The Making of an Echo Chamber: How the plastic industry exploited anxiety about COVID-19 to attack reusable bags

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Executive Summary

The plastics industry has been waging a PR war in an attempt to interfere with legislation banning or regulating the use of single-use plastic, notably around plastic bags. Through front groups, corporate-funded research, and misrepresentation of scientific studies, the plastics industry has exploited the COVID-19 emergency to create fear about reusable bags and assert that single-use plastic is necessary to keep people safe.

Two recent studies have concluded that plastics are among the surfaces that human coronaviruses may survive on for the longest, of several surfaces. After these studies were publicized in media outlets, several media outlets began portraying researcher “warnings” about the potential for reusable grocery bags to transmit the new coronavirus, despite the fact that reusable grocery bags were not among the surfaces examined. Several articles reference older studies that demonstrated the transmission of certain bacteria via reusable bags, without mentioning that those studies were funded by the plastics industry, nor the finding that bags could be disinfected with washing.

These narratives falsely conflate those older studies on bacteria on reusable bags with new studies about coronaviruses to “prove” that single-use plastic bags are the safest way to prevent transmission of coronavirus. This is a deflection from the recent studies demonstrating that the virus will persist on plastic longer than almost any material examined, which could call into question the safety of the majority of plastic-packaged items in supermarkets.

The professors, spokespeople, and front groups promoting this bait-and-switch misinformation have numerous financial ties to plastic manufacturers and petrochemical refinery companies. Many are affiliated with or have been known to work with conservative free-market think tanks funded by Charles Koch Foundation and fossil fuel-funded clients. These conflicts of interest are not mentioned in the recent flurry of news reports on these studies. Some states or municipalities with legislation banning plastic bags or instituting bag fees are now pausing or delaying legislation or enforcement, citing concerns about COVID-19 specifically linked to this misinformation. The echo chamber falsely linking coronavirus to reusable grocery bags is a
profit-driven distraction to vital safety information that consumers need in order to navigate the COVID-19 crisis.

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Section 1: Exploiting a Crisis

As COVID-19 spreads, and the public struggles to keep up with evolving understanding of its transmission, we have seen corporate front groups like Competitive Enterprise Institute, Manhattan Institute, and American Energy Alliance circulating a string of similar stories and op-eds which explicitly warn anxious consumers that reusable grocery bags could be spreading coronavirus, and urge municipalities to repeal bag bans and/or fees. These groups have a documented history of fossil fuel industry funding (detailed below). These stories about reusable grocery bags potentially spreading the coronavirus have been picked up and reprinted in an increasing number of news outlets. This well-established public relations strategy, designed to create a crisis-driven media ecosystem “echo chamber,” has already helped influence a few states and municipal governments to delay or pause bans on disposable plastic bags, citing concerns of COVID-19.

It appears that a media campaign was designed to establish and spread the narrative that “reusable grocery totes could be spreading COVID-19,” and “bag bans should be suspended due to COVID-19 concern.” The irony is that the campaign relied heavily upon studies that found that the virus persisted longer on plastic surfaces than other materials. Whoever initiated this narrative was clearly able to draw on previous industry-funded and front group-linked “research,” recycling past PR efforts to try to deflect attention from the longevity of COVID-19 on plastic.

A chronological analysis of news reports and established industry connections to front groups and public relations firms reveals some key corporate participants in this carefully orchestrated misinformation echo chamber; these efforts are further described below.

- Novolex, one of the country’s largest manufacturers of plastic film and packaging, uses Edelman as its PR firm. Edelman has a long history of representing fossil fuel industry clients (who often launder information through these same corporate front groups). Novolex has been involved in legislative efforts to prevent communities or states from restricting the use of single-use plastic bags, often through the American Recyclable Plastic Bag Alliance. Novolex (then Hilex Poly) had underwritten a study by Robert Kimmel, who appears to be one of the first public voices linking reusable bags to the spread of COVID-19.

- The American Chemistry Council (ACC) has underwritten at least one of the studies referenced, specifically a study authored by Charles Gerba and Ryan Sinclair at University of Arizona and Loma Linda University School of Public Health in 2011. The ACC has been documented to be interfering in legislative efforts relating to plastic.
Many of these think tanks that circulated the story early on have a long, documented history of deploying similar PR tactics for fossil fuel industry clients, such as the Manhattan Institute, a front group which has been involved in efforts to dismiss climate science and battle against environmental policies for decades. It is one of the few remaining anti-climate organizations recently funded by ExxonMobil, which has been expanding its plastics operations as part of its $20 billion “Growing the Gulf” program.

In response to consumer concern over plastic pollution, particularly single-use disposable plastic bags, many states and municipalities have recently enacted legislation regulating, outlawing, or disincentivizing the sale or distribution of plastic bags. The location of op-eds or articles published in recent weeks linking reusable bags to COVID-19 suggest a PR campaign aimed at states where the laws are recent or about to be enacted in 2020; these include: Maryland (February/March legislation; House voted March 12), Maine (set to be enforced April 22), New Hampshire (house voted January 2020), New York (set to be enacted March 1, now delayed until April), Washington State (approved in January 2020). Municipalities that have taken action include Denver (bag fee, as the state has passed pre-emption laws banning local bag bans) and Albuquerque (approved January 1).

The plastic bag industry is experienced at spreading a variety of arguments – sometimes backed up by reports or studies they themselves fund – to blunt or deflect legislative efforts to eliminate their products. Novolex, headquartered in South Carolina, is one of the largest manufacturers of plastic bags and film, and manufactures low- and medium-density polyethylene grocery carrier bags for retailers and convenience stores including Albertsons, Safeway, Vons (banners of Albertsons Companies), Ralphs (banner of The Kroger Co.), Walmart, WinCo Foods, Walgreens, and Circle K.¹ Novolex has a history of using PR and/or lobbying campaigns to defeat legislation aimed at regulating the use of plastic.² For example, Novolex funded the Laredo Texas Merchant’s Association to hire an attorney with consulting firm Thompson Knight to fight a bag ban, a tactic repeated in other legislatures, including California, Ohio, and New York.³ ⁴ ⁵ In South Carolina, home of Clemson University, Novolex and Sonoco, a packaging manufacturer, have both donated to South Carolina candidates and political committees, and a Novolex-affiliated trade association spent about $88,000 on lobbying between 2017 and 2019⁶; Novolex also appears to have created a front group for the express

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¹ https://www2.calrecycle.ca.gov/ReusableBags/Company/Details/25
⁵ https://publicintegrity.org/environment/pollution/pushing-plastic/inside-the-long-war-to-protect-plastic/
purpose of fighting plastic legislation in California. Novolex’s ultimate owner is Carlyle Group, one of the world’s largest private equity groups; Carlyle Group also has interests in oil, gas and specialty chemicals.

