

# The Regulatory Studies Center: A **Stain** on the George Washington University Name

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# Executive Summary

**The Regulatory Studies Center (RSC)** is a research center at the George Washington University housed within the Columbian College of Arts and Sciences. Founded in 2009, the RSC regards itself as “a leading source for applied scholarship in regulatory issues.”<sup>1</sup> Members of the RSC publish academic research, submit public comments to regulatory agencies, write commentaries, and facilitate events with the larger regulatory community within academia.

The RSC is an ally of chemical manufacturers, the fossil fuel industry, and a vast network of wealthy ultra-conservative donors, spearheaded by the efforts of Charles Koch. Many RSC donors have well established interests in deregulation, especially as it pertains to the regulation of chemicals and fossil fuel emissions. The American Petroleum Institute (API) and the American Chemistry Council (ACC) are industry trade associations that represent oil companies and chemical manufacturers that have successfully derailed federal environmental and chemical regulations.<sup>2</sup> Both groups have financial ties to the RSC. Together, far right charitable organizations including Searle Freedom Trust, the Sarah Scaife Foundation, the Charles Koch Foundation, Donors Trust, and the ExxonMobil Foundation, in addition to the Mercatus Center at George Mason University, have contributed millions of dollars to the RSC.<sup>3</sup> In recent years, funding from Koch and Exxon has skyrocketed. All of these organizations have also been identified as members of a core group of climate change denial financiers.<sup>4</sup>

The RSC’s ties to the Koch network, industry, and climate denial are further compounded by the backgrounds of RSC staff. RSC Director Susan Dudley, who served as director of the Office of Information and Regulatory Affairs (OIRA) for President George W. Bush has been affiliated with at least eight organizations with ties to the Koch Network over the course of her career, including the George Mason University Mercatus Center— Charles Koch’s flagship research center— and the Federalist Society.<sup>5</sup> Before he became a research professor at the RSC, Brian Mannix was a researcher at two other Koch-funded research centers including the Mercatus Center.<sup>6</sup> Regulatory economist Howard Beales, now a Senior Scholar at the RSC, famously testified on behalf of Camel cigarettes that the Joe Camel caricature was not intended to market cigarettes to young peoples<sup>7</sup>. Before arriving at the RSC, Senior Scholar George Gray advocated on behalf of various Koch-affiliated organizations in favor of chemical deregulation.<sup>8</sup> At the RSC, these staff have continued the pattern of questioning science on behalf of their funders.

In addition to the core RSC team, the RSC “Community of Scholars” consists of individuals from across academia and industry who make periodic contributions to the center.<sup>9</sup> The Community of Scholars program enables the RSC to lend GW’s academic credibility to otherwise questionable sources. The most notable RSC scholars include Tony Cox, an industry funded statistician who believes air pollution is harmless,<sup>10</sup> W. Kip Viscusi, known for his concept of the value of a statistical life (VSL) which places the economic value of a human life at \$10 million,<sup>11</sup> and Julian Morris, who argued as recently as 2018 that the benefits of climate change outweigh the costs.<sup>12</sup> When John Graham, another RSC scholar, was appointed as head of OIRA under the George W. Bush Administration, 30 top medical and public health academics signed a letter stating: “It is a cardinal rule of scientific research to avoid at all costs any conflict of interest that could influence the objectivity of one’s findings. . . . For more than a decade, John Graham . . . has violated this rule.”<sup>13</sup> Through the RSC scholars’ program, such individuals submit public comments and publish research via the RSC and achieve otherwise unattainable academic credibility in the process.

The work of the RSC consistently aligns with the interests of RSC donors. A 2019 study by Public Citizen revealed that 96 percent of public comments relating to the stringency of regulations submitted by the RSC were

in favor of deregulation, while 100 percent of comments directly related to the regulatory process would result in deregulation over the long term.<sup>14</sup> In addition to public comments, the analysis conducted for this report has uncovered that peer reviewed research at the RSC is consistently published in journals with close ties to the Koch network and industry, and is consistently funded by deregulatory organizations –namely Searle Freedom Trust.

The efforts of the RSC have made a meaningful impact on regulations and the regulatory process. President Trump’s Executive Order 13771, mandating that two regulations be cut for every new one added, was an idea cultivated and developed by the RSC long before it was signed into law.<sup>15</sup> When Trump’s Environmental Protection Agency (EPA) lowered the Social Cost of Carbon (SCC) –a figure used to implement carbon pricing into regulations– from \$50 to a range of \$1 to \$7 per ton of CO<sub>2</sub>, a team of RSC researchers were credited by the EPA for developing a key regulatory argument used to lower the SCC.<sup>16</sup>

Between the RSC scholars’ program and the full time RSC staff, Director Dudley has engineered the center into a well-oiled institution of climate denial while maintaining the illusion of credibility. Some team members, such as Director Susan Dudley, Research Professor Brian Mannix, and RSC Scholar Tony Cox, profess overt climate denial and skepticism. Others, such as Research Professor Bridget Dooling and RSC Scholar W. Kip Viscusi, have created legal arguments that expand the role of cost-benefit analysis in regulations, hindering the efficacy of environmental regulations. Meanwhile, the more respected work of co-directors Steven Balla and Christopher Carrigan –paired with the GW name itself– provide a shield of credibility for the RSC to hide behind.

The RSC has proven to be a key stepping stone for staff who have gone on to work for the federal government. As an RSC staff member, Sofie Miller conducted research on the Department of Energy’s (DOE) energy efficiency standards, consistently advocating for their removal.<sup>17</sup> Miller went on to work for the DOE under the Trump Administration before going on to work at OIRA. At OIRA, Miller has been accused of stalling the review process for President Biden’s new DOE efficiency standards.<sup>18</sup> RSC Research Professor Bridget Dooling has served on the Biden transition team and was recently appointed to the Council of the American Bar Association Section of Administrative Law and Regulatory Practice all while remaining on the RSC staff.<sup>19</sup> RSC Scholar Tony Cox was appointed to the EPA Clean Air Scientific Advisory Committee in 2019, where he advocated for a decrease in air pollution standards.<sup>20</sup>

This is not the first time that wealthy deregulatory actors have infiltrated educational institutions under the leadership of Charles Koch. Rather, the RSC is part of a much larger apparatus developed by Koch over multiple decades. Charles Koch remarked as early as 1974 that “I do maintain, however, that the educational route is both the most vital and the most neglected [way to fight for free enterprise]... We should [support] only those programs, departments or schools that contribute in some way to our individual companies or to the general welfare of our free enterprise system.”<sup>21</sup> To achieve this goal, Koch has consistently attached a variety of conditions of past funding agreements. Examples of conditions attached to Koch donations include the ability to influence hiring decisions, determine curriculum, programming, and more.<sup>22</sup> The details of funding agreements made by the RSC remain unknown because of the GWU’s status as a private university and the weakness of the university’s conflict of interest and gift giving policies, which do not consider institutional conflicts of interest or the contingencies often attached to donations from the Charles Koch foundation.<sup>23</sup>

The RSC would not be the first –or the last– Koch-funded center to close its doors. GWU can learn from the gift giving and conflict of interest policies of other universities that have fought off dark money on their campuses to dismantle the RSC as well as prevent something similar from taking place in the future. Grace Speights, chair of the board of trustees, must recuse herself from this process because her law firm, Morgan Lewis, represents the same interests as the RSC.

The Regulatory Studies Center injects the credibility of the George Washington University name into the ideology and policies that its donors support. The presence of the RSC on GW’s campus stands in direct contradiction to GW’s commitment to combat the climate crisis and threatens the university’s credibility at large.<sup>24</sup> The RSC will continue to serve as a stain on the diploma of every GW student, the pride of every GW professor, and GW’s reputation as long as the center remains part of GW. Most importantly, the continued existence of the RSC is both an insult and a threat to the marginalized communities who are left to face the consequences of the RSC’s impact on the regulatory state.

**The Regulatory Studies Center is funded by lobbying groups, charitable foundations, organizations, and individuals with a vested monetary interest in deregulation, especially as its work pertains to air pollution, energy standards, and the regulation of toxic chemicals.**

The Charles Koch Foundation, the American Chemistry Council, the American Petroleum Institute, ExxonMobil, and Searle Freedom Trust are among the most notable institutions with known ties to the RSC.<sup>25</sup> Recently released 2019 and 2020 documents indicate that some foundations –such as the Sarah Scaife Foundation and the ExxonMobil Foundation–have continued to make donations to the RSC that match the value of their previous donations. Other foundations –such as the Charles Koch Foundation and Searle Freedom Trust– have dramatically increased contributions to the RSC since 2018. In the words of Stephen Trachtenberg, for whom the Trachtenberg School of Public Policy –which houses the RSC– is named, “most people who give money have some idea in mind about what their money will accomplish.”<sup>26</sup>

**Figure 1. Charitable Donations Made to the RSC**

Year	Charles Koch Foundation	Searle Freedom Trust	ExxonMobil Foundation	Sarah Scaife Foundation
2009		\$62,500 <sup>27</sup>		
2010	\$15,000 <sup>28</sup>	\$437,000 <sup>29</sup>		
2011	\$86,120 <sup>30</sup>	\$168,000 <sup>31</sup>		
2012	\$116,000 <sup>32</sup>			
2013	\$50,000 <sup>33</sup>	\$80,000 <sup>34</sup>	\$195,000 <sup>35</sup>	
2014	\$60,000 <sup>36</sup>	\$100,000 <sup>37</sup>	\$207,000 <sup>38</sup>	
2015	\$417,335 <sup>39</sup>	\$100,000 <sup>40</sup>	\$200,000 <sup>41</sup>	
2016	\$322,035 <sup>42</sup>	\$100,000 <sup>43</sup>	\$200,000 <sup>44</sup>	
2017	\$132,035 <sup>45</sup>	\$125,000 <sup>46</sup>	\$125,000 <sup>47</sup>	\$323,000 <sup>48</sup>
2018	\$546,840 <sup>49</sup>	\$490,000 <sup>50</sup>	\$100,000 <sup>51</sup>	\$179,000 <sup>52</sup>
2019	\$795,336 <sup>53</sup>	\$500,000 <sup>54</sup>	\$100,000 <sup>55</sup>	\$346,000 <sup>56</sup>
2020	unknown	unknown	\$140,000 <sup>57</sup>	unknown
<b>Total:</b>	<b>\$2,540,701</b>	<b>\$2,287,500</b>	<b>\$1,267,000</b>	<b>\$848,000</b>

Many RSC donors have decades-long track records of directing their funds toward climate denial. All four organizations listed below have recently been identified by researchers as central organizations in the Climate Change Counter Movement (CCCM).<sup>58</sup> A study published by Yale Sociologist Justin Farrell, which includes an analysis of 40,785 texts produced by the CCCM from 1993-2013, made two key findings about CCCM donors.<sup>59</sup> First, when organizations like the RSC accept funding from CCCM donors they are more likely to disseminate content meant to polarize the climate change debate. Second, CCCM donations have been proven to influence the thematic content of CCCM funded efforts. **All four donors in Figure 1 have been identified influential CCCM donors.**

Donations from these organizations –particularly the Charles Koch foundation– have been known to apply contingencies to their donations. Gift agreements for Koch donations at universities across the country often grant the Koch foundation with the power to influence content, curriculum, staff, lectures, and more. In 2009 –the same year the RSC was founded– Clemson University agreed to give the Koch foundation discretion in hiring decisions.<sup>60</sup> At present, the RSC is allowed to keep confidential documents that could contain similar revelations private thanks to GWU’s status as a private university. Donations from organizations other than nonprofits are also kept private. As such, the figure 1 below merely provides a glimpse of the true scope and implications of RSC funding. Nonetheless, it remains clear that the RSC had received millions of dollars from prominent anti-regulatory organizations since its founding in 2009.

**Cost benefit analysis (CBA)**, also referred to as benefit cost analysis (BCA), is one method that can be used to conduct a regulatory impact analysis (RIA). Under a BCA, all the costs of a regulation (business costs, impact on labor, etc.) are translated into a dollar value to be weighed against the benefits of regulation (decreased pollution, lives saved, etc.). Increasingly across regulatory agencies, when an RIA reveals that costs exceed benefits, a regulation is not adopted.<sup>61</sup>

The era of cost benefit analysis began in 1981 when President Reagan signed Executive Order 12291, which called on agencies to ensure that the benefits of regulations outweighed the costs. However, it was President Bill Clinton's Executive Order 12866 –a refined version of E.O. 1229– that entrenched CBA in the regulatory state. Executive Order 12866 mandates the Office of Information and Regulatory Affairs (OIRA) to review “economically significant” regulations –regulations with an estimated economic impact exceeding \$100 million. However, OIRA has the power to review most any regulation.<sup>62</sup> The agency reviews anywhere from 500 to 700 regulations a year, only 10 percent of which are economically significant. If a cost benefit analysis reveals that costs exceed benefits, OIRA has the authority to mandate changes to draft regulations or block them outright.<sup>63</sup> As a result, OIRA has gained the title –including from Dudley herself– of “the most powerful government agency you’ve never heard of.”<sup>64</sup>

At face value, the methodology of CBA is already skewed in favor of deregulation. The RSC employs a variety of methodological tools to maximize the deregulatory potential of CBA. These efforts are further underscored by the efforts of legal scholars at the RSC, who work to expand the applications of CBA across the regulatory state.

