, “The Advancement of Sound Science Coalition.”

As Glantz and Ong explain: “The ‘sound science’ movement is not an indigenous effort from within the profession to improve the quality of scientific discourse, but reflects sophisticated public relations campaigns controlled by industry executives and lawyers whose aim is to manipulate the standards of scientific proof to serve the corporate interests of their clients.”²⁵ Given its dubious origins, it is telling indeed that “sound science” has been so readily adopted as a rallying cry by top officials in the Bush administration.

Whatever the underlying reasons, there is little question that the Bush administration has created a toxic environment for science policy and technical analysis. As the evidence presented in the ensuing chapters shows, the current politicization of the federal government’s handling of scientific and technical information has set the nation on a dangerous path that

impoverishes the policymaking process by leading to choices that are not informed by the best available scientific and technical knowledge;

weakens our democracy by denying citizens the benefit of a full and open debate on vital policy matters;

demoralizes the legions of dedicated career researchers in the federal government who compile and analyze information; and, ultimately,

undermines the tradition of scientific and technical excellence upon which the credibility of our government depends.

Recent surveys offer striking evidence that a significant number of researchers at federal agencies feel their integrity has been compromised. For example, one in five agency scientists at the U.S. Fish and Wildlife Service reported that they have personally been “directed to inappropriately exclude or alter technical information from USFWS scientific documents.” The practice has certainly impeded the government’s protection of many endangered species. Similarly, a significant majority—some 58 percent—of scientists at the National Oceanic and Atmospheric Ad-

ministration's Fisheries Department reported that they personally knew of cases where high-level Bush administration appointees in the Commerce Department had "inappropriately altered NOAA Fisheries determinations."²⁶

A separate survey, conducted by the Washington, DC-based Public Employees for Environmental Responsibility, asked federal staff at the Environmental Protection Agency's Region 8 office in Denver, Colorado, a series of questions about their agency. Among the findings: some 78 percent of the professional staff surveyed—many of whom are staff scientists—agreed or strongly agreed with the statement that "political interests affect key decisions made by EPA more than they did five years ago."²⁷

Results like these lend credence and volume to a rising chorus of concern from many quarters about the conduct of scientific business at federal agencies. Lewis Branscomb, a Harvard University physicist who directed the National Bureau of Standards in the Nixon administration, for example, notes that President Nixon never "hand-picked ideologues to serve on advisory committees, or dismissed from advisory committees very well-qualified people if he didn't like their views. What's going on now," Branscomb says, "is in many ways more insidious. . . . I don't think we've had this kind of cynicism with respect to objective scientific advice since I've been watching government, which is quite a long time."²⁸

In response to such charges, White House Press Secretary Scott McClellan stated in August 2003: "This administration looks at the facts, reviews the science, and then makes a decision, based on that information, that is in the best interest of the American people."²⁹ All too often, however, as we shall see, a close review of the record reveals a dramatically different story.