Two trade associations, the ACC and the Plastics Industry Association (PIA, also known as PLASTICS) have also been interfering in legislative efforts to end plastic pollution, often through the American Legislative Exchange Council (ALEC). The ACC, which is a member of ALEC, originally created the American Recyclable Plastic Bag Alliance (initially the Progressive Bag Alliance, then Progressive Bag Affiliates, then American Progressive Bag Alliance, APBA) and played a more active role in lobbying against plastic bans. In 2011, the ACC announced that the APBA was becoming a division of the Plastics Industry Association, which became a member of ALEC in 2013. In recent years, PLASTICS and the APBA have worked more closely with ALEC to oppose plastic bans across the country. Clorox, Coca-Cola, PepsiCo, GM, and SC Johnson were members of PLASTICS as of 2018, before exiting the group following public pressure. The former vice president of federal affairs at the ACC has recently joined the retail lobby group Grocery Manufacturers Association (GMA) as executive vice president of public affairs. Novolex is a major funder of ARPBA, and there is overlap between Novolex executives and the ARPBA.

Leading up to the New York state bag ban, for example, the plastics industry started warning of a paper bag shortage. A January 30, 2020 article in the NY Post quoted plastic bag manufacturer Novolex dramatically warning New York state residents that they “should prepare” for an imminent paper bag shortage. Plastic bag manufacturer Poly-Pak Industries intervened with a court case along with a merchant’s association and delayed the enforcement of the NY bag ban until April 1.

In February 2020, as COVID-19 spread through China and led to supply chain disruptions in the United States, the Staten Island Advance published, “Could the coronavirus in China cause a shortage of reusable bags? Expert says it’s possible.” The article noted that reusable polypropylene bags were mostly exported from China, but it mostly focused on a shortage of plastic bags. The article quoted Novolex spokesman Phil Rozenski and Matt Seaholm, Executive Director of the ARPBA, warning “if there’s a shortage of paper bags – and by all

9 Bryan Zumwalt, vice president of federal affairs at the ACC, will join the Grocery Manufacturers Association (GMA) as executive vice president of public affairs.
11 Phil Rozenski at Novolex was the policy chairman at Novolex as recently as 2016, and Gary Alstott, Senior Vice President at Novolex is the chairman of the ARPBA.
indications there will be – you’re going to get a push towards thicker polypropylene reusable bags.”

The plastics industry narrative on plastic bag bans seemed to take a sharp turn after February 19. On Feb 19, Live Science published an article about two recent studies looking at the longevity of coronaviruses on various surfaces. Both studies point to plastic as one of the surfaces (along with steel) upon which the viruses could persist the longest. Neither study examined the presence of viruses on the surface of reusable grocery bags.

- A February 2020 paper in *Journal of Hospital Infection* examined the surface life of coronaviruses like SARS and MERS. Although the authors did not study COVID-19, they assumed that the results would be similar. The study looked at coronavirus “cousins” on inanimate surfaces, including metal, steel, glass, aluminum, wood, etc. Various viruses persisted on plastic for a range of time, from less than 48 hours to up to 9 days (MERS-1). Fabric was not among the tested surfaces, though disposable gowns were, and the study does not indicate what type of plastic was tested. The authors found that these coronaviruses can be efficiently inactivated by surface disinfection procedures within 1 minute.

- A March 2020 preprint of a forthcoming study by scientists from the National Institutes of Health, CDC, UCLA, and Princeton University, to be published in *The New England Journal of Medicine* looked at the new coronavirus, and “found that viable virus could be detected in aerosols up to 3 hours post aerosolization, up to 4 hours on copper, up to 24 hours on cardboard and up to 2-3 days on plastic and stainless steel. HCoV-19 and SARS-CoV-1 exhibited similar half-lives in aerosols, with median estimates around 2.7 hours. Both viruses show relatively long viability on stainless steel and polypropylene compared to copper or cardboard: the median half-life estimate for HCoV-19 is around 13 hours on steel and around 16 hours on polypropylene.”

Both studies reach similar conclusions. Although one study is specific to COVID-19 and the other involved different but similar viruses (e.g. “old” coronavirus), and are very new, both studies highlight:

1. That these viruses may persist on plastic or steel longer than other materials such as cardboard
2. the prolonged dangers of transmission through contact with hard surfaces that have not been disinfected effectively; and
3. the effectiveness of standard disinfecting/sterilizing agents if properly applied.

Shortly after this article was published, a flurry of articles and op-eds began to appear (see timeline below), combining these new studies with a series of older studies on reusable grocery bags stretching back to 2011 – including the University of Arizona and Loma Linda University

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13 https://www.medrxiv.org/content/10.1101/2020.03.09.20033217v1.full.pdf
study funded by the ACC\textsuperscript{14} and a Clemson University study underwritten by Hilex Poly/Novolex --\textsuperscript{15} which suggest that polypropylene (reusable plastic) grocery bags could spread disease. The result was a series of headlines suggesting that reusable grocery bags are probably spreading COVID-19, underscored by assertions that "researchers have been warning for years," even though evidence suggests that regular, normal disinfectants and washing would clean the bags of viral contamination. **All studies on bags referenced - both industry-funded and not - recommend that customers should indeed wash their bags.**

Based on an examination of the timeline of stories, the first mention of reusable grocery bags relating to COVID-19 appeared in the Staten Island Advance, three days after the LiveScience article was posted. That first article only mentioned supply chain disruptions; a subsequent article in the Staten Island Advance mentioned prior studies on transmission of bacterial disease on reusable grocery bags, but did not disclose that one study was underwritten by the ACC. A few days later, the Staten Island Advocate reported that Professor Robert Kimmel at Clemson University had emailed the New York State legislature, referencing his own prior research on reusable grocery bags as "proof" of disease transmission. This article also does not mention that his 2014 research "A Life Cycle Assessment of Grocery Bags," was underwritten by plastic manufacturer Hilex Poly (now Novolex)\textsuperscript{16} and co-authored by Kay Cooksey, "Cryovac Chair," whose professorship is endowed by Cryovac, a manufacturer of flexible plastic packaging.