In addition to frequently publishing articles advocating for the expansion of OIRA's regulatory authority, the RSC is a central hub for the exchange of knowledge between influential members of the OIRA community. RSC Director Susan Dudley and frequent RSC contributor John Graham both served as director of OIRA at different stages of the George W. Bush administration. **All in all, seven of the eight individuals ever to be confirmed as director of OIRA have contributed to the RSC, either through articles, public comments, or as panelists at events hosted by the RSC.** This direct line to institutional soft power, paired with the RSC's key role as a facilitator the Society for Benefit Cost Analysis makes the center an especially strategic avenue for corporate interests to pursue deregulation.

## **Cost Benefit Analysis is the RSC's preferred method of regulatory analysis**

RSC researchers both employ CBA to justify their claims in research and public comments and study the entrenchment of CBA in the regulatory state. Since 2016, 11 research articles dedicated to the methodology and history of CBA have been published by RSC researchers.<sup>65</sup> In 2018, the RSC hosted an event in GW's Jack Morton Auditorium commemorating the 25<sup>th</sup> anniversary of Executive Order 12866. The event featured remarks from current and former OIRA Administrators including Trump's OIRA Administrator Naomi Rao.<sup>66</sup>

## **RSC Researchers Advocate for Methodologies Within Cost Benefit Analysis that are Biased in Favor of Deregulation**



## *Value of Statistical Life:*

The Value of Statistical Life (VSL) is the metric used in CBA to determine how much society is willing to pay to save a life. The methodology of VSL is best described by legal scholar Lisa Heinzerling:

“Suppose that one million people all face a one in one million risk of death from being exposed to a particular air pollutant. Suppose these people are each willing to pay ten dollars to avoid that one-in-a-million risk. All told, this population is willing to pay ten million dollars to avoid one death from the air pollution. In this case, we would say that the value of the statistical life is ten million dollars.”<sup>67</sup>

Ten million is in fact the actual value of the VSL that is commonly used in cost-benefit analysis. The concept of VSL and the \$10 million value were both created by W. Kip Viscusi, an RSC scholar who frequently contributes to public comments and research at the RSC.<sup>68</sup>

The VSL results in the devaluation of human life. The notion of “willingness to pay” suggests that individuals impacted by a regulation—or the lack thereof—fully understand the threat of the risk in question and freely choose to assume some level of risk. However, individuals are often deprived of the information necessary to adequately understand risk levels. For instance, farm workers may not have a complete understanding of the health effects of the pesticides they are exposed to. Moreover, increased participation in risky endeavors is reflected in the VSL as a decrease in perceived risk, leading to a decrease in the willingness to pay, ultimately resulting in a decrease in the VSL. Under this approach, the presence of families in areas with high levels of air pollution is reflected as a willingness to assume risk rather than the result of a lack of affordable housing elsewhere. Even when the VSL indicates a need for regulation, RSC research has sought to reframe the discussion in favor of deregulation. In a 2019 article titled “Responsible Precautions for Uncertain Environmental Risks,” W. Kip Viscusi addresses the regulation of common groundwater contaminants including atrazine, the most used herbicide in the United States.<sup>69</sup> Importantly, the health effects of atrazine exposure are spread unevenly across society. Migrant farmworkers in California are among the communities with the highest levels of atrazine exposure.<sup>70</sup> Atrazine has already been banned in the EU due to its ties to cancer and birth defects.<sup>71</sup>

Viscusi discredits the high level of willingness to pay for atrazine regulations as misguided, suggesting that the public calls for better regulation of atrazine are “guided by emotion” and that the public does not have enough information to adequately understand the risk posed by atrazine. In a follow-up article, Director Susan Dudley writes that “Viscusi et al.’s research in this series reveals that the public over-reacts to very small water-related risks, such as those posed by the herbicide atrazine.”<sup>72</sup>

The RSC has direct ties to lobbyists that have sought to discredit the link between atrazine exposure and adverse health impacts. Federal Focus Inc. is an anti-regulatory organization headed by James Tozzi. Federal Focus is a known RSC contributor. In 2003, Tozzi played a critical role in discrediting critical studies of atrazine which ultimately prevented its regulation.<sup>73</sup>

## **The Discount Rate, Long-Term Costs, and Extreme Incrementalism**

The discount rate is a tool used in regulatory analysis to ensure that short term economic impacts are valued more heavily than long term ones. For example, a discount rate of 10% would mean that a future value of \$110

would be valued at \$100 in the present. The discount rate is especially harmful when it comes to the regulation of climate change, whose most horrific consequences will be suffered by future generations. Current federal guidance mandates the use of both a 3% and 7% discount rate depending on the context. A discount rate of 5% has been used to characterize continued carbon emissions as a social benefit.<sup>74</sup>

RSC research and public comments advocate for the maintenance of a high discount rate. In a 2016 public comment submitted to the EPA's Science Advisory Board, RSC Research Professor Brian Mannix framed a decreased discount rate, even if only lowered from 3% to 2%, as unethical. **Mannix also assumed that because the economy will grow indefinitely, future generations will always be wealthier than current ones and therefore better able to address long term threats such as climate change.** By extension, Mannix points to generic arguments for the negative short term impacts of regulations to criticize future-oriented regulations. Using this approach, Mannix writes that “substituting the preferences of absent rich people for those of present poor people is particularly problematic.”<sup>75</sup>

Arguments in favor of a high discount rate are compounded by a general aversion toward long term regulatory commitments. A consistent theme in RSC work is to frame long term regulatory commitments as irresponsible risks that jeopardize economic growth.<sup>76</sup> Director Susan Dudley, Senior Policy Analyst Daniel Pérez, and Co-Director Christopher Carrigan wrote in a 2019 article titled “Dynamic Benefit-Cost Analysis for Uncertain Futures:”

“Committing vast resources to one problem may harm economic growth and make society less resilient and less able to cope with other (anticipated or unanticipated) events or challenges” and that “expensive efforts to improve the welfare of future generations may be frustrated, for example, if the public compensates by reducing other forms of long-term savings and intergenerational wealth transfer.”<sup>77</sup>

Through this lens government policies meant to avert future risks –climate related or otherwise– will always remain secondary to economic gain.

### *Co-benefits:*

Co-benefits are the benefits that result from a regulation but are not the primary goal of a regulation. In some cases, co-benefits contribute significantly to the overall social benefits of a regulation. Such is the case with decreases in mercury emissions. A cost benefit analysis of mercury emissions found that a reduction in mercury emissions would result in a \$6 million annual benefit to society, while the co-benefits –including decreases in asthma attacks and heart disease– totaled over \$80 billion over the course of five years.<sup>78</sup>

RSC research and public comments support withholding co-benefits from cost benefit analyses. In August 2020, both Brian Mannix and Joseph Cordes submitted public comments attacking the co-benefits of mercury regulations.<sup>79</sup> In December 2020, the EPA finalized a rule that, in alignment with the preferences of Mannix and Cordes, mandated the separation of benefits and co-benefits under the EPA's cost benefit analysis rules.<sup>80</sup> Director Susan Dudley also wrote an article attacking the use of co-benefits in a 2013 article published in the *Journal Regulation*.<sup>81</sup>

### *Ex-post regulation, Ex-ante regulation, and Extreme Incrementalism:*

Ex-post regulation is an approach whereby after a set amount of time, the impacts of a regulation are reviewed and then amended accordingly. While this is not an inherently bad approach to regulation, it is often used as a means of decreasing the stringency of new regulations. When it comes to the regulation of potentially lethal toxins –which is often the case– an emphasis on retrospective review means that individuals on the frontlines must first suffer the consequences of their exposure to prove that regulation is necessary. W. Kip Viscusi writes in his article about the groundwater contaminants atrazine, BPA, and pharmaceuticals:

“The optimal strategy often involves holding off from expensive or irreversible actions and instead **learning about the risk based on experience** (emphasis added) and considering adaptive behavior that involves switching to other policies if the outcomes with the uncertain choice are sufficiently unfavorable.”<sup>82</sup>

Advocacy in favor of ex-post regulation is inextricably linked to advocacy against ex-ante regulation –designing regulations based on predictions for the future. The focus on the long term emphasized by ex-ante regulation makes it the regulatory approach best suited for climate regulations. However, in the same article about chemical regulation, Dudley argues that not only should an increased emphasis be placed on ex-post analysis, but that resources should be diverted away from ex-ante analysis to do so.<sup>83</sup>

## The RSC Uses CBA to Justify Deregulation as the Solution to Social Inequality

In some cases, RSC research justifies deregulation in the name of the same vulnerable populations who are disproportionately impacted by deregulation, including farm workers exposed to atrazine, low-income housing areas with high levels of air pollution, and those without access to air conditioning amid a heat stroke.

In 2016, former RSC Senior Policy Analyst Sofie Miller published a public comment on the RSC website that sought to reject the Department of Energy’s (DOE) updated fuel efficiency mandates for manufactured housing, formerly known as mobile homes. DOE estimated that the proposed mandate would prevent 97.6 million metric tons of CO2 emissions over 30 years.<sup>84</sup> In her public comment, Miller attacks DOE’s methodology to argue that increased energy efficiency standards will disproportionately impact low-income households. Her argument is used as a pretext to soften the DOE’s energy efficiency standards.

In another 2016 public comment submitted to the Environmental Economics Advisory Committee of EPA’s Science Advisory Board, Research Professor Brian Mannix argued that the costs of regulations resulted in increased mortality rates, impacting marginalized communities the most. Mannix further argues that, taking economic growth as a given, future generations will be wealthier and therefore better equipped than the current generation to mitigate environmental risks. He writes:

“Incurring regulatory costs has consequences for mortality and morbidity, and they are greater for poorer populations than for richer ones. Can we use the presumed higher value of life in the future to ethically justify increased mortality today, and increased mortality overall?”<sup>85</sup>

Using Mannix’s reasoning, long-term regulations oriented toward climate policy are unethical because of the presumed ways in which regulatory costs result in death. In contradiction, the vulnerable communities Mannix

employs for his reasoning are the same communities that face the greatest risk of being affected by the adverse effects of climate change and thus most in need of regulation.

In January 2021, newly elected President Biden released a memorandum titled “Modernizing Regulatory Review.”<sup>86</sup> The regulatory community paid close attention to Biden’s commitment to “propose procedures that consider the distributional consequences of regulations ... to ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities.” As a result of the memo, the role of distributional impacts became a recurring point of discussion at the 2021 Society for Benefit Cost Analysis annual conference, and the RSC has doubled down on its commitment to justify deregulation in the name of marginalized communities. In May 2021, Director Susan Dudley wrote that “President Biden is right to demand more rigorous analysis of how regulatory benefits and costs are distributed. Over the next few months, GW Regulatory Studies Center scholars will be offering additional insights and ideas for ways to heed his call.”<sup>87</sup>

Rent seeking –which can also be thought of as “privilege seeking”– is a niche economic concept recently used by Dudley to advocate for deregulation on account of marginalized communities. According to the theory, whenever a disruptive regulation is proposed –such as stricter carbon emissions standards– powerful lobbying interests –such as RSC funders ExxonMobil, American Petroleum Institute, and the American Chemistry Council– will spend money to fight back against the regulations. Because industries are forced to divert funds away from operations that promote innovation and competition toward lobbying, lobbying costs represent a waste of money that should be treated as an economic loss.<sup>88</sup> This, paired with the belief that costs incurred by regulations impact vulnerable communities the most, is how Dudley associates regulation to distributional harms. Taken to its logical end, the concept of rent seeking would suggest that marginalized communities in the US would be better off if ExxonMobil could allocate its counter climate change lobbying budget –and perhaps its funding for the RSC– toward its oil drilling operations. So long as the RSC remains in operation, it will continue to amass an arsenal of arguments that offer deregulation as the solution to systemic inequities in the United States.

## **RSC Research Published in Law Reviews Advocates for the Expansion of Benefit Cost Analysis in the Regulatory State**

Many articles published by the RSC in law reviews advocate for the expansion of OIRA’s role in the regulatory state. The greater the authority of OIRA to analyze –and ultimately approve or block– regulations, the more important cost-benefit analysis becomes to the regulatory process. As a result, many RSC articles found in law reviews provide detailed arguments in favor of the expansion of OIRA review and the use of CBA in the regulatory process. Since 2016, a total of five articles advocating for the expansion of OIRA’s authority have been published by RSC researchers in law reviews.<sup>89</sup> Three were written by Director Susan Dudley and two were written by Research Professor Bridget Dooling.

RSC research also explores the role of judicial review in solidifying the role of cost benefit analysis. Judicial review is the process whereby courts determine the validity of laws and regulations. One article published by the late Research Professor Jerry Ellig– funded by the GMU Mercatus Center– provides a favorable account of

expanding the use of cost benefit analysis in the judicial review process.<sup>90</sup>

## The RSC Collaborates with Industry to Bolster Support for BCA

Founded in 2007, the Society for Benefit Cost Analysis (SBCA) is an organization dedicated to bringing together individuals from across government, industry, and academia to discuss the practice and theory of cost-benefit analysis and advocate for its applications. The RSC is a charter member of the SBCA, in addition to ExxonMobil and NERA Economic Consulting<sup>91</sup>—which also has ties to the Koch network.<sup>92</sup> According to an archive of the SBCA website, ExxonMobil has contributed a minimum of \$37,500 to the SBCA since its founding.<sup>93</sup> Director Susan Dudley and Co-Director Joseph Cordes have both served as president of the Society.<sup>94</sup>

The RSC has served as a facilitator of the SBCA community. The annual SBCA conference has been held in GW's Student Center from 2016-2019. If not for the pandemic, the annual conference would have continued to be held on GW's campus. The conference provides an opportunity for the larger regulatory community to discuss emerging trends in regulation and agree upon priorities moving forward. Over the years, sponsors of the SBCA annual conference have included the American Chemistry Council (2016 - 2019), the American Petroleum Institute (2019), and ExxonMobil (2017 - 2019).<sup>95</sup>

The Journal of Benefit Cost Analysis, where most of the RSC's peer reviewed research is published, is sponsored by the SBCA. Joseph Cordes currently sits on the Journal's editorial board in addition to RSC scholars Art Fraas, John Graham, and Kip Viscusi.<sup>96</sup>

*Figure 2.*

**CONFERENCE SPONSORS**

Conference support is provided by:

*Taken from the program for the 2019 SBCA conference, held in the GW Student Center*

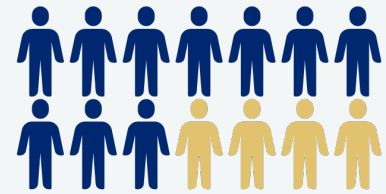
# Academic Research: Journals & Funding

As the RSC has come under increasing scrutiny, it has repeatedly pointed to its research to defend its reputation. A February 2021 letter signed by multiple RSC affiliates and the dean of the Columbian College of Arts and Sciences asserted that “its scholars publish in a wide range of leading peer-reviewed academic and legal journals” and urges individuals to visit the RSC website and read its work.<sup>97</sup> In alignment with these claims, the RSC website describes the “Journal Articles and Working Papers” portion as “the apex of the Center’s academic research” where researchers “[set] the standard in their academic disciplines.”<sup>98</sup>

However, a review of the 64 journal articles and working papers published by the RSC from January 2016 to July 2021 –not counting working papers that became journal articles– indicates that RSC research is far less standard setting than the RSC has suggested. RSC research can be divided into three groups: peer reviewed journal articles, law review journal articles, and working papers –research articles intended to be published. Articles published in law reviews are kept separate from articles published in other journals because law reviews are student edited and do not include funding disclosures. Though some law reviews claim to be peer reviewed, it is not a standardized practice. Non-law review articles adhere to a consistent peer review process and are more likely to include funding disclosures.

As indicated by figure 3, the analysis revealed that a sizable amount of RSC research is found in niche conservative publications –many of which have direct ties to the Koch network– and is often funded by deregulatory organizations. Nearly half of all published work can be directly traced to the Koch network or other industry interests. Since the RSC began to more frequently reveal research funding sources in late 2019, Searle Freedom Trust and the C. Boyden Gray Center for the Study of the Administrative State –a Koch-funded research center at the GMU Antonin Scalia Law School– have emerged as the predominant funders of RSC research. In an effort to defend the prestige of its academic work, the RSC has made misleading claims regarding the journals in which it published. Most RSC research that does not indicate a conflict of interest comes almost exclusively from Co-Directors Steven Balla and Christopher Carrigan. Meanwhile, Director Susan Dudley is the lead author for most articles that suggest a conflict of interest.

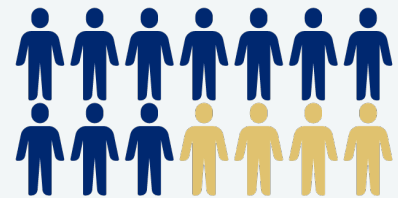
*Fig. 3.1*



**10 of 14**

peer reviewed articles (excluding law reviews) that lack an apparent conflict of interest list Steven Balla or Christopher Carrigan as lead author.

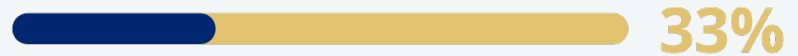
*Fig. 3.2*



**8 of 15**

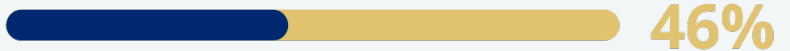
peer reviewed articles (excluding law reviews) that indicate a conflict of interest list Susan Dudley as lead author.

*Fig. 3.3*



of articles published in law reviews are found in journals with ties to the Koch network, industry, and deregulation.

*Fig. 3.4*



of all published articles are tied to the Koch network and/or industry via funding disclosures and/or the journal of publication (excluding law reviews).

*Fig. 3.5*



of articles published since September 2019 (when the RSC began to disclose research funding more frequently) disclose funding from anti-regulatory sources (excluding law reviews).

## A Large Portion of RSC Research is Published in Law Reviews, Many of Which have Ties to the Koch-Network

**Figure 4. RSC Publications in Law Reviews Since 2016**

Journal	Number of Publications Since 2016	Connection to Koch/Industry/Far Right
Administrative Law Review Accord	1	
NYU Journal of Legislation and Public Policy	2	
Federalist Society Review	1	The Federalist Society is an organization of conservative lawyers and legal scholars that has received funding from the Koch brothers, Searle Freedom Trust, the Sarah Scaife Foundation, and other far right groups. <sup>99</sup>
American Bar Association Journal of Law & Politics	1	Founded at the University of Virginia under the guidance of Antonin Scalia
Journal of Law, Economics & Policy	1	Housed in the Antonin Scalia Law School at George Mason University. <sup>100</sup>
Florida State University Business Review	1	FSU received \$12,397,957 in contributions from the Koch Network from 2005-2019 <sup>101</sup>
American University Law Review	1	
Case Western Law Review	1	
Administrative Law Review Journal	1	
Ohio State Law Journal	1	

**The majority of peer-reviewed RSC research, excluding law reviews, is either found in journals with ties to the Koch network or funded by ideologically motivated actors**

**Figure 5. RSC Research Published in Peer Reviewed Journals Since 2016**

<b>Journal</b>	<b>Number of Publications Since 2016</b>	<b>Connection to Koch/Industry/Deregulation</b>
Journal of Benefit Cost Analysis	8	Journal is published by the Society for Benefit Cost Analysis, which has received funding from ExxonMobil, The American Petroleum Institute, and The American Chemistry Council. Five Articles published in JBCA received funding from Searle Freedom Trust and one received funding from the C. Boyden Gray Center for the Study of the Administrative State.
Public Administration Review	4	One article published in PAR has considerable overlap with another RSC article published in Regulation and Governance that received funding from Searle Freedom Trust. This overlap was not disclosed by the authors.
Regulation and Governance	4	
Supreme Court Economic Review	2	Housed in the Antonin Scalia Law School at George Mason University.
Journal of Theoretical Politics	1	
Policy and Internet	1	
The Review of Austrian Economics	1	Peter J. Boettke and Christopher Coyne are co-editors of this journal and are also co-directors of F.A. Hayek Program for Advanced Study in Philosophy, Politics, and Economics at the Mercatus Center at George Mason University. <sup>102</sup>
The Theory and Practice of Legislation	1	
The China Quarterly	1	
Journal of Chinese Governance	1	
Journal of Chinese Political Science	1	
Daedalus	1	The article published in Daedalus received funding from Searle Freedom Trust.
Review of Policy Research	1	
Informatization Policy Journal	1	

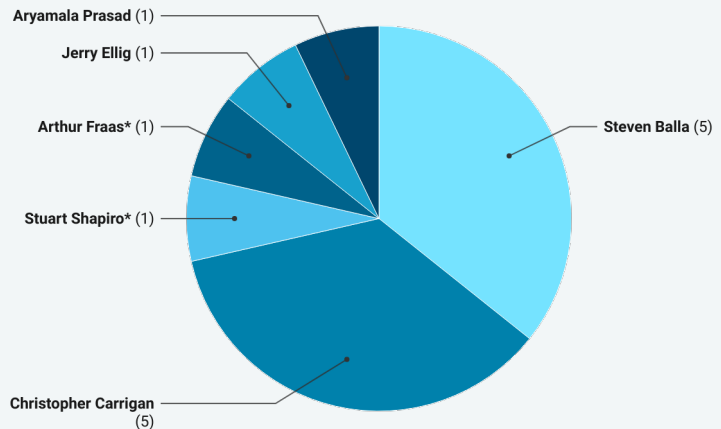


## There is a Disconnect Between the Publications of Koch Affiliated and non-Koch Affiliated RSC Researchers

While a variety of RSC researchers and RSC scholars have periodically published their own peer reviewed work, most of the articles feature Director Susan Dudley or Co-Directors Steven Balla and Christopher Carrigan. Dudley is responsible for most of the peer reviewed work that appears to align with the interests of RSC funders while Balla and Carrigan conduct the majority of the RSC’s least ideologically skewed work. Unlike Dudley, Balla and Carrigan have academic ties to GW that stem beyond the RSC. Balla is an associate professor of political science, public policy and public administration, and international affairs at GW and Carrigan is an associate professor of public policy and public administration –regular faculty. In contrast, Dudley is a distinguished professor of practice at the Trachtenberg School –specialized faculty– whose primary affiliation to GW is her role as RSC Director. In other words, Balla and Carrigan’s academic work –and their resulting academic credibility – emanates from outside of the RSC, whereas Dudley’s exists entirely from within it. **Thus, the inclusion of Carrigan and Balla’s work enables the RSC to tap into an added level of credibility. This results in an appearance of balance, which provides undue legitimacy to the RSC’s core mission of uplifting the regulatory preferences of its donors.** It comes as no surprise, then, that an op-ed in defense of the RSC, published in the GW Hatchet, was written by Balla and Carrigan.

Figure 6.

### Lead Author of Articles Not Suggestive of a Conflict of Interest (Excluding Law Reviews)

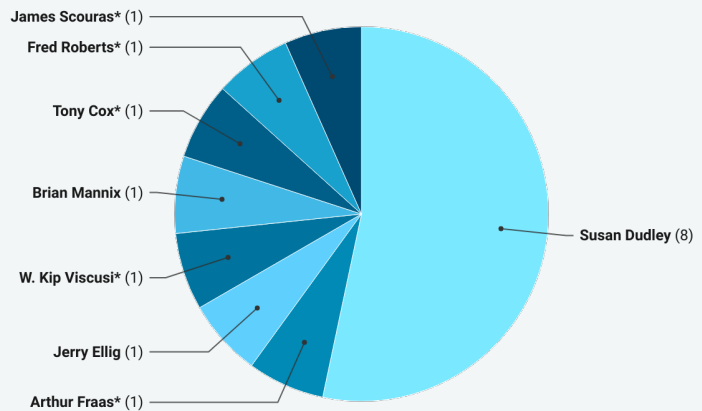


\*Researcher is an RSC Scholar. RSC scholars are members of the regulatory community but not part of the RSC staff. They make periodic contributions to the center.

Created with Datawrapper

Figure 7.

### Lead Author of Articles Suggestive of a Conflict of Interest (Excluding Law Reviews)



\*Researcher is an RSC Scholar. RSC scholars are members of the regulatory community but not part of the RSC staff. They make periodic contributions to the center.

Created with Datawrapper

## Searle Freedom Trust and the C. Boyden Gray Center for the Study of the Administrative State Have Recently Emerged as the Predominant Funders of RSC Research

**Figure 8. Journal Articles and Working Papers with Funding Disclosures January 2016- July 2021**

Journal	Author(s)	Publication Date	Funding Source(s)
Working Paper	Susan Dudley	March, 2017	American Chemistry Council
Working Paper	Susan Dudley	September, 2019	C. Boyden Gray Center
Working Paper	Brian Mannix and Bridget Dooling	September, 2019	C. Boyden Gray Center
Working Paper	Jerry Ellig and Richard Williams	September, 2019	C. Boyden Gray Center, Mercatus Center
Journal of Benefit Cost Analysis	James Scouras	September, 2019	Searle Freedom Trust
Journal of Benefit Cost Analysis	W. Kip Viscusi, Joel Huber, and Jason Bell	September, 2019	Searle Freedom Trust
Journal of Benefit Cost Analysis	Fred Roberts	September, 2019	Searle Freedom Trust
Journal of Benefit Cost Analysis	Tony Cox	September, 2019	Searle Freedom Trust
Journal of Benefit Cost Analysis	Susan Dudley, Daniel Pérez, Brian Mannix, and Christopher Carrigan	September, 2019	Searle Freedom Trust
Journal of Benefit Cost Analysis	Susan Dudley	January, 2020	C. Boyden Gray Center
Working Paper	Christopher Carrigan, Mark Fabrizio, Stuart Shapiro	February, 2020	C. Boyden Gray Center
Working Paper	Jerry Ellig	May, 2020	Utah State University Center for Growth and Opportunity
Regulation and Governance	Susan Dudley and Zhoudan Xie	June, 2020	Searle Freedom Trust
Regulation and Governance	Susan Dudley	July, 2020	Searle Freedom Trust, C. Boyden Gray Center

An analysis of the RSC’s early research contains precious few funding disclosures. In September 2019, the RSC began to disclose research funding in articles for the first time. Although some journal articles still lack funding acknowledgements or provide ambiguous acknowledgements, many have begun to include explicit funding disclosures. Since September of 2019, the C. Boyden Gray Center has funded five RSC working papers and one RSC journal article. The C. Boyden Gray Center for the Study of the Administrative State is a policy center housed in the Antonin Scalia law school at George Mason University. Mr. Gray, for whom the center is named, has stated that the center is **“an indispensable component of the effort” to take down the “Administrative State and its supporting doctrines.”**<sup>103</sup>

Additionally, Searle Freedom Trust has provided funding for nine articles since September of 2019, all of which were published in peer reviewed journals. In eight of the articles, Searle funding is clearly stated in the acknowledgements section of the article.