Additionally, much of the data in the study was provided by Edelman,\textsuperscript{17} Novolex's PR firm.\textsuperscript{18} The largest public relations firm in the world, Edelman has worked for numerous oil industry clients for decades, receiving hundreds of millions of dollars in contracts from the American Petroleum Institute (API) alone. Edelman lost its contract with API in 2015, following widespread scrutiny of the PR giant's work for corporations that oppose solutions to climate change. (Edelman claims it has stopped taking contracts with the coal industry and anyone involved with "climate denial.")

Clemson's Department of Food, Nutrition, and Packaging Sciences has branded "service labs" affiliated with the plastic packaging industry, including Cryovac (a brand of Sealed Air, whose

\textsuperscript{14}https://lluh.org/sites/medical-center.lomalindahealth.org/files/docs/LIVE-IT-Sinclair-Article-Cross-Contamination-Reusable-Shopping-Bags.pdf?rsource=medical-center.lomalindahealth.org/sites/medical-center.lomalindahealth.org/files/docs/LIVE-IT-Sinclair-Article-Cross-Contamination-Reusable-Shopping-Bags.pdf. See Acknowledgements "This project was support in part by the American Chemistry Council." This funding support has also been reported, including a March 2020 Plastics News article

\textsuperscript{15}https://www.scnow.com/news/local/paper-plastic-or-reusable-grocery-bags-go-under-the-clemson/article_f05daae8-a5c4-5a4b-bc80-de449be1eed2.html

\textsuperscript{16}https://www.scnow.com/news/local/paper-plastic-or-reusable-grocery-bags-go-under-the-clemson/article_f05daae8-a5c4-5a4b-bc80-de449be1eed2.html; see paper for acknowledgements.

\textsuperscript{17}See paper, for example, page 6.

\textsuperscript{18}See, for example, a press release with Edelman contact.

customers include Coca-Cola, Nestlé, PepsiCo, Procter & Gamble, and Unilever\(^{19}\), DuPont, and Sonoco, (now owned by Amcor, whose customers include Nestlé, KraftHeinz, PepsiCo, and Starbucks),\(^{20}\) and one course appears to be funded by or in partnership with Eastman, which manufactures plastic packaging.\(^{21}\) Robert Kimmel is the director of Clemson’s Center for Flexible Packaging (CEFPAK), which is funded by membership fees from plastic converters and packaging manufacturers, who can sponsor “directed” research.\(^{22}\) Kimmel is also an “expert witness and consultant” with Rubin Anders, and holds numerous patents.\(^{23}\)

Clemson University’s industry relationships are notable beyond just the flexible packaging funding. The Koch Foundation has funded many university centers or professor chairs, as part of the Koch network’s “structure of social change” strategy. Funding of universities is a way to generate concepts and theories that get transmitted through think tanks (and eventually actioned by activist groups and legislators). At Clemson University, The Institute for the Study of Capitalism\(^ {24}\) is among the top recipients of money from Koch Industries CEO Charles Koch, who began contracting Clemson professors to teach “appreciation” of “economic freedom,” a Koch-curated lobbying tool. Clemson previously faced widespread criticism for allowing the BB&T Foundation--led by Charles Koch’s friend and colleague John Allison--to directly influence Clemson curriculum, requiring professors to assign Ayn Rand’s “Atlas Shrugged” to students.\(^ {25}\)

Section 2: The Timeline of the COVID-19 Echo Chamber

We reconstructed the timeline\(^ {26}\) of the spread of the “reusable bags can cause COVID-19” narrative, and then examined the spokespersons, guest editors, and writers in the various stories, identifying their affiliations with various think tanks. Many of these articles were posted on the ARBA’s website “Bag the Ban,” which was registered by Novolex’s PR firm Edelman.\(^ {27}\) Profiles and known funding of the think tanks follow in Section 3.

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\(^ {21}\) https://www.plasticstoday.com/packaging/eastman-partners-clemson-on-innovative-package-design-project-students/87309473558807

\(^ {22}\) See, for example, article about ribbon-cutting https://www.packworld.com/machinery/primary-packaging/news/13338858/clemson-opens-center-for-flexible-packaging.

\(^ {23}\) http://rubinanders.com/bob-kimmel/#

\(^ {24}\) http://www.unkochmycampus.org/successful-models-of

\(^ {25}\) http://www.unkochmycampus.org/successful-models-of

\(^ {26}\) Using a Google search, we looked at newspaper articles specifically focusing on the risk of reusable bags spreading COVID-19 during the time period of February 15, 2020, and March 23, 2020. This was not an exhaustive search, and we particularly focused on examples of known fossil fuel-funded think tanks. We did include every article that had been catalogued and posted on American Recyclable Plastic Bag Alliance’s “Bag the Ban,” website.

\(^ {27}\) https://publicintegrity.org/environment/pollution/pushing-plastic/inside-the-long-war-to-protect-plastic/
February 19

- The LiveScience article is published,28 "How long can the new coronavirus last on surfaces?" with the subheadline “Some coronaviruses can linger on surfaces for up to 9 days.”

February 22

- Staten Island Advance publishes, “The dumb plastic bag ban is even dumber than we thought (opinion).” The article references a number of supposed problems with reusable bags, but notes that as reusable bags are imported from China, that the new coronavirus will disrupt that supply chain.