## The RSC has Made Misleading Claims Regarding the Journals it Publishes in

In February 2020, the RSC released a “fact sheet” as part of its campaign to rebut concerns of the center’s relationship with the Koch network. One “fact” about RSC research reads:

“Center scholars publish their research in respected peer-reviewed academic and legal journals, including the *Journal of Policy Analysis and Management*, *Public Administration Review*, *Risk Analysis*, *Journal of Benefit-Cost Analysis*, *Regulation and Governance*, *American Political Science Review*, *Journal of Politics*, *Journal of Regulatory Economics*, *Journal of Empirical Legal Studies*, *Review of Industrial Organization*, the *Federal Communications Law Journal*, *Administrative Law Review*, and more.”<sup>104</sup>

Many of the journals listed above –journals that the RSC presumably consider to be most representative of its work– are entirely absent from the Journal Articles & Working Papers page on the RSC website, which purports to include all RSC research dating back to 2010. Specifically, there is not a single article published in *American Political Science Review*, *Journal of Politics*, *Journal of Regulatory Economics*, *Journal of Empirical Legal Studies*, or *Federal Communications Law Journal* listed on the page.

Some of the journals listed above contain RSC research, but the research contains conflicts of interest. One 2014 article published in *Risk Analysis*, authored by RSC scholar Randall Lutter, seeks to undermine the legitimacy of chemical regulations and was funded by CropLife America, the trade association representing the manufacturers of pesticides and other agricultural chemicals.<sup>105</sup> A 2015 article from *Risk Analysis*, authored by Director Susan Dudley and RSC Scholar Julian Morris, suggests that the health risks of exposure to respirable crystalline silica –a chemical that has been linked to incurable lung disease– were blown out of proportion by regulators.

## RSC Research has Made an Impact on Regulation

During Donald Trump’s presidency, some of the ideas advocated for by the RSC through public comments

were adopted. The amended Social Cost of Carbon, which is explored in detail in the case study below, and Executive Order 13771 stand out as the RSC's greatest victories. Under E.O. 13771, regulatory agencies were instructed to eliminate two regulations for every one that was adopted. In June 2016, Director Susan Dudley published an article titled "Can Fiscal Budget Concepts Improve Regulation?" that advocates for a fiscal budget in which old regulations are eliminated when new ones are created.<sup>106</sup> In Fall of 2017, Trump expressed support for a similar approach to regulation. In December 2016, RSC researcher Marcus Peacock released another report titled "Implementing a Two-for-One Regulatory Requirement in the U.S." In January 2016, Trump signed EO 13771 into law. Once EO 13771 became law, RSC Research Professor Bridget Dooling, Senior Policy Analyst Daniel Pérez, and Policy Analyst Mark Febrizio published an article on how the rule could become even stronger.<sup>107</sup> Importantly, RSC research has advocated for such a policy long before the arrival of the Trump administration. Susan Dudley had proposed such a policy as early as 2011.<sup>108</sup>

# Case Study:

## Tony Cox

Tony Cox is a statistician with known ties to the American Chemistry Council, the American Petroleum Institute<sup>109</sup>, and Phillip Morris.<sup>110</sup> Cox's industry bias has been well established for more than a decade. In 2005, President George W. Bush's FDA commissioner was left with no choice but to strike a testimony by Cox as inadmissible because of Cox's attempts to skew his findings in favor of industry.<sup>111</sup> An RSC Scholar, Cox has been contributing journal articles and public comments to the RSC since 2012. As of June 2021, he remains listed as a member of the RSC community of scholars.

In 2016, the RSC joined forces with the American Chemistry Council and the American Petroleum Institute to sponsor Cox's development of a software tool known as Causal Analytics Technology (CAT).<sup>112</sup> Upon the completion of CAT, the RSC hosted a demonstration on GW's campus, and the software was celebrated on the RSC website.<sup>113</sup> In 2017, Cox published an article in *Critical Reviews of Toxicology* in which he uses CAT and utilizes the George Washington University name to claim that particulate matter produced by air pollution does not kill people.<sup>114</sup> According to the World Health Organization, ambient air pollution kills seven million people annually.<sup>115</sup> In the United States, people of color are exposed to 66% more air pollution than their white counterparts.<sup>116</sup> The article is a blatant example of conflict of interest. In the article, Cox explicitly acknowledges that his work was both proof-read and copy-edited by the American Petroleum Institute. The scientific community, unsurprisingly, came out in overwhelming opposition to Cox's conclusions. An article titled "Don't Abandon Evidence and Process on Air Pollution Policy" which labeled Cox as a "fringe scientist" was published in the journal *Science* in response to Cox's work.<sup>117</sup>

In early 2019, Cox was appointed to serve as the Chairman of the EPA's Clean Air Scientific Advisory Committee (CASAC). There, he scrapped the EPA's scientific approach to air pollution, an approach that had been upheld by the previous 11 CASAC committees and is supported by 138 top scientists.<sup>118</sup>

Cox continues to collaborate with the RSC. In 2019, the RSC published an article by Cox about the applications of machine learning toward long term regulatory decision-making for "uncertain" problems such as climate change.<sup>119</sup> Most recently, Cox has worked to obscure the relationship between air pollution and Covid-19. In November 2020, an article published in *Global Epidemiology* concluded that exposure to particulate matter does not increase risk for Covid-19. Though this article was not funded by the RSC, Cox offers a link to the RSC-sponsored CAT software for researchers to replicate his findings.<sup>120</sup>

In addition to Cox's own contributions to the RSC, he is among Director Susan Dudley's most cited academics in her publications. Since 2016, Dudley has cited Cox 20 times across four journal articles and one working paper. Dudley prepared a paper for the OECD Workshop on Socioeconomic Impact Assessment of Chemicals Management in Helsinki –whose sponsors included the American Chemistry Council– titled "Retrospective Evaluation of Chemical Regulations." In the paper, Cox's CAT was offered as a publicly available tool for research.<sup>121</sup>

Not only has the RSC continued to provide Cox with an academic platform despite repeated condemnations from the scientific community for violations of academic integrity and false claims, but it also provided funding for an analytic tool to support Cox's claims. There is perhaps no better example of how the RSC collaborates with the oil industry to perpetuate the climate crisis.

**If the RSC weren't an institution of climate denial, it wouldn't exist.** Core members of the RSC staff, and none more than Director Dudley herself, consistently downplay and question the threat of climate change in academic settings. Even those who have been labeled “fringe scientists” by their peers because of their views on climate change are given a voice by the RSC. All of this is unsurprising in the context of RSC funders, who have demonstrated empirically and admitted themselves that climate denial is a goal of their donations. The RSC does not just house climate denial, it is an institution of climate denial. Every component of the RSC, including the center's most reputable work, helps enable the center to provide academic legitimacy to climate denial. Because the RSC perpetuates climate denial on an institutional level, the institution itself must be dismantled.

Multiple members of the RSC have established, long before the RSC was founded, a pattern of denying the established scientific consensus on climate change. The careers of RSC Director Susan Dudley and RSC Research Professor Brian Mannix stand out as the most illuminating examples of this pattern. In 1997, as a member of the George Mason University Regulatory Analysis Program, Dudley testified before Congress where she spoke on the EPA's proposed ambient air quality standard for ozone. Dudley implored lawmakers to consider the economic benefits of increased ozone in the atmosphere, which she argued “dwarf the positive benefits.” According to her testimony, a rise in ozone corresponds with a decrease in the incidence of cataracts and skin cancer by blocking more UV rays.<sup>122</sup> Later, in 2007, Brian Mannix wrote in an article for the Koch-funded Heartland Institute in which he labeled carbon pricing advocates as a cold blooded “carbon cartel” which poses “the greatest threat to freedom and prosperity that looms in the twenty-first century.” That same year, the Environmental Protection Agency conducted an analysis finding that carbon dioxide emissions and five other gases are linked to climate change. The report labeled climate change as an endangerment to public welfare and recommended that the federal government take steps to regulate vehicle emissions and the burning of gasoline. RSC Director Susan Dudley, serving as OIRA Administrator at the time, willfully neglected to open an email containing the EPA's findings as part of the Bush Administration's decision to dismiss the report's findings.<sup>123</sup> Dudley's decision to suppress relevant scientific information ensured that the impacts of climate change would not be considered in the crafting of regulations.

It should come as no surprise that Dudley and Mannix, with backgrounds such as these, were selected to direct and work at the RSC. As established in the funding section of this report, a core group of RSC funders have also been identified as the harbingers of the decades-long effort to inject uncertainty and divisiveness into the climate crisis, otherwise known as the Climate Change Counter Movement (CCCM). Climate denial at the RSC is particularly unsurprising when we are reminded of its funding from ExxonMobil. A recent sting operation targeting an ExxonMobil lobbyist confirmed that the corporation has been heavily involved in promoting climate skepticism through think tanks and centers and intends to continue to weaken climate regulations to the best of its ability.<sup>124</sup> Thus, from the perspective of RSC funders, the RSC was always meant to become an institution of climate denial.

The RSC has sought to reassure critics that climate denial does not take place within the center. The climate-related section of the February 2021 letter defending the RSC's reputation reads:

“Contrary to unsubstantiated claims, no one in the Regulatory Studies Center questions climate science. In fact, most of the Center's scholars do not focus on environmental or energy issues at all. Those who have written on climate issues address economic and legal questions, not the science.”

This is far from straightforward. Although RSC research and public comments may not question the science on the existence of climate change, science regarding the severity of the risk posed by climate change is consistently called into question. **This is climate denial.** The following quotes offer the most overt instances of climate denial that are found in RSC content, made by core RSC staff.

### **Climate Denial Under GW Letterhead:**

*“Glacial advances have happened repeatedly in the past; and, absent anthropogenic warming, they will happen again, with catastrophic consequences. Absent warming, we know that glaciers will cover New York City again one day.”<sup>125</sup>*

Director Susan Dudley and Brian Mannix, 2/26/14

*“For instance, the statement “ambient carbon dioxide concentrations are increasing, and therefore we must stop burning fossil fuels” may or may not be good public policy, but the latter policy decision does not necessarily follow from the former scientific fact.”<sup>126</sup>*

Director Susan Dudley and Marcus Peacock, 2016

*“It is possible to imagine that Congress might someday decide that coal combustion is too harmful and should be banned in favor of, say, nuclear power; but it is also possible to imagine them doing the opposite.”<sup>127</sup>*

Brian Mannix, 2/26/18

*“Most of the efforts that have been made, by both governments and academics, to estimate the economic impacts of climate change have focused on global impacts. The effect on individual countries will vary dramatically, and in some cases may well produce a net benefit rather than a loss”<sup>128</sup>*

Brian Mannix, 7/31/19

*“While the occurrence of climate change is widely accepted, the nature and probability of extreme outcomes is much less understood.”<sup>129</sup>*

Director Susan Dudley, Daniel Pérez, Brian Mannix, and Christopher Carrigan, 9/2/19

*“While it emphasizes some considerations that are worth focusing on more rigorously, especially how regulatory actions affect different populations, the order exhibits no concern for the potential unintended consequences of acting too aggressively.”<sup>130</sup>*

Director Susan Dudley, 1/27/21 (Referring to President Biden’s E.O. 13990, which “directs all executive departments and agencies to immediately review and... take action to... immediately commence work to confront the climate crisis”)<sup>131</sup>

In addition to the core RSC staff, the RSC scholars program enables the center to provide climate deniers with a platform to critique environmental regulations via public comment under GWU letterhead. Tony Cox, for instance, has authored four journal articles and submitted one public comment via the RSC. Cox's contributions to the RSC include a public comment and a working paper on air pollution. RSC Scholar Julian Morris has deemed climate change a "myth created by a coalition of self-interested scientists, governments and environmental groups." In 2018, Morris published research suggesting that the benefits of climate change outweigh the costs.<sup>132</sup> Nonetheless, in 2018, the RSC loaned Morris the GW name to submit a public comment in which he criticized Obama-era vehicle emissions standards and recommended an increase in CO2 emissions standards to "better reflect" its benefits to society. The EPA cited Morris' comment in its decision to roll back the regulations.<sup>133</sup>

Climate change denial at the RSC does not merely exist among a few isolated individuals and loosely affiliated RSC scholars. Instead, climate denial is consistent in RSC research across a broad range of authors, anchored by Director Susan Dudley's leadership. Explicit cases of climate denial, such as those listed in this section, are compounded implicit acts of climate denial. These efforts include the severe devaluation of the Social Cost of Carbon (detailed in the next section), the rejection of the health impacts of air pollution, and the solidification of a warped version of cost benefit analysis that will automatically weaken the efficacy of any future climate regulations. In these ways, the RSC plays a significant role in perpetuating the climate crisis.



# Case Study:

## The Social Cost of Carbon

A key example of the RSC's complicity in the climate crisis, and the efficacy of RSC public comment campaigns, is their attempts to lower the Social Cost of Carbon (SCC). The SCC is the dollar value placed on the costs of emitting CO<sub>2</sub>. The SCC came to fruition after President Obama assembled a special working group to determine the social cost of carbon emissions. Regulatory agencies like the EPA, use the SCC as a metric when crafting emissions regulations.

When the SCC was first introduced, it was one uniform price that considered the global and domestic benefits of decreasing CO<sub>2</sub> emissions. The RSC would prefer that global and domestic prices remain separate. A domestic SCC is much lower than a global SCC because it only includes the impacts of carbon emissions within US borders –ignoring the costs of carbon emissions abroad that contribute to US economic growth and the social benefits gained by non-US citizens from decreased emissions. Depending on the methodology used, the domestic SCC amounts to either 7% or 23% of the global total. In short, a domestic SCC enables the United States to ignore its carbon emissions abroad and the historical role it has played in creating the climate crisis the world faces. Thus, a shift toward a domestic SCC will decrease the regulatory costs associated with climate change and by extension, make it easier for polluters –including RSC donors such as ExxonMobil– to maintain high levels of emissions. On at least 10 occasions, RSC affiliates have published public comments and articles suggesting that the global and domestic benefits of decreased emissions should be reflected as two different SCCs.<sup>134</sup>

Many RSC scholars argue that we must incorporate the domestic SCC rather than the global one because the US, and its regulations, are only intended to protect the interests of the people within the borders of the US. In a letter published in *Science*, Dudley and others suggested that “a regulation with substantial domestic costs based on a finding that benefits to foreigners “justify” such costs would be irregular at best.”<sup>135</sup> Of the letters seven signatories, five of them– Susan Dudley, John Graham, Randall Lutter, Art Fraas, and W. Kip Viscusi– are or have been affiliated with the RSC.

In a different letter, this time addressed to the committee responsible for determining the SCC, RSC affiliates – Dudley, Fraas, Graham, and Viscusi– clarified the implications of maintaining a domestic SCC. They suggested that the global SCC might be used in special circumstances like satisfying the past –but not necessarily future– international agreements surrounding GHG emissions or as a way of incentivizing other countries to intensify emissions reductions. Other than these two exceptions, the authors intend the domestic SCC to be used in all other circumstances, particularly Regulatory Impact Analysis (RIA), which are conducted before a regulation is made. If, for example, the EPA were creating a new regulation for the carbon emissions of semi-trucks, it would use an RIA and conduct a cost benefit analysis in order to determine ideal emissions standards. The lower the SCC, the more emissions the EPA is likely to permit. In other words, although the RSC still supports keeping track of the global SCC, they imply that it would almost never be factored into the construction of regulations.

In 2018, Trump heeded the advice of the RSC, lowering the SCC from its Obama era level of \$50 per ton of CO<sub>2</sub> emitted, down to \$1 to \$7. The global-domestic distinction articulated by the RSC proved essential to the drastic lowering of the SCC. In the RIA where the SCC was first lowered, the EPA cited the letter from *Science* when discussing the difference between domestic and international benefits.<sup>136</sup> One footnote describes the letter as part of “an active literature... discussing how to appropriately treat [carbon emissions] for purposes of domestic policy making.”

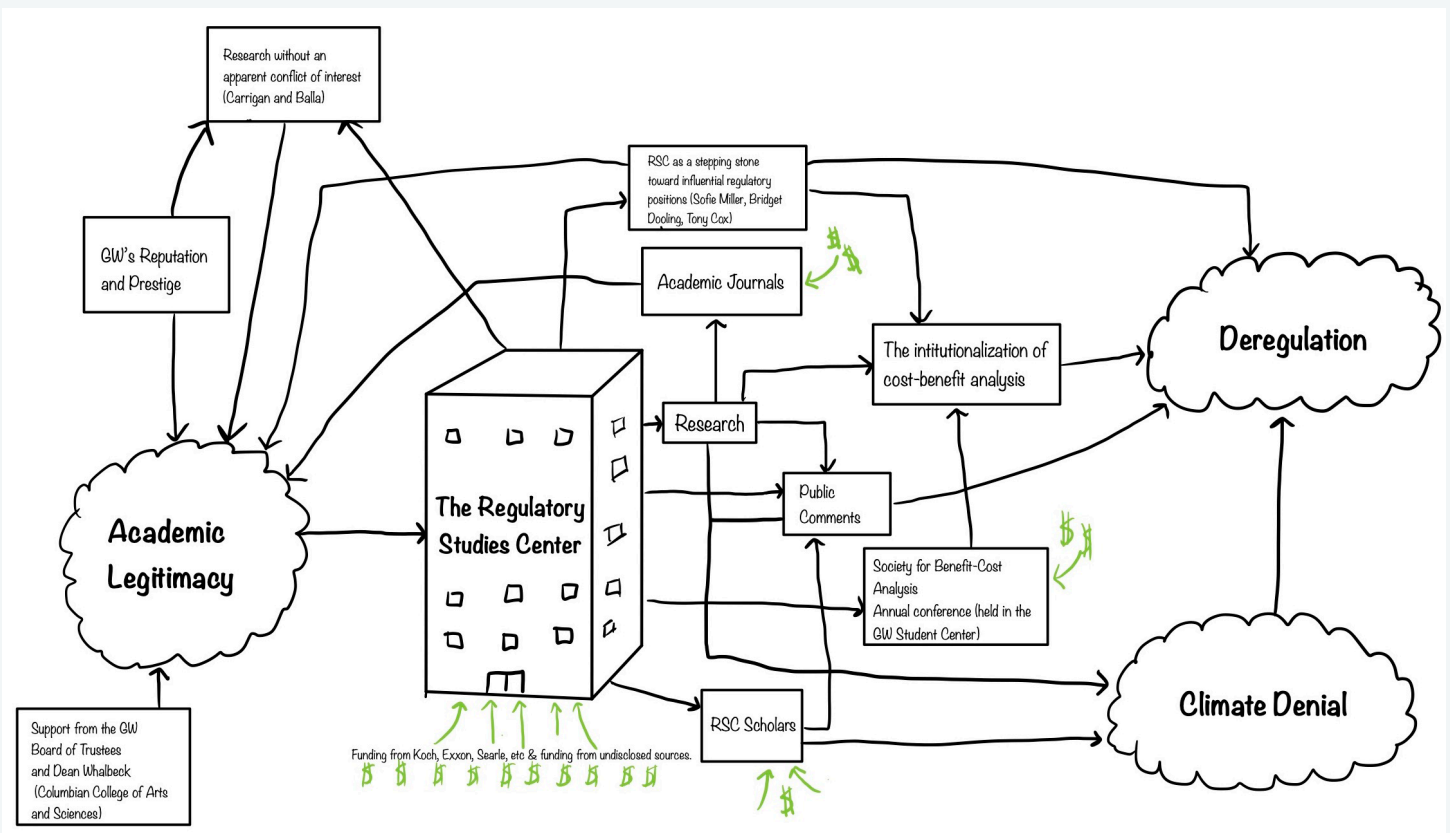
# Viewing the RSC as an Institution

**Proponents of the RSC portray the center as a group of loosely affiliated individuals to distance the RSC from accountability.** The February 2021 letter in defense of the RSC labeled accusations of climate denial at the center as “ad hominem rhetoric” used to “censor individuals and “dictate the direction of scholars research.”<sup>137</sup> By individualizing RSC content, the conversation shifts away from the interests of RSC donors toward the respective opinions of RSC staff and RSC scholars.

This approach ignores the fact that the RSC is uniquely equipped to validate and amplify the opinions of its researchers on a level that researchers could not achieve as individuals. Tony Cox is emblematic of this dynamic. As an individual, Cox is viewed by many of his peers as a fringe scientist. When Cox’s work is published via the RSC, he can tap into newfound credibility. Importantly, the only reason Cox was chosen by the RSC is because his personal beliefs align with the agenda of RSC donors. Radical claims made in RSC content therefore do not reflect the RSC’s commitment to protecting individual opinions. Rather, every individual RSC contributor fits into a larger deregulatory apparatus fueled by RSC funders.

Viewing the RSC as an institution also highlights the detrimental effects of RSC research that might seem harmless in isolation. While the RSC might point to Balla and Carrigan’s impressive academic credentials or Bridget Dooling’s appointment to the Biden transition team as evidence of the RSC’s credibility, these examples play a crucial role in the RSC’s deregulatory mission. As demonstrated in the diagram below every function of the RSC ultimately serves its end goals of climate denial and deregulation.

*Figure 9.*



# Conflict of Interest (COI), Gift Giving, and the Board of Trustees

## The COI and Gift Giving Policies at GW are Inadequate and Must be Reformed

Both the COI and Gift Giving policies at GW provide a veil of secrecy that enables the RSC to continue to accept large donations from nefarious actors. The COI policy requires little transparency from researchers and focuses on the financial holdings of researchers rather than institutional conflicts of interest. The gift giving policy is similarly lacking. Although any gift over \$50,000 requires a signed gift agreement, there are no provisions in the policy to prevent contributions from donors who have business interests in the content of the research they are funding, nor does the policy prohibit donors from influencing the content of research.

A report by UnKoch My Campus revealed that in 2009, the same year the RSC was founded, grants provided to Clemson University were contingent upon the Charles Koch Foundation's ability to determine staff positions. Similar donation contingencies have also occurred at various other universities including Florida State University, Wake Forest, Utah State University, and George Mason University. **Because GW is a private institution, records that might prove how Koch donations have shaped RSC staff and content are not publicly available.**<sup>138</sup> However, there is nothing in the GW gift giving policy that would have prevented such donations from taking place.

GW must amend its gift giving policy to hold the RSC accountable and to ensure corporate interests cannot continue to erode its academic credibility. A more just gift giving policy must forbid funding that suggests an institutional conflict of interest, end donors ability to influence research outcomes and hiring decisions, and require all centers at GW to compile a comprehensive database of all funding agreements and relevant documentation including the retroactive disclosure of previous agreements.

## GW's Office of Corporate and Foundation Relations (CFR) Actively Encourages Research Funding from Searle Freedom Trust and Works Closely with the Charles Koch foundation

GW's CFR office has ignored the troubled histories of the Charles Koch Foundation and Searle Freedom Trust, deciding instead to facilitate and encourage the solicitation of their funds for research. On the CFR website, an entire page is dedicated to describing grant opportunities from Searle Freedom Trust. The page encourages researchers to apply if they are interested in environmental policy, social welfare reform, cost-benefit analysis of regulatory practices, and other areas.<sup>139</sup> The Charles Koch Foundation is listed as a centrally managed foundation at GW. This means that the CFR has staff dedicated to engaging in discussions with GW researchers and facilitating the allocation of Koch Foundation funds.<sup>140</sup>

## Grace Speights, Chair of the GWU Board of Trustees, has a Conflict of Interest in Holding the RSC Accountable.

In addition to her role as Chair of GW's Board, Grace Speights is a prominent Washington DC attorney. Speights is a partner at the law firm Morgan Lewis; a firm that, like the RSC, is known for its allegiance to corporate business interests.<sup>141</sup> At the firm, Speights is a primary contact on the Labor, Employment, and Benefits team, which has assisted clients such as General Motors and Amazon in anti-union efforts.<sup>142</sup> In another instance, Speights' firm won their client ExxonMobil \$20.3 million from the federal government to compensate the com-

pany for the remediation of oil refineries and chemical plants in Texas and Louisiana.<sup>143</sup> As Chair of the Board of Trustees, Speights has proven a natural ally of the RSC. Even after 85.7% of voters in the University Student Association elections voted in favor of divestment from fossil fuels, Speights refused to take a position on the matter.<sup>144</sup> More recently, Speights has sought to amend the ways in which faculty can contribute to the campus dialogue following the GWUFA's campaign calling on GWU President Leblanc to resign. This petition also encouraged faculty to sign the Sunrise GW petition calling on GWU to cut ties with the RSC.<sup>145</sup> Given her background as an attorney and the actions she has taken toward silencing GW faculty thus far, Grace Speights should not be trusted to hold the RSC accountable in an objective manner. The George Washington University bylaws state "trustees must avoid situations in which their personal interests could create an actual or apparent conflict with their responsibilities, obligations, or duties to the university."<sup>146</sup> Given Speight's bias –intentional or not– toward the RSC, she must not be allowed to determine its fate.

# Conclusion

**It is time for the Board of Trustees to cut ties with the Regulatory Studies Center.** For twelve years, George Washington University has loaned its name, campus, and reputation to the RSC. During that time, the center has platformed climate deniers, developed an industry-funded tool for junk science, laid the groundwork for Trump's deregulatory agenda, and much more. Marginalized communities that breathe most of the polluted air, farmworkers who are exposed to the most pesticides and herbicides, families that have been impoverished because of deregulation, and other vulnerable communities are most severely impacted by the RSC's work, while simultaneously serving as the RSC's justification for deregulation. All of this is done in the name of the business interests that fund the RSC—an unforgivable institutional conflict of interest.

If the RSC remains a part of GWU, there will be destructive consequences. Researchers will continue to fight for a version of cost-benefit analysis that best suits RSC donors and provide policy suggestions. The University Student Center will again serve as the meeting place for anti-regulatory economists from across the country. When the EPA reopens the SCC—or any other relevant climate policy question—for debate, the RSC will be there armed with climate deniers, CBA, and the GWU name. Most importantly, we must bear in mind that Trump was the first Republican in office since the RSC was founded. When Trump was elected, the RSC was prepared to hit the ground running with the regulatory policies they had crafted years before. The RSC has already made clear their intentions to find new ways to pose deregulation as the solution to systemic inequality. Next time an ally of the RSC is in the Executive Office, Dudley and her team will be ready to strike again.

The RSC is not just problematic because of the individuals who work there, but as an institution in and of itself. Every member of the RSC is complicit. Though some members of the RSC, such as Dudley and Mannix, reflect the interests of RSC funders more directly than others, everyone at the center plays a role. Legal scholars such as Bridget Dooling equip the center with arguments to further entrench the role of CBA across the regulatory state. Others such as Balla and Carrigan—whose own work doesn't pose a conflict—provide the center with undeserved credibility. In turn, members of the RSC community of scholars, often denounced by their peers, leverage this credibility to rationalize their otherwise unfounded radical deregulatory proposals. As a result, the net impact of the RSC is greater than the sum of its parts. Thus, the only way to avoid the consequences of the RSC is to close the center.