February 25

- Kings County Politics publishes an article by staff writer Chaya Gerkov “Concerns Mount That Plastic Bag Ban Could Help Spread Coronavirus.” The first line of the article states that “As the plastic bag ban is set to become law next week under the reasoning that it will decrease endangerment to the environment, new [sic] studies are showing that recyclable [sic] bags might endanger your health and maybe spread the formidable coronavirus” (emphasis added) however the next paragraph refers to Ryan Sinclair’s 2018 study, not any new studies nor looked at recyclable bags (in fact, Sinclair’s study focused on polypropylene bags which are not considered recyclable in most reprocessing facilities). In Sinclair’s study, reusable polypropylene tote bags were sprayed with a “surrogate” virus to check transmission. The study did find evidence of the virus on surfaces touched by the shopper, including the checkout counter, though the conclusion recommends “in-store hand hygiene...surface disinfection and public education about washing reusable grocery bags.” It is not clear from this study what would differentiate a reusable grocery bag from any other item a shopper would be carrying into a store that may be infected by a virus including purses, perhaps with the exception of the direct contact with the cashier/checkout area. King County Politics notes that Ryan Sinclair emailed the New York City Council in 2020 that, “These results indicate that reusable bags, contaminated with a virus from their household, have the potential to spread disease and put shoppers at risk of illness.” However, many interviews with Sinclair after the study was published quote him emphasizing the need to wash bags to reduce the spread of disease. This article does not mention that Sinclair was a co-author of the 2011 study underwritten by the ACC.
  - Sinclair’s 2018 study was published in the Journal of Environmental Health29, which is a publication of the National Environmental Health Association. The author thanks the Environmental Safety Alliance, an organization which has little information about it, but appears to have been part of a PR campaign against

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28 Note that this article has been frequently updated, but using the Wayback machine, it appears that it was first published February 19, 2020. https://web.archive.org/web/20200219124418/https://www.livescience.com/how-long-coronavirus-last-surfaces.html
bag legislation in California in 2012. One of the authors is listed as affiliated with the Environmental Safety Alliance and the others are at Linda Loma University, where Sinclair is faculty.

February 28

- Kings County Politics news outlet publishes an article by editor Steve Witt: “Clemson Univ Prof Says Delay Bag Ban for Coronavirus Concerns.” The article details how Robert Kimmel contacted the “State Department of Health and numerous elected officials” two days before the bag ban went into effect, citing new coronavirus concerns. The article notes that the communication was sent through “Brooklyn architect and environmentalist Allen Moses” though the excerpt of Kimmel’s email references another communication by Moses, which references Sinclair’s 2018 study.
  - Allen Moses apparently shared with the New York State legislature a prior email communication with Charles Gerba, who authored the 2011 study with Ryan Sinclair, and had presented these scientific studies and more to City Council Member Brad Lander “who has been a driving force behind the plastic bag ban,” warning that “If the coronavirus spreads then scientists will check supermarket carts and checkouts and reusable bags. And heads will roll when citizens find out the politicians were warned in advance that their bag legislation put the public at risk.” Witt notes that Kings County Politics had broken this story several days prior, suggesting that Robert Kimmel’s email about his Novolex-funded research and Allen Moses’ communication with researchers funded by the ACC may be the origin of the narrative linking reusable grocery bags to COVID-19.
- Competitive Enterprise Institute published blog “May Common Sense Prevail - New York delays enforcement of plastic bag ban.”

March 5

- New York Post editorial board published “To fight coronavirus, Gov. Cuomo should suspend NY’s new plastic-bag ban.”
  - Does not offer specifics but states “Because the reusable bags that advocates push as a replacement are serious germ-spreaders.”
  - References a February 18, 2020 John Tierney op-ed in The Wall Street Journal, which appears to note environmental benefits of frequent bag washing; it is not clear if this makes any direct link to COVID-19 or disease transmission of reusable bags.
- Insider New Jersey published an article on the bag ban, noting the 2011 Gerba and Sinclair study on bacteria.

March 6:

- New Hampshire Union Leader publishes editorial “What’s on the bag? What bugs us about the plastic ban.” This references novel coronavirus in the first line, but does not offer specifics, only discusses vaguely the potential for bags to carry disease.
● New York Daily News publishes “New York’s bad bag ban: Unintended consequences undermine the supposed environmental benefits.” The article’s author is affiliated with the Reason Foundation, a libertarian think-tank which is affiliated with and funded by David Koch and Koch-related foundations.

March 9:
● Queens County Politics (which appears to be a sister publication to Kings County Politics), re-publishes the February 25 article by Chaya Gerkov.

March 12:
● Manhattan Institute publication City Journal publishes John Tierney article, “Greening Our Way to Infection: The ban on single-use plastic grocery bags is unsanitary—and it comes at the worst imaginable time.” Tierney is a Manhattan Institute contributing editor and a columnist at the New York Times. Tierney has written extensively about plastic, notably a New York Times article “Recycling is Garbage” in 1996 that generated record-breaking hate mail.

The opening paragraph inaccurately states, “These reusable tote bags can sustain the COVID-19 and flu viruses—and spread the viruses throughout the store.” Tierney claims that “Viruses and bacteria can survive in the tote bags up to nine days, according to one study of coronaviruses,” linking to the LiveScience article about the recent studies of coronaviruses. Tierney further references older studies specific to reusable grocery bags, noting “the risk of spreading viruses was clearly demonstrated,” by the (ACC-funded) 2011 study by Gerba and Sinclair, and Sinclair’s 2018 study.

Tierney also references a 2012 research paper co-authored by economics and law professors, Jonathan Klick and Joshua Wright, at UPenn and George Mason University (GMU). GMU is often described as “ground zero” for Koch influence in higher education. In this study, not peer reviewed, the professors looked at emergency room admission rates after the bag ban was adopted and noted a spike in admissions and deaths related to bacteria. The San Francisco Department of Public Health analyzed the study and found that the authors failed to establish a link between banning of bags and spike in ER cases of gastrointestinal bacterial infections. The health department did say that it is plausible that reusable bags that are not regularly cleaned could cause gastrointestinal infections.

Jonathan Klick is a professor at the University of Pennsylvania Law School; and is affiliated with the PERC (Property and Environment Research Center), which has received funding from Koch Foundation and ExxonMobil (Klick was a PERC Lone Mountain Fellow, possibly while he wrote that paper). Klick is affiliated with University of Pennsylvania Law School’s Quattrone Center, which has received funding from the
Charles Koch Foundation, and Klick completed his PhD at GMU (Economics) in 2001, after Koch started funding programs there. Joshua Wright is a professor at the Antonin Scalia Law School at GMU. Wright had previously received a grant from Institute for Humane Studies (IHS), of which Charles Koch has been chairman and top funder of IHS since the 1970s, and has had paper published by the Koch-founded Cato Institute think tank. At the time this paper was published, it was circulated by State Policy Network members; the Texas Public Policy Foundation noted that reusable bags may be "deadly."

Tierney’s article also references a 2012 study on an Oregon norovirus outbreak, which linked the transmission of norovirus aerosols (fomites) from an ill soccer player to packaged food stored inside a woven polypropylene grocery bag inside the bathroom; the fomites settled onto the packaged food, plastic bag, or both and sickened the other players when they passed the bag and food around. The study notes that this case, “illustrates one of the less obvious hazards of reusable grocery bags” but concludes that touching the bag could not be analyzed separately from touching or consuming the packaged food inside the bag. The conclusion indicated the need for disinfecting potentially contaminated surfaces - inclusive of the bag, bathroom surfaces and packaged goods within the bathroom.

Lastly, Tierney also references Brooklyn “activist” Allen Moses’ warning, without referencing Moses’ apparent relationship to Clemson professor Robert Kimmel’s industry funded packaging research center.

March 13:
- NY state senator Rob Ortt posts Manhattan Institute article to his Facebook page. This was the fourth most circulated version of this Manhattan Institute article, with 180 interactions.
- Rio Grande Institute published a blog, "Is there a worse time in the age of Coronavirus to ‘more fully’ ban plastic bags?" This article referenced the 2018 Loma Linda study, and noted that an Albuquerque City Councilor Pat Davis had announced the plastic bag ban extend towards the thicker ‘2.25 mil’ bags (which many states or municipalities are allowing to be exempt from the plastic-bag ban as they are considered ‘reusable’)

March 14
- NY Post published John Tierney’s Manhattan Institute article with a different headline, “Using tote bags instead of plastic could help spread the coronavirus.”

30 https://www.thedp.com/article/2017/03/quattrone-center-receives-koch-foundation-donation
32 Social media sharing data obtained via Crowd Tangie
Conservative news host John Stossel tweeted the Manhattan Institute article. John Stossel is affiliated with the Reason Institute. This was the largest Twitter circulation of the article with 500 interactions.\textsuperscript{33}

Australian MP Craig Kelly posted the Manhattan Institute article to his Facebook page. This was the top single Facebook promotion of the article at 860 interactions.\textsuperscript{34}

Retailer Giant (owned by Ahold Delhaize) urges customers to bring in their reusable bags because increased shopping in the Washington, DC area has strained its bag supplies.

March 15

- The mayor of Waterville, Maine, posted on his personal Facebook page that he wants to repeal the bag ban, citing John Tierney’s NY Post article as information.
- Maryland state delegate Kathy Szeliga posted the Manhattan Institute article on Facebook, quoting “these reusable tote bags can sustain the COVID-19 and flu viruses—and spread the viruses throughout the store.” This was the second most shared Facebook post of this article, with 450 interactions.\textsuperscript{35}
- Roxanne Beckford Hoge of “Reform California” Tweet; this was the second most-circulated tweet, with 350 interactions.\textsuperscript{36} Reform California is a SuperPAC (a 527 organization) founded by Carl DeMaio, a politician and talk radio host.

March 16

- Wall Street Journal Editorial Board op-ed “The Plastic Bag Ban Backfires. Reusable bags are notoriously dirty and may spread the virus.” The opening line explicitly links the plastic bag ban and COVID-19: “The statewide ban on single-use plastic bags took effect on March 1, the same day New York confirmed its first case of coronavirus. To protect the public, officials in the Empire State and elsewhere should immediately suspend their plastic bag bans.”
  - The article references a CDC “warning” that COVID-19 “may remain viable for hours to days on surfaces made from a variety of materials; this appears to misconstrue the recent studies by researchers as a CDC warning.
  - The article references a 2013 novel swine enteric coronavirus disease, and subsequent USDA conclusion that a likely root cause of the outbreak was traced back to contaminated feedbags. WSJ notes that, “The feed bags are often made of the same kind of material as reusable shopping bags.” This material is typically not cloth but woven plastic, either polyethylene or polypropylene, and while many reusable grocery totes available are indeed woven plastic, the USDA report notes that the bags were ideal dispersion due to frequent reuse with little disinfection between uses. It did note that the construction and use of plastic could make it

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\textsuperscript{33} Social media sharing data obtained via Crowd Tangie.
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\textsuperscript{36} Social media sharing data obtained via Crowd Tangie
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more ideal for viral particles. Again, this study does not compare disease transmission rates to cloth or fabric bags.

- The article references the 2012 study of a norovirus outbreak among an Oregon soccer team.

- **American Energy Alliance (AEA)** reprinted the Manhattan Institute/City Journal article in its morning energy newsletter. The subheadline that AEA chose is “Plastic bags save lives.”

  - The AEA is the political advocacy (501c4) affiliate of the nonprofit (501c3) Institute for Energy Research (IER), which was initially created by Charles Koch and former Enron executive Robert Bradley. The IER and AEA are currently managed by Bradley and Tom Pyle, a former Koch Industries lobbyist and energy advisor to Donald Trump.

- **Center for American Experiment published** its own op-ed, “Plastic bags save lives so why are environmentalists trying to ban them.” The Center for American Experiment is part of the Minnesota State Policy Network think tank (Manhattan Institute is also part of the SPN). This op-ed was written by Isaac Orr, who was previously employed by Heartland Institute, who has promoted fracking. Almost all quoted content was nearly identical to the Manhattan Institute article, however Orr also included a graph depicting Asian countries as the highest contributor to mismanaged plastic, based on a study which ignores the higher per capita use of plastic in Europe and North America, which was then exported to Asia, but has been used by plastic industry and the Trump administration to blame Asian countries for ocean-based plastic pollution, a dog whistle to growing anti-Chinese sentiment.

- **Brookline, MA** voted to delay its ban on polystyrene takeout containers.

- **New Jersey 101.5 talk radio** published a short opinion piece by talk radio host Judi Franco, “I worry the plastic bag ban may be spreading coronavirus.” Franco referenced Sinclair’s 2018 study, incorrectly noting that “cloth” bags carry bacteria (Sinclair’s study looked at polypropylene bags).

**March 17**

- **Maine state legislature** voted to delay its bag ban, citing coronavirus concerns.

- **Forbes** published an article by Patrick Gleason, Vice President of State Affairs at Americans for Tax Reform, “Pandemic Prompts Call To Suspend Or Repeal Bag Bans & Taxes.” Americans for Tax Reform is a powerful anti-tax and pro-tobacco lobbying group founded by Republican operative Grover Norquist. The article referenced the 2011 Gerba and Sinclar (ACC-funded) study and unspecified “additional” studies showing that reusable bags can cause foodborne illness.