The GWU community deserves transparency. As much information as we do know about the RSC, so much more is shrouded in secrecy. Although non-profits such as the Charles Koch Foundation and the ExxonMobil Foundation are required by law to disclose donations, individuals and other sorts of organizations are not. Aside from sporadic research funding disclosures in publications, it remains unknown where and in what quantity RSC funds are allocated. The RSC assures us that it does not accept donations conditioned on hiring. If this is true, the RSC has no reason to fear sharing this information publicly. Until the RSC publicly releases the entirety of its financial records and funding agreements dating back to its founding—which it must—the full magnitude of the RSC's institutional conflict of interest will remain unknown. In the meantime, the RSC will remain without a credible claim to transparency or credibility.

GWU's administration must also amend the university gift giving policy to ensure that the same mistakes learned from the RSC are not repeated. A just gift giving policy will ensure that all relevant documentation is made publicly available and prohibit the acceptance of gifts contingent upon hiring, curriculum, or any other unjust contingency. This new policy must include retroactive disclosures of information. Moreover, students and faculty must be given a seat at the table in the gift acceptance process. Finally, because of her conflict of inter-

est, Chairwoman Grace Speights should not be allowed to provide input during this process.

GWU has enabled the RSC to grow for twelve years too long. The RSC has already caused this university– and the world– enough harm and shows no signs of slowing down. It is time to abolish the RSC and clean the stain from the GWU name.

# Appendix: RSC Affiliates Mentioned

Susan Dudley: Director

Christopher Carrigan: Co-Director

Steven Balla: Co-Director

Joseph Cordes: Co-Director

Bridget Dooling: Research Professor

Jerry Ellig: Former Research Professor

Brian Mannix: Research Professor

Howard Beales: Senior Scholar

George Gray: Senior Scholar

Sofie Miller: Former Research Professor

Mark Febrizio: Policy Analyst

Daniel Pérez: Senior Policy Analyst

Zhoudan Xie: Senior Policy Analyst

Tony Cox: RSC Scholar

Julian Morris: RSC Scholar

Arthur Fraas: RSC Scholar

John Graham: RSC Scholar

W. Kip Viscusi: RSC Scholar

# ENDNOTES

- 1 About, Regulatory Studies Center (Viewed on 8/2/21) <https://regulatorystudies.columbian.gwu.edu/about>
- 2 American Petroleum Institute, Climate Investigations Center, (Viewed on 8/2/21) <https://climateinvestigations.org/trade-association-pr-spending/american-petroleum-institute/> and American Chemistry Council, Sourcewatch, (Viewed on 5/2/20) [https://www.sourcewatch.org/index.php?title=American\\_Chemistry\\_Council](https://www.sourcewatch.org/index.php?title=American_Chemistry_Council)
- 3 Taylor Lincoln, *A Key Cog in Charles Koch's Master Plan: How the Purportedly Unbiased Regulatory Studies Center Advances an Agenda to Deregulate America*, Public Citizen, (June 3 ,2019) <https://mkus3lurbh3lbztg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>
- 4 *Obstructing action: foundation funding and US climate change counter-movement organizations*, Robert Brulle, Galen Hall, Loredana Loy, & Kennedy Schell-Smith, (May 15, 2021). <https://link.springer-com.proxygw.wrlc.org/article/10.1007/s10584-021-03117-w>
- 5 Lincoln, 68 <https://mkus3lurbh3lbztg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>
- 6 *ibid.*, 73
- 7 Caroline Mayer, *FTC Choice to Defend Tobacco Ad*, LA Times (May 31, 2001) <https://www.latimes.com/archives/la-xpm-2001-may-31-fi-4585-story.html>
- 8 *EXCERPTS: the “list of George Gray’s corporate sponsors reads like a murderer’s row of the top polluters in the country.”* Lobbywatch, (October 7, 2005) <https://www.lobbywatch.org/archive2.asp?arcid=5813>
- 9 *Our Community of Scholars*, RSC, (Viewed 6/3/2021), <https://regulatorystudies.columbian.gwu.edu/our-community-scholars>
- 10 Susanne Rust, Tony Barboza, *Top advisor to Trump’s EPA is called out in major journal for his ‘fringe’ ideas*, LA Times, (March 21, 2019), <https://www.latimes.com/local/california/la-me-epa-pollution-study-20190321-story.html>
- 11 W. Kip Viscusi, *Pricing Lives: Guide Posts for a Better Society*, Princeton University Press, (2018), <https://press.princeton.edu/books/hardcover/9780691179216/pricing-lives>
- 12 Julian Morris, *Climate Change, Catastrophe, Regulation and the Social Cost of Carbon*, reason foundation, (March 2018) [https://reason.org/wp-content/uploads/2018/03/climate\\_change\\_social\\_cost\\_carbon.pdf](https://reason.org/wp-content/uploads/2018/03/climate_change_social_cost_carbon.pdf).
- 13 *Industry Ally John Graham Is Wrong Choice to Be Nation’s Regulatory Gatekeeper*, Public Citizen, (May 17, 2001) <https://www.citizen.org/news/industry-ally-john-graham-is-wrong-choice-to-benations-regulatory-gatekeeper/>.
- 14 Taylor Lincoln, *A Key Cog in Charles Koch’s Master Plan: How the Purportedly Unbiased Regulatory Studies Center Advances an Agenda to Deregulate America*, 6, Public Citizen, (June 3 ,2019) <https://mkus3lurbh3lbztg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>
- 15 Lincoln, 36, <https://mkus3lurbh3lbztg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>
- 16 Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, Environmental Protection Agency, 7-7, (August, 2018), <https://www.ourenergypolicy.org/resources/regulatory-impact-analysis-for-the-proposed-emission-guidelines-for-greenhouse-gas-emissions-from-existing-electric-utility-generating-units-revisions-to-emission-guideline-implementing-regulations/>
- 17 Art Fraas and Sofie Miller, *Measuring Energy Efficiency: Accounting for the Hidden Costs of Product Failure*, International Association for Energy Economics, (January 1, 2019) <https://regulatorystudies.columbian.gwu.edu/measuring-energy-efficiency-accounting-hidden-costs-product-failure> and Sofie Miller, *Risks of Regulating in the Dark*, Federalist Society Review, (January 18, 2017), <https://regulatorystudies.columbian.gwu.edu/risks-regulating-dark>
- 18 Lesley Clark and Kelsey Brugger, *Biden energy rules hit ‘vacuum of leadership’*, E&E News (July 28, 2021) <https://www.eenews.net/articles/biden-energy-rules-hit-vacuum-of-leadership/>
- 19 *Bridget Dooling receives prestigious appointment*, George Washington University Regulatory Studies Center, (May 6, 2021) <https://regulatorystudies.columbian.gwu.edu/bridget-dooling-aba-section-council-member>.
- 20 Rachel Frazin, *EPA reappoints controversial leader to air quality advisory committee*, The Hill, (September 15, 2020), <https://thehill.com/policy/energy-environment/516556-epa-reappoints-controversial-leader-to-air-quality-advisory>
- 21 *Increased Funding, Increased Influence Koch University Funding Update May 2005 – 2019*, UnKoch My Campus, (2021), <https://static1.squarespace.com/static/5400da69e4b0cb1fd47c9077/t/60a3e72e3a0489488b2eb436/1621354288338/unKochMyCam->



[pus+Koch+Funding+Report+May+2005+-+2019.pdf](#)

22 [ibid.](#)

23 GWU Gift Policy, <https://compliance.gwu.edu/gift-acceptance#:~:text=The%20university%20requires%20signed%20Gift,of%20Gifts%20of%20realized%20bequests>. and GWU Conflict of Interest Policy, <https://compliance.gwu.edu/conflict-interest>.

24 Lauren Lumpkin, George Washington University commits to single-use-plastic ban, The Washington Post, (February 11, 2021), [https://www-washingtonpost-com.proxygw.wrlc.org/education/gw-plastics-ban/2021/02/11/b9ed45bc-6c6b-11eb-9f80-3d7646ce1bc0\\_story.html](https://www-washingtonpost-com.proxygw.wrlc.org/education/gw-plastics-ban/2021/02/11/b9ed45bc-6c6b-11eb-9f80-3d7646ce1bc0_story.html).

[https://www.washingtonpost.com/local/education/gw-plastics-ban/2021/02/11/b9ed45bc-6c6b-11eb-9f80-3d7646ce1bc0\\_story.html](https://www.washingtonpost.com/local/education/gw-plastics-ban/2021/02/11/b9ed45bc-6c6b-11eb-9f80-3d7646ce1bc0_story.html)

25 Lincoln, 26 <https://mkus3lurbh3lbtg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>

26 Richard Bernstein, UnKoch My ... Happiness Studies?, RealClear Investigation, (July 11, 2017), [https://www.realclearinvestigations.com/articles/2017/07/10/koch\\_money\\_gets\\_happiness\\_studies\\_booded\\_but\\_why.html](https://www.realclearinvestigations.com/articles/2017/07/10/koch_money_gets_happiness_studies_booded_but_why.html)

27 Searle Freedom Trust Form 990 (2009), p. 60 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

28 Charles G. Koch Charitable Foundation Form 990 (2010), p. 22 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

29 Searle Freedom Trust Form 990 (2010), p. 66 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

30 Charles G. Koch Charitable Foundation Form 990 (2011), p. 51 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

31 Searle Freedom Trust Form 990 (2011), p. 19 on pdf reader pagecount. <https://projects.propublica.org/nonprofits/organizations/367244615>

32 Charles G. Koch Charitable Foundation Form 990 (2012), p. 23 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

33 Charles G. Koch Charitable Foundation Form 990 (2013), p. 46 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

34 Searle Freedom Trust Form 990 (2013), p. 24 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

35 Exxon-Mobil Foundation Form 990 (2013), p. 88 on pdf reader count. <https://projects.propublica.org/nonprofits/organizations/136082357>

36 Charles G. Koch Charitable Foundation Form 990 (2014), p. 21 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

37 Searle Freedom Trust Form 990 (2014), p. 18 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

38 Exxon-Mobil Foundation Form 990 (2014), p. 92 on pdf reader count. <https://projects.propublica.org/nonprofits/organizations/136082357>

39 Charles G. Koch Charitable Foundation Form 990 (2015), p. 22 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

40 Searle Freedom Trust Form 990 (2015), p. 23 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

41 Exxon-Mobil Foundation Form 990 (2015), p. 76 on pdf reader count. <https://projects.propublica.org/nonprofits/organizations/136082357>

42 Charles G. Koch Charitable Foundation Form 990 (2016), p. 42 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>

43 Searle Freedom Trust Form 990 (2016), p. 22 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>

- 44 Exxon-Mobil Foundation Form 990 (2016). p. 62 on pdf reader count. <https://projects.propublica.org/nonprofits/organizations/136082357>
- 45 Charles G. Koch Charitable Foundation Form 990 (2017), p. 73 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/480918408>
- 46 Searle Freedom Trust Form 990 (2017), p. 24. <https://projects.propublica.org/nonprofits/organizations/367244615>
- 47 Health and Environment, portion of 2017 Worldwide Giving Report, EXXONMOBIL (Aug. 30, 2018), <https://exxonmobil.co/2ZNWgWl>.
- 48 2017 Annual Report, SARAH SCAIFE FOUNDATION (undated; viewed on May 1, 2019), <http://bit.ly/2V4XvSx>.
- 49 Charles G. Koch Charitable Foundation Form 990 (2018), p. 175 on pdf reader page count. <https://s3.documentcloud.org/documents/6560076/2018-Charles-Koch-Foundation-990.pdf>
- 50 Searle Freedom Trust Form 990 (2018), p. 18 on pdf reader page count. <https://projects.propublica.org/nonprofits/organizations/367244615>
- 51 2018 Worldwide Giving Report, p. 23, ExxonMobil Foundation <https://corporate.exxonmobil.com/-/media/Global/Files/worldwide-giving/2018-Worldwide-Giving-Report.pdf>
- 52 Sarah Scaife Foundation Annual Report 2018, 10, <http://www.scaife.com/2018-Sarah%20Scaife%20Foundation-Annual%20Report.pdf>
- 53 Charles G. Koch Charitable Foundation Form 990 (2019), p. 115 on pdf reader page count. <https://s3.documentcloud.org/documents/20422379/2019-charles-koch-foundation-990.pdf>
- 54 Searle Freedom Trust Form 990 (2019), p. 21 on pdf reader pagecount. <https://projects.propublica.org/nonprofits/organizations/367244615>
- 55 ExxonMobil Foundation 2019 Worldwide Giving Report, p. 9 <https://corporate.exxonmobil.com/Sustainability/Community-engagement/Worldwide-giving/Worldwide-Giving-Report>
- 56 Sarah Scaife Foundation Annual Report 2019, 10, <http://www.scaife.com/sarah19.pdf>
- 57 ExxonMobil Foundation Worldwide 2020 Worldwide Giving Report, p. 9 <https://corporate.exxonmobil.com/Sustainability/Community-engagement/Worldwide-giving/Worldwide-Giving-Report>
- 58 Robert Brulle, Galen Hall, Loredana Loy, & Kennedy Schell-Smith, *Obstructing action: foundation funding and US climate change counter-movement organizations*, *Climatic Change*, (May 15, 2021). <https://link-springer-com.proxygw.wrlc.org/article/10.1007/s10584-021-03117-w>
- 59 Justin Farrell, Corporate funding and ideological polarization about climate change, *Proceedings of the National Academy of Sciences of the United States of America*, (May 13, 2015), <https://www.pnas-org.proxygw.wrlc.org/content/113/1/92>
- 60 Lincoln, 54, <https://mkus3lurbh3lbztg254fzode-wpengine.netdna-ssl.com/wp-content/uploads/A-Key-Cog-in-Charles-Kochs-Master-Plan-4.pdf>
- 61 OIRA 101: The Most Powerful Government Agency You've Never Heard Of, The Center for Progressive Reform, <http://progressivereform.org/our-work/regulatory-policy/oira-101-most-powerful-government-agency-youve-never-heard/>
- 62 *ibid.*
- 63 *ibid.*
- 64 Susan Dudley, (October 26, 2020) <https://twitter.com/susanedudley/status/1320733615261655044?lang=en>
- 65 Christopher Carrigan, What's wrong with the back of the envelope? A call for simple (and timely) benefit-cost analysis, *George Washington University Regulatory Studies Center*, (April 26, 2016), <https://onlinelibrary.wiley.com/doi/abs/10.1111/rego.12120>; Brian Mannix, Benefit-Cost Analysis as a Check on Administrative Discretion, *George Washington University Regulatory Studies Center*, (2016), <https://www.journals.uchicago.edu/doi/full/10.1086/696841>; Susan Dudley et al, Consumer's Guide to Regulatory Impact Analysis: Ten Tips for Being an Informed Policymaker, *George Washington University Regulatory Studies Center*, (July 27, 2017), <https://www.cambridge.org/core/journals/journal-of-benefit-cost-analysis/article/consumers-guide-to-regulatory-impact-analysis-ten-tips-for-being-an-informed-policymaker/FAF984595B822A70495621AEA7EF7DEB>; Christopher Carrigan and Russell W. Mills Organizational Process, Rulemaking Pace, and the Shadow of Judicial Review, *Public Administration Review*, (May 17, 2019),