This article also notes that Jon Caldara, president of the Independence Institute (I2I) is urging Colorado Governor Jared Polis (D) to repeal these local bag bans, since “single use items have less of a chance of spreading the disease.” The I2I is the main State Policy Network affiliate in Colorado. Caldara notes in a more recent article on the I2I blog that Polis reached out to I2I at his suggestion to ask for more policy suggestions.
Gleason notes that reusable bags are emissions-intensive because most of them are imported from China, and additionally notes that some studies show that bag bans do not reduce litter as intended, referencing, for example, a "study" showing that plastic bag pollution increased in San Francisco after its bag ban (the study was not linked, but appears to be written by the Reason Foundation. The Forbes/Americans for Tax Reform article concluded with, “Governors and state lawmakers can continue to help fight the spread of the virus by taking action to suspend or repeal the many bag bans and taxes across the U.S. that now pose an even greater public health risk than in the past.” Americans for Tax Reform had commissioned a 2012 economic study, written by Beacon Hill Institute, on “unintended consequences” of plastic bag taxes.

- John Stossel made his second tweet of the Manhattan Institute article; this was the third largest circulation of this article on Twitter, with 188 interactions.37

- Washington State Policy Center, a member of the State Policy Network, publishes a column by Todd Meyers, with Center for the Environment, titled “To fight coronavirus, veto Washington's plastic bag ban.” The opening paragraph is ominous: “Like other states, Washington is taking extraordinary measures to reduce the spread of coronavirus. The governor can do one simple thing to reduce a source of potential spread: veto the ban on plastic bags...It has been known for several years, reusable bags are vectors for disease.” Meyers linked to an NBC news article about the 2012 norovirus study (though that article notes that the study authors insist that proper washing and/or disinfecting of the bag would suffice in reducing disease transmission). Meyers also referenced the March 16 Wall Street Journal op-ed, calling reusable bags ‘vectors of disease.’ Meyers has authored previous articles for Washington State Policy Network on plastic bag bans.

March 18

- Institute for Energy Research posts “Countries and U.S. States & Localities are Banning Plastics, but Plastic Products Help to Fight the Coronavirus.”
  - The article describes the general movement to ban or regulate plastic, and notes that disposable masks are now marine pollution (even noting that because they are polypropylene they do not break down, affirming the problem with plastic in the marine environment). The second paragraph notes that, “Ban on Plastic Shopping Bags Back-Fires.” This article references the March 16 Wall Street Journal op-ed, and references the 2013 swine flu outbreak associated with polypropylene feed bags, the 2012 norovirus outbreak related to fomite aerosols on a polypropylene bag, and the 2011 Gerba, C. and Sinclair, R. study. The article goes on to discuss ventilators, then concludes with, “With health concerns at the forefront of concern, companies and governments should abandon anti-plastic policies and embrace single-use items...Plastic bans at a time of a National Emergency make little practical sense, when plastics are so vital to our national and public health” (emphasis by Greenpeace). This appears to be IER’s ony article about plastic bags specifically but the think tank are other pro-plastic op-eds in 2019 and earlier.

37 Social media sharing data obtained via Crowd Tangie
Washington Examiner ran an op-ed by Competitive Enterprise Institute fellow Angela Logomasini, “Plastic bag bans aren’t helping us fight against coronavirus.” The op-ed starts, “Before the novel coronavirus pandemic hit, warnings about potential public health consequences of banning single-use plastics in the name of environmental protection fell on deaf ears. But now people are wisely calling on lawmakers in New York, California, and other states and localities to reverse bans and regulations on single-use plastic grocery bags. Reusable bags can contribute to the spread of COVID-19 and other pathogens” (emphasis by Greenpeace). The link goes to the March 17 Forbes article authored by Americans for Tax Reform. Logomansini also references a 2018 Competitive Enterprise Institute article “5 reasons why banning plastics may harm the environment and consumers” which, in claiming that “single use plastic is more sanitary” cites several reasons including that “Plastic items are more sanitary” citing the ACC page on plastic packaging, and “Reusable bags often harbor bacteria and could pose a health risk for consumers” linking to Gerba, C. and Sinclair R. (2011). Logomansini references 2011 Gerba, C. and Sinclar R. study and 2018 Sinclair R. et al study, the 2012 study of a norovirus outbreak among a soccer team, and notes both Robert Kimmel’s 2014 life cycle analysis on grocery bags and his recent urging to New York state to halt its ban at least until the COVID-19 crisis is under control. Logomanisini also referenced “studies going back to the 1970s” that affirm the sanitary nature of single-use compared to reusables, though one link appears to be broken, and another goes to an undated study “Disposables vs Reusables” (which appears to not offer a definitive conclusion but point to the need for more study, particularly if it is indeed in the 1970s and would not be evaluating any modern innovative reusable solutions). Logomansini also referenced several of her own op-eds published as evidence that plastic pollution should be solved by proper disposal not bans.

Committee for a Constructive Tomorrow (CFACT) published “Banning plastic grocery bags spreads disease.” This blog mainly focused on increased environmental costs attributed to bag bans, referencing Tierney’s article in Manhattan Institute/City Journal, and Gerba and Sinclair’s 2011 study.

Albuquerque Journal published a guest op-ed, “Coronavirus is why plastic bag ban should go”by Paul Gessing, president of New Mexico’s Rio Grande Foundation. Gessing noted, “The problem with reusable cloth bags preferred by...other opponents of plastic bags is real,” and references Sinclair’s 2018 study (again ignoring the fact that Sinclair’s study focused not on cloth bags but reusable polypropylene -- plastic -- bags).


March 19

Wall Street Journal published an article “War on Plastic Takes a Backseat in Coronavirus Crisis.” This article describes some of the backlash but also interviews health experts who offer a range of opinions on whether or not retailers should accept reusables or temporarily pause those programs; this article does not appear to replicate any of the industry-funded talking points.

The Josiah Bartlett Center for Public Policy published a 4-page briefing titled “A Disease Outbreak is a bad time to ban disposables and paper” and an accompanying blog. The Josiah Bartlett Center for Public Policy has been documented to be funded by
Donors Capital, which has been described as the “dark money ATM of the conservative movement.” It had, in 2017, published a climate-denial report authored by Michael Sununu, brother of New Hampshire Governor Chris Sununu. The briefing covers the same suite of studies already circulated, with the addition of studies focusing on reusable cups (we did not examine those studies in preparing this brief).