- <https://onlinelibrary-wiley-com.proxygw.wrlc.org/doi/full/10.1111/puar.13068>; Susan E. Dudley, Daniel R. Pérez, Brian F. Mannix, and Christopher Carrigan, Dynamic Benefit-Cost Analysis for Uncertain Futures, *Journal of Benefit-Cost Analysis*, (September 2, 2019) <https://www-cambridge-org.proxygw.wrlc.org/core/journals/journal-of-benefit-cost-analysis/article/dynamic-benefit-cost-analysis-for-uncertain-futures/F608CEAA98A1AA9337A8DE2AB5881426>; Susan Dudley, Regulatory Oversight and Benefit-Cost Analysis: A Historical Perspective, *Journal of Benefit-Cost Analysis*, (January 15, 2020) <https://www-cambridge-org.proxygw.wrlc.org/core/journals/journal-of-benefit-cost-analysis/article/regulatory-oversight-and-benefit-cost-analysis-a-historical-perspective/0BF712E5C-D96C64300EB220A6D2C31CC>; Susan Dudley and Brian Mannix, Improving Regulatory Benefit-Cost Analysis, *Journal of Law and Politics*, (January 22, 2019) <https://regulatorystudies.columbian.gwu.edu/improving-regulatory-benefit-cost-analysis>; Christopher Carrigan, Mark Febrizio, & Stuart Shapiro, Regulating Agencies: Using Regulatory Instruments as a Pathway to Improve Benefit-Cost Analysis, C. Boyden Gray Center for the Study of the Administrative State, (February 18, 2020), <https://regulatorystudies.columbian.gwu.edu/regulating-agencies>; Susan Dudley, The Durability of Regulatory Oversight, *Regulation & Governance*, (July 20, 2020) <https://regulatorystudies.columbian.gwu.edu/durability-regulatory-oversight>; Jerry Ellig, Improvements in SEC Economic Analysis, *Florida State University Business Review*, (August 19, 2020) <https://regulatorystudies.columbian.gwu.edu/improvements-sec-economic-analysis>; and Susan Dudley, Milestones in the Evolution of the Administrative State, *Dædalus*, (November 18, 2020) <https://regulatorystudies.columbian.gwu.edu/milestones-evolution-administrative-state>
- 66 25 Years of EO 12866, George Washington University Regulatory Studies Center, (Viewed January 24, 2021), <https://regulatorystudies.columbian.gwu.edu/25-years-EO-12866>
- 67 Lisa Heinzerling, Cost-Nothing Analysis: Environmental Economics in the Age of Trump, *Colorado Natural Resources, Energy & Environmental Law Review*, (November, 2018), <https://www.colorado.edu/law/lisa-heinzerling-cost-nothing-analysis-environmental-economics-age-trump>
- 68 W. Kip Viscusi, *Pricing Lives: Guideposts for a Safer Society*, Princeton University Press, (2018), <https://press.princeton.edu/books/hardcover/9780691179216/pricing-lives>
- 69 W. Kip Viscusi, Joel Huber, & Jason Bell, Responsible Precautions for Uncertain Environmental Risks, *Journal of Benefit-Cost Analysis*, (September 17, 2019), <https://regulatorystudies.columbian.gwu.edu/responsible-precautions-uncertain-environmental-risks>.
- 70 Tyrone Hayes, Endocrine disruption, environmental justice, and the ivory tower, TEDxBerkley, (March 8, 2018), <https://www.youtube.com/watch?v=Hu0IXMTFY9Q>
- 71 Syngenta Harassed the Scientist Who Exposed Risks of its Herbicide Atrazine, Union of Concerned Scientists, (October 12, 2017), <https://www.ucsusa.org/resources/syngenta-harassed-scientist-who-exposed-risks-its-herbicide-atrazine>
- 72 Susan Dudley, Daniel Pérez, Brian Mannix, and Christopher Carrigan, Dynamic Benefit-Cost Analysis for Uncertain Futures, *Journal of Benefit-Cost Analysis*, (September 17, 2019), <https://regulatorystudies.columbian.gwu.edu/dynamic-benefit-cost-analysis-uncertain-futures>
- 73 Chemical Industry Pressures EPA to Protect Herbicide, not Wildlife, Union of Concerned Scientists, (December 12, 2006) <https://www.ucsusa.org/resources/chemical-industry-pressures-epa-protect-herbicide-not-wildlife>.
- 74 Heinzerling, 300, <https://www.colorado.edu/law/lisa-heinzerling-cost-nothing-analysis-environmental-economics-age-trump>
- 75 Brian Mannix, Comment to EPA's Science Advisory Board, George Washington University Regulatory Studies Center, (March 7, 2016), <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20Future%20Lives%20-%20BMannix.pdf>
- 76 Susan Dudley, Daniel Pérez, Brian Mannix, and Christopher Carrigan, Dynamic Benefit-Cost Analysis for Uncertain Futures, *Journal of Benefit-Cost Analysis*, (September 17, 2019), <https://regulatorystudies.columbian.gwu.edu/dynamic-benefit-cost-analysis-uncertain-futures>
- 77 *ibid.*
- 78 Lisa Friedman and Coral Davenport, E.P.A. Weakens Controls on Mercury, *The New York Times*, (December 7, 2020), <https://www.nytimes.com/2020/04/16/climate/epa-mercury-coal.html>
- 79 Brian Mannix, EPA's Benefit-Cost Analysis, George Washington University Regulatory Studies Center, (August 4, 2020) <https://regulatorystudies.columbian.gwu.edu/epas-benefit-cost-analysis> & Joseph Cordes, Benefit-Cost Analysis at the EPA, George Washington University Regulatory Studies Center, (August 4, 2020), <https://regulatorystudies.columbian.gwu.edu/benefit-cost-analysis-epa>

- 80 Jennifer Hijazi, EPA cost-benefit rule could undermine Biden climate action, E&E News, (December 15, 2020), <https://subscriber.politicopro.com/article/eenews/1063720663>.
- 81 Susan Dudley, OMB's Reported Benefits of Regulation: Too Good to Be True? Regulatory Reform, (Summer, 2013) [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/Dudley\\_OMB\\_BC\\_Regulation-v36n2-4.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/Dudley_OMB_BC_Regulation-v36n2-4.pdf)
- 82 . Kip Viscusi, Joel Huber, & Jason Bell, Responsible Precautions for Uncertain Environmental Risks, Journal of Benefit-Cost Analysis, (September 17, 2019), <https://regulatorystudies.columbian.gwu.edu/responsible-precautions-uncertain-environmental-risks>.
- 83 Susan Dudley, Improving Evaluation of Chemical Regulations, George Washington University Regulatory Studies Center, (August 31, 2016), <https://regulatorystudies.columbian.gwu.edu/improving-evaluation-chemical-regulations>.
- 84 Sofie Miller, DOE's Energy Conservation Standards for Manufactured Housing, George Washington University Regulatory Studies Center, (August 16, 2019), <https://regulatorystudies.columbian.gwu.edu/does-energy-conservation-standards-manufactured-housing>
- 85 Brian Mannix, Public Interest Comment: Are Future Lives Worth More Than Our Own?, George Washington University Regulatory Studies Center, (March 14, 2020), <https://regulatorystudies.columbian.gwu.edu/are-future-lives-worth-more-our-own>
- 86 Modernizing Regulatory Review, The White House, (January 20, 2021) <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/modernizing-regulatory-review/>
- 87 Susan Dudley, Distributional Effects in Regulatory Impact Analysis, George Washington University Regulatory Studies Center, (May 12, 2021), <https://regulatorystudies.columbian.gwu.edu/distributional-effects-regulatory-impact-analysis>
- 88 David Henderson, Rent Seeking, The Library of Economics and Liberty, <https://www.econlib.org/library/Enc/RentSeeking.html>
- 89 Bridget Dooling, OIRA's Expanded Review of Tax Regulations and Its Surprising Implications, The Business, Entrepreneurship & Tax Law Review, (2019), <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=1075&context=betr>; Bridget Dooling, Bespoke Regulatory Review, Ohio State Law Journal, (January 13, 2021), <https://regulatorystudies.columbian.gwu.edu/bespoke-regulatory-review-0>; Susan Dudley, OIRA Past and Future, George Washington University Regulatory Studies Center, (September 12, 2019), <https://regulatorystudies.columbian.gwu.edu/oira-past-future> ; Susan Dudley, The Durability of Regulatory Oversight, Regulation and Governance, (July 20, 2020), <https://regulatorystudies.columbian.gwu.edu/durability-regulatory-oversight>; Susan Dudley, Regulatory Oversight and Benefit-Cost Analysis: A Historical Perspective, Journal of Benefit-Cost Analysis, (January 24, 2020), <https://regulatorystudies.columbian.gwu.edu/regulatory-oversight-and-benefit-cost-analysis-historical-perspective>
- 90 Jerry Ellig, Improvements in SEC Economic Analysis Since Business Roundtable: A Structured Assessment, Mercatus Center at George Mason University, (December 15, 2016), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2887790](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2887790)
- 91 Contributors, Society for Benefit-Cost Analysis <https://web.archive.org/web/20151018174624/http://benefitcostanalysis.org/contributors>
- 92 Koch-Commissioned Study Aims to Kill Electric Vehicle Tax Credit, Koch vs. Clean, (December, 2018) <https://www.kochvs-clean.com/koch-funded-nera-study-electric-vehicle/>
- 93 Previous Conferences, Society for Benefit-Cost Analysis, <https://benefitcostanalysis.org/#>
- 94 Past Directors, Society for Benefit-Cost Analysis, [https://www.benefitcostanalysis.org/past\\_directors.php](https://www.benefitcostanalysis.org/past_directors.php)
- 95 Previous Conferences, Society for Benefit-Cost Analysis, <https://benefitcostanalysis.org/#>
- 96 Editors and Current Editorial Board, Society for Benefit-Cost Analysis, [https://www.benefitcostanalysis.org/editors\\_and\\_current\\_editorial.php](https://www.benefitcostanalysis.org/editors_and_current_editorial.php)
- 97 GW Regulatory Studies Center Faculty Statement, (February 11, 2021) [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/GW%20Regulatory%20Studies%20Center%20Faculty%20Statement\\_2021-02-11.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/GW%20Regulatory%20Studies%20Center%20Faculty%20Statement_2021-02-11.pdf)
- 98 *ibid.*
- 99 Federalist Society for Law and Public Policy Studies, Sourcewatch, (March 27, 2021) [https://www.sourcewatch.org/index.php/Federalist\\_Society\\_for\\_Law\\_and\\_Public\\_Policy\\_Studies](https://www.sourcewatch.org/index.php/Federalist_Society_for_Law_and_Public_Policy_Studies)
- 100 Home, Journal of Law & Politics, (Viewed August 11, 2021), <https://www.lawandpolitics.org/>
- 101 Koch Foundation Funding to University and Higher Education Programs, 2005-2019, UnKoch My Campus, (Viewed August 11, 2021) <https://docs.google.com/spreadsheets/d/1c8h3cx5PouCV62KhG624NaIwR4ROfULjYF7yWOWXk8A/edit#gid=0>

- 102 Editors, The Review of Austrian Economics, (Viewed August 11, 2021), <https://www.springer.com/journal/11138/editors>
- 103 Allison Pienta, Update to Report on “The Federalist Society’s Takeover of George Mason University’s Public Law School” (December 2018), <http://www.unkochmycampus.org/dec-20-2018-donor-control-at-gmu-update>
- 104 Fact Sheet, George Washington University Regulatory Studies Center, (February 2020), [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/RSC%20Fact%20Sheet%20-%20February%202020\\_.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/RSC%20Fact%20Sheet%20-%20February%202020_.pdf)
- 105 Randall Lutter et. al, Improving Weight of Evidence Approaches to Chemical Evaluations, (December 16, 2014) [https://www.google.com/url?q=https://regulatorystudies.columbian.gwu.edu/improving-weight-evidence-approaches-chemical-evaluations&sa=D&source=editors&ust=1622570568566000&usg=AOvVaw1S6HUELbhj3\\_2Mb3HnrkzA](https://www.google.com/url?q=https://regulatorystudies.columbian.gwu.edu/improving-weight-evidence-approaches-chemical-evaluations&sa=D&source=editors&ust=1622570568566000&usg=AOvVaw1S6HUELbhj3_2Mb3HnrkzA)
- 106 Susan Dudley, Can Fiscal Budget Concepts Improve Regulation, George Washington University Regulatory Studies Center, (June 13, 2016), <https://regulatorystudies.columbian.gwu.edu/can-fiscal-budget-concepts-improve-regulation>
- 107 Our Team, George Washington University Regulatory Studies Center, (Viewed August 11, 2021), <https://regulatorystudies.columbian.gwu.edu/our-team>
- 108 Susan E. Dudley, Regulatory Pay-Go, George Washington University Regulatory Studies Center (Feb. 7, 2011), [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/20110207\\_dudley\\_regulatory\\_pay-go.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/20110207_dudley_regulatory_pay-go.pdf)
- 109 Anuj B. Mehta, Ivor Douglas, and Allan Wallkey, Concentration–Response Associations Used to Estimate Public Health Benefits of Less Pollution Are Not Valid Causal Predictive Models, The American Thoracic Society, (2016), <https://www.atsjournals.org/doi/pdf/10.1513/AnnalsATS.201608-619LE>
- Not Valid Causal Predictive Models <https://www.atsjournals.org/doi/pdf/10.1513/AnnalsATS.201608-619LE>
- 110 Dana Drugmand, EPA Clean Air Panel Chair Dismisses His Oil Industry Ties, Slams Harvard Study on Air Pollution and COVID Risks, (May 18, 2020) <https://www.desmog.co.uk/2020/05/18/epa-clean-air-committee-cox-harvard-air-pollution-covid>
- 111 Michaels, David. 2020. The Triumph of Doubt : Dark Money and the Science of Deception. Oxford ; New York: Oxford University Press, 225.
- 112 Causal Analytics Toolkit (CAT) Demonstrations, George Washington University Regulatory Studies Center, (May, 2016) <https://regulatorystudies.columbian.gwu.edu/causal-analytics-toolkit-cat-demonstrations>
- 113 Louis Anthony Cox, Jr, A Causal Analytics Toolkit (CAT) for Assessing Potential Causal Relations in Data, George Washington University Regulatory Studies Center, (May 10, 2016) <https://regulatorystudies.columbian.gwu.edu/causal-analytics-toolkit-cat-assessing-potential-causal-relations-data>
- 114 Louis Anthony Cox, Jr, Do causal concentration-response functions exist? A critical review of associational and causal relations between fine particulate matter and mortality, Critical Reviews in Toxicology, (June 28, 2017) <https://pubmed.ncbi.nlm.nih.gov/28657395/>
- 115 9 out of 10 people worldwide breathe polluted air, but more countries are taking action, World Health Organization, (May 2, 2018), <https://www.who.int/news/item/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action>
- 116 Emily Holder, People of color live with 66% more air pollution, US study finds, The Guardian, (June 27, 2019), <https://www.theguardian.com/environment/2019/jun/27/us-air-pollution-north-east-mid-atlantic-analysis-union-concerned-scientists>
- 117 Gretchen Goldman and Francesca Dominici, Don’t abandon evidence and process on air pollution policy, Science, (March 29, 2019), <https://science.sciencemag.org.proxygw.wrlc.org/content/363/6434/1398/tab-pdf>
- 118 Gretchen Goldman, Taking Science Out of Air Pollution Protections, Union of Concerned Scientists, (March 25, 2019) <https://blog.ucsusa.org/gretchen-goldman/taking-science-out-of-air-pollution-protections/>
- 119 Tony Cox, Muddling-Through and Deep Learning for Managing Large-Scale Uncertain Risks, Journal of Benefit-Cost Analysis, (September 2, 2019) <https://www.cambridge-org.proxygw.wrlc.org/core/journals/journal-of-benefit-cost-analysis/article/muddling-through-and-deep-learning-for-managing-largescale-uncertain-risks/48F4D5371FDB784999862E31C7F587D8>
- 120 Tony Cox and Douglas Popken, Should air pollution health effects assumptions be tested? Fine particulate matter and COVID-19 mortality as an example, Global Epidemiology, (November, 2020) <https://www.sciencedirect-com.proxygw.wrlc.org/science/article/pii/S2590113320300171#s0025>
- 121 Susan Dudley, Retrospective evaluation of chemical regulations, OECD Environment Working Papers, (March 14, 2017) <https://www.oecd-ilibrary.org/docserver/368e41d7-en.pdf?expires=1624460518&id=id&accname=guest&checksum=96FDC->

7DA8A8410B2CC25C5DCB92DC3A9

- 122 Susan Dudley, Comments on the U.S. Environmental Protection Agency's Proposed National Ambient Air Quality Standard for Ozone, George Mason University Mercatus Center, (March 12, 2009). [https://mercatus.org/uploadedFiles/Mercatus/Publications/20060830\\_MR\\_RSP\\_PIC\\_EPA\\_NAAQS\\_Dudley\\_March\\_12\\_1997.pdf](https://mercatus.org/uploadedFiles/Mercatus/Publications/20060830_MR_RSP_PIC_EPA_NAAQS_Dudley_March_12_1997.pdf)
- 123 Obama EPA Releases Suppressed Bush-Era Global Warming Finding, Society of Environmental Journalists, (October 14, 2009), <https://www.sej.org/headlines/obama-epa-releases-suppressed-bush-era-global-warming-finding>
- 124 Lawrence Carter, Inside Exxon's playbook: How America's biggest oil company continues to oppose action on climate change, (March 6, 2021), <https://unearthed.greenpeace.org/2021/06/30/exxon-climate-change-undercover/>
- 125 Brian Mannix and Susan Dudley, Public Interest Comment on The Interagency Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order No. 12866, George Washington University Regulatory Studies Center, (February 26, 2014), <https://regulatorystudies.columbian.gwu.edu/public-interest-comment-interagency-technical-support-document-technical-update-social-cost-carbon>
- 126 Susan Dudley and Marcus Peacock, Improving Regulatory Science: A Case Study of the National Ambient Air Quality Standards, Supreme Court Economic Review, (2016), <https://www.journals.uchicago.edu/doi/full/10.1086/696956?af=R&mobileUi=0>
- 127 Brian Mannix, Public Interest Comment1 on The Environmental Protection Agency's Advanced Notice of Proposed Rulemaking: State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units, George Washington University Regulatory Studies Center, (February 26, 2018), <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20EPA-CPP-Replacement%20-%20BMannix.pdf>
- 128 Brian Mannix, Clean Power v. Clean Energy, The George Washington University Regulatory Studies Center, (July 31, 2019) <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/Insights/GW%20Reg%20Studies%20-%20Clean%20Power%20v.%20Clean%20Energy%20-%20BMannix.pdf>
- 129 Susan Dudley, Daniel Pérez, Brian Mannix, and Christopher Carrigan, Dynamic Benefit-Cost Analysis for Uncertain Futures, Journal of Benefit-Cost Analysis, (September 17, 2019), <https://regulatorystudies.columbian.gwu.edu/dynamic-benefit-cost-analysis-uncertain-futures>
- 130 Susan Dudley, The Regulators' New Marching Orders, The George Washington University Regulatory Studies Center, (January 27, 2021) <https://regulatorystudies.columbian.gwu.edu/regulators-new-marching-orders>
- 131 Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis, Executive Office of the Vice President, (January 20, 2021) <https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis>
- 132 [https://reason.org/wp-content/uploads/2018/03/climate\\_change\\_social\\_cost\\_carbon.pdf](https://reason.org/wp-content/uploads/2018/03/climate_change_social_cost_carbon.pdf)
- 133 The Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program, Environmental Protection Agency, (September 27, 2019), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-7602>
- 134 Brian Mannix and Susan Dudley, Public Interest Comment1 on The Interagency Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order No. 12866, George Washington University Regulatory Studies Center, (February 26, 2014) <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20EPA%20ACE%20Proposed%20Rule%20-%20BMannix.pdf>; Ted Gayer and W. Kip Viscusi, Determining the Proper Scope of Climate Change Benefits, The George Washington University Regulatory Studies Center, (June 3, 2014), <https://regulatorystudies.columbian.gwu.edu/determining-proper-scope-climate-change-benefits>; Susan Dudley and Brian Mannix, The Social Cost of Carbon, The Federalist Society, (July 24, 2014) <https://fedsoc.org/commentary/publications/the-social-cost-of-carbon>; Sofie Miller, Public Interest Comment on The Department of Energy's Proposed Rule Energy Conservation Program: Energy Conservation Standards for Small, Large, and Very Large Air-Cooled Commercial Package Air Conditioning and Heating Equipment, The George Washington University Regulatory Studies Center, (December 1, 2014), [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20DOE\\_EERE-2013%20-%20SMiller.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20DOE_EERE-2013%20-%20SMiller.pdf); Sofie Miller, Whose Benefits Are They, Anyway? Examining the Benefits of Energy Efficiency Rules 2007 – 2014, George Washington University Regulatory Studies Center, (September 2, 2015), <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/WorkingPa->

[pers/GW%20Reg%20Studies%20-%20Examining-Energy-Efficiency-Standards%20-%20SMiller.pdf](#);

Art Fraas, Randall Lutter, Susan Dudley, Ted Gayer, John Graham, Jason F. Shogren, and W. Kip Viscusi, Social cost of carbon: Domestic duty, *Science*, (February 5, 2016) <https://science-sciencemag-org.proxygw.wrlc.org/content/351/6273/569.2>; Art Fraas and Randall Lutter, Should the Federal Regulatory Agencies Report Benefits to Americans from Mandated Reductions in Greenhouse Gas Emissions? *Resources for the Future*, (February 8, 2016), <https://www.resources.org/common-resources/should-the-federal-regulatory-agencies-report-benefits-to-americans-from-mandated-reductions-in-greenhouse-gas-emissions/>; Susan Dudley, President Trump Takes On The Social Cost Of Carbon, *Forbes*, (March 30, 2017) <https://www.forbes.com/sites/susandudley/2017/03/30/president-trump-takes-on-the-social-cost-of-carbon/>; Brain Mannix, Public Interest Comment on The Environmental Protection Agency's Advanced Notice of Proposed Rulemaking: State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units, The George Washington University Regulatory Studies Center, (February 26, 2018), <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/PICs/GW%20Reg%20Studies%20-%20EPA%20ACE%20Proposed%20Rule%20-%20BMannix.pdf>.

135 Art Fraas, Randall Lutter, Susan Dudley, Ted Gayer, John Graham, Jason F. Shogren, and W. Kip Viscusi, Social cost of carbon: Domestic duty, *Science*, (February 5, 2016) <https://science-sciencemag-org.proxygw.wrlc.org/content/351/6273/569.2>

136 Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, Environmental Protection Agency, (See page 7-7) (August, 2018) <https://www.ourenergypolicy.org/resources/regulatory-impact-analysis-for-the-proposed-emission-guidelines-for-greenhouse-gas-emissions-from-existing-electric-utility-generating-units-revisions-to-emission-guideline-implementing-regulations/c>

137 GW Regulatory Studies Center Faculty Statement, (February 11, 2021) [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/GW%20Regulatory%20Studies%20Center%20Faculty%20Statement\\_2021-02-11.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/GW%20Regulatory%20Studies%20Center%20Faculty%20Statement_2021-02-11.pdf)

138 Institutional Conflicts of Interests in Academia, UnKoch My Campus, (2018), [https://actionnetwork.org/forms/get-access-to-model-university-policies-to-protect-against-donor-interference?source=direct\\_link&](https://actionnetwork.org/forms/get-access-to-model-university-policies-to-protect-against-donor-interference?source=direct_link&)

139 Searle Freedom Trust—Grant, GW Corporate & Foundation Relations, (Viewed August 11, 2021), <https://cfr.gwu.edu/searle-freedom-trust%E2%80%9494grants>

140 Centrally-Managed Foundations and Corporations, GW Corporate & Foundation Relations, (Viewed August 11, 2021), <https://cfr.gwu.edu/faculty/find-private-funding/priority-foundations-corporations>

141 Grace E Speights, Morgan Lewis, (Viewed August 20, 2021), <https://www.morganlewis.com/bios/gspeights>

142 Karina Ochoa Berkley, GW said goodbye to LeBlanc. Grace Speights should be next. (June 3, 2021), <https://www.gwhatchet.com/2021/06/03/gw-said-goodbye-to-leblanc-grace-speights-should-be-next/>

143 US Ordered to Pay 20.3 million to ExxonMobil for Cleanup of Wartime Environmental Pollution, Morgan Lewis, (Viewed August 20, 2021), <https://www.morganlewis.com/pubs/2020/08/us-ordered-to-pay-20-3-million-to-exxonmobil-for-cleanup-of-war-time-environmental-pollution>

144 Makena Roberts and Schoenfeld, Officials decline to take positions on Board of Trustees, divestment referenda, The GW Hatchet, (April 12, 2020), <https://www.gwhatchet.com/2020/04/12/officials-decline-to-take-positions-on-board-of-trustees-divestment-referenda/>

145 GWUFA Official Statements 2020, (Viewed Aug 15, 2021), <https://gwufa.org/gwufa-official-statements-2020/>

146 Bylaws of the George Washington University, (Viewed Aug 11, 2021), <https://trustees.gwu.edu/sites/g/files/zaxdzs2786/f/downloads/Current%20University%20Bylaws%20-%20February%208%2C%202019.pdf>