March 20

- Hy-Vee limits reusable bags, citing concerns of coronavirus - does not specifically link to any of these studies.
- In Sacramento, it is reported that Trader Joe’s prohibits customers from putting groceries in their own bags until they return to their cars.
- The Massachusetts Food Association, which represents the grocery industry throughout the state, calls on the state to suspend all local and state ordinances banning plastic bags citing concerns of coronavirus.
- Portland, Maine mayor repeals the city’s bag fee, citing explicit concerns about plastic bags and new coronavirus: “According to current research and understanding, COVID-19 can survive on various surfaces for hours and in some cases days,” City Hall Communications Director Jessica Grondin said in a news release. “Therefore, the city is encouraging shoppers to not use their reusable bags during this time and asks that stores make single-use bags readily available.”
- Competitive Enterprise Institute’s Myron Ebell included John Tierney’s Manhattan Institute article in a Cooler Heads Coalition weekday digest email. The subtitle was “Disposable Plastic Shopping Bags Are Safer,” and noted “These reusable tote bags can sustain the COVID-19 and flu viruses—and spread the viruses throughout the store.” The Cooler Heads Digest is considered a coordinating body for climate deniers.
- Reason Foundation published a blog “Plastic Bag Bans are the Latest to get Tossed During Coronavirus Pandemic.” This article describes the fears, notes delays due to fears, and is actually really measured noting that the studies show some ability to pass disease if not washed but that the risk may be low. However, as mentioned above, the Reason Foundation had, in 2014, authored a study incorrectly concluding that San Francisco’s plastic bag ban had increased plastic pollution.

March 21

- The New Hampshire governor issued an emergency order prohibiting the use of reusable bags and requiring disposable paper or plastic, citing COVID-19 concerns. Note that the Union Leader had published an op-ed with these talking points on March 6, and the Josiah Bartlett Center, affiliated with the governor’s brother, had published its briefing only two days prior.

March 22

- New Hampshire Union Leader editorial board publishes “About the Plastic Bags -- Much Better for dealing with the virus,” noting that single-use is preferable to cloth bags.
Boston Herald runs a piece by conservative syndicated columnist Adriana Cohen, “Plastic bag bans dangerous during COVID-19 pandemic.”

March 23

- Retailer Giant Eagle announces that customers are encouraged not to bring in their reusable bags over concerns about COVID-19.
- In Fresno, CA, retailer Vons (banner of Albertsons Companies) urges customers not to bring in their reusable bags. If customers choose to bring their reusable bags into stores, they must bag their own groceries.
- Retailers Walmart and Whole Foods respond to NBC’s inquiry about reusable bag policies, noting that customers are permitted to bring reusable bags into stores and that they are encouraged to clean their reusable bags. Retailers Publix, ALDI, BJ’s, and Winn-Dixie had not responded by the time the article went to press.
- PLASTICS prepared a letter to the federal Department of Health and Human Services asking HHS to issue a statement “on the health and safety benefits seen in single-use plastics” and to speak out against bans on plastic. The letter cites three studies; Gerba & Sinclair’s 2011 study, the 2012 study of the Oregon norovirus outbreak (which did not establish a link between norovirus transmission and bags specifically), and a May 2019 study on microbial contamination of reusable bags; this study does conclude that bags can be safely used with proper use and care.

March 24

- Researcher Ryan Sinclair, whose 2011 research was underwritten by the ACC, authored a guest op-ed for USA Today titled, “COVID-19: Protecting grocery workers is a top priority. Plastic bags help that effort.” He emphasized the findings of his research on bacteria on reusable bags and summarizes legislative action. He concludes that protecting grocery employees should include “ending the push for shoppers to use reusable bags and lifting the ban on plastic — at least until this emergency is over.”
- Retailer Price Chopper announces its plans to temporarily reintroduce disposable plastic bags, after New York state agreed to not take action on its plastic bag ban until mid-May.
- Citing health concerns, retailer Meijer asks customers to leave reusable grocery bags at home, unless customers are using the self-checkout lines.
- Retailer Wegmans permits customers to bring reusable bags into stores as long as customers bag groceries themselves. Wegmans encourages customers to clean their reusable bags after each use.39
- In Portland, retailer QFC (a banner of The Kroger Co.) has signs in stores discouraging the use of reusable bags.

March 25

- Retailer Target will not sell customers reusable bags. Customers are permitted to use their reusable bags, as long as they bag their own groceries. Paper and plastic bags will

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39 There does not appear to be a published company policy on this.
be given away for free, including in markets like Minneapolis where there used to be a charge for single-use bags.

- The mayor of Boston announces the temporary suspension of the bag ban for essential businesses.

Section 3: Who are these Think Tanks and Who Funds Them?

These think tanks have many years of experience orchestrating the precise kind of momentum-gathering narratives that spread throughout the media ecosystem, like wildfire. The ongoing and evolving spread of the plastic industry's self-serving fallacious narrative, picked up by outlet after outlet (often in the same states and municipalities where there are active or pending bans on plastic bags), and echoed across social media platforms, has made use of the same multi-dimensional conservative infrastructure that climate deniers and other conservative and corporate interests have used. These include state think tanks (members of the State Policy Network), libertarian front groups and industry-funded academic "experts" -- many of whom are academic "double-dippers" who consult for the industry.

Many of these op-eds were published by think tanks who are funded by the fossil fuel industry and other industries that often mount counter-attacks and PR campaigns when feeling threatened by new regulations or stiff restrictions on their business. Below we detail some of the funders of several of these think tanks, based on analysis of IRS disclosures (990 forms). This data does not indicate what funding may have been used for. But these groups house some of the best crisis communications artists out there. They do not necessarily have to be told when to seize any opportunity to advance their funders’ (or potential funders) interest.

Manhattan Institute (SPN member):
The Manhattan Institute is a multi-issue front group based in New York City. The Institute has been involved in efforts to dismiss climate science and battle against environmental policies for decades. It is one of the few remaining anti-climate organizations that is still funded from ExxonMobil, receiving $1,390,000 from ExxonMobil from 1997-2018.

Manhattan has received $3,252,537 from Koch foundations controlled by Charles Koch, CEO of Koch Industries, from 1997-2018.

American Energy Alliance (AEA) and Institute for Energy Research (IER):
The AEA is the political advocacy (501c4) affiliate of the nonprofit (501c3) IER, which was initially created by Charles Koch and former Enron exec Robert Bradley. The IER and AEA are currently managed by Bradley and Tom Pyle, a former Koch Industries lobbyist and energy advisor to Donald Trump. Both of these organizations have received money from oil lobbying

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40 This spreadsheet is updated through 2017. 2018 data has not been entered for every group, but is updated for each group represented in this brief.
41 See also: https://blog.ucsusa.org/elliott-negin/exxonmobil-still-funding-climate-science-denier-groups
groups, coal companies like Peabody and Alpha Natural Resources, and from anonymous donors hiding grants through DonorsTrust, referenced in links, in title above).

The AEA has served as a major pass through for Charles Koch’s network of political donors. The IER and AEA have received millions of dollars from nonprofit foundations controlled by Koch Industries executive Charles Koch, including:

- **Over $7 million** from Freedom Partners Chamber of Commerce, 2012-2017. Freedom Partners which was founded and remains controlled by Koch Ind execs. Koch executives have renamed the organization Stand Together Chamber of Commerce.
- **$700,000 from Charles Koch’s foundations** to the Institute for Energy Research, 1997-2018.

The AEA has received at least $800,000 in recent years from the American Fuel & Petrochemical Manufacturers, the lobbying organization for oil and petrochemical refinery companies, including Koch Industries, Marathon Petroleum Corp, and Valero Energy. AEA received a **$350,000 grant from AFPM in 2017**, the top grant made by AFPM that year, and AEA received **$450,000 consulting fees from AFPM in 2013**.

**State Policy Network:**
The State Policy Network is an organization in Washington, DC that acts as a coordinating body for hundreds of state-based conservative "think tanks" in all 50 states. SPN’s member organizations coordinate to simultaneously advance corporate-backed policies from state to state.

**American Legislative Exchange Council** (SPN member):
American Legislative Exchange Council (ALEC) is one-stop shopping for state elected officials interested in pursuing an array of corporate agendas, from derailing climate and clean energy programs to breaking workers unions to undermining public education. ALEC has worked for the plastics industry, and helped companies fight bans against plastic bags in many states.

ALEC does not disclose lists of corporate nor legislative members, but leaked rosters and meeting attendance lists confirm that ALEC has particularly deep ties to Koch Industries and Koch-controlled nonprofits. Many of the largest fossil fuel companies have abandoned ALEC in recent years, including ExxonMobil, BP, Shell, MidAmerican, Alliant, and other fossil fuel companies. However, the lobbying groups and trade associations representing those companies have remained active at ALEC meetings.

**American Chemistry Council** (ACC):

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42 [https://www.alec.org/article/plastic-bag-ban/](https://www.alec.org/article/plastic-bag-ban/)
The ACC represents BP Lubricants, Chevron-Phillips Chemical Co, ExxonMobil Chemical Company, Dow Chemical, DuPont, Huntsman, Occidental Chemical Corp, Marathon Petroleum, Saudi Aramco (Motiva), Shell Chemical Co. Note: Marathon Petroleum was listed as a member of the ACC until 2018, but Marathon senior vice president Ray Brooks served on the ACC Board of Directors from January 1, 2017 through December 31, 2019. The ACC’s funding disclosures don’t indicate any funding to front groups or corporate think tanks such as the ones in this brief, however they are known to commission or fund research.44

**Competitive Enterprise Institute** (SPN member):
The Competitive Enterprise Institute (CEI) has been a central player in the fossil fuel industry’s decades-long attack on public understanding of climate science, including as a litigant against climate scientists themselves. CEI received $2,100,000 from ExxonMobil until the company discontinued its funding in 2005, as part of an effort to distance itself from the most discredited organizations involved in denying climate science.

Foundations controlled by Koch Industries CEO Charles Koch have given $838,259 to CEI, from 1997-2018. An unredacted CEI IRS 990 filing from 2009 revealed that CEI received $100,000 directly from the late co-owner of Koch Industries, David Koch. A Koch Industries subsidiary was listed among sponsors of the 2013 CEI annual fundraising dinner (at a $15,000 sponsorship level), and CEI’s 2019 annual dinner was also sponsored by Americans for Prosperity, which was founded and remains controlled by Koch Industries executives.

Other disclosed sponsors of CEI annual fundraising dinners included Marathon Petroleum Corporation (2013 and 2019), and the American Fuel & Petrochemical Manufacturers (2013 and 2019), which represents both Koch and Marathon. AFPM disclosed $45,000 to CEI in 2017, as well.

Murray Energy Corporation’s 2019 bankruptcy filings listed CEI among organizations receiving its financial support.

**Center for the American Experiment** (SPN member):
The Center for the American Experiment is the primary Minnesota affiliate of the State Policy Network. Its president is John Hinderaker, a lawyer who has retained Koch Industries. Limited funding info is available for the Center, making corporate sponsorships difficult to confirm compared to disclosures to the IRS from longstanding old-money corporate foundations that fund most of the State Policy Network groups: The Bradley Foundation, Roe Foundation, Hume Foundation, DonorsTrust, and others.

Section 4: Conclusion

The petrochemical and plastic industry has demonstrated over and over again that public health is not their concern. There are negative public health impacts from every stage of the plastics life cycle, from fracking and refining to ingestion of microplastics, ultimately ending as waste headed to landfills or incineration. What’s worse, they are trying to capitalize on the COVID-19 crisis by playing on people’s fears around sanitation and hygiene. Through front groups and corporate funded research, the plastic industry is misrepresenting scientific findings to scare people away from reusable bags even as recent studies reveal the virus lasts longer on plastic than other materials.

Plastic waste is now found everywhere we look, from the bottom of the Mariana Trench in the deepest part of the Pacific to the Rocky Mountains and the Pyrenees. We have put so much plastic into the environment that it is in the food we eat, the water we drink, and the air we breathe. Plastic pollution is putting numerous species at risk, and impacting entire ecosystems. At a time when it is clear we must phase out our reliance on single-use plastic as quickly as possible, the plastic industry is fighting a dirty war that threatens to endanger our health and corrupt public policy.

We will not allow them to succeed.