

FROM THE MAGAZINE

The Perverse Panic over Plastic

The campaign against disposable bags and other products is harming the planet and the public.

John Tierney

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Why do our political leaders want to take away our plastic bags and straws? This question is even more puzzling than a related one that I've been studying for decades: Why do they want us to recycle our garbage?

The two obsessions have some common roots, but the moral panic over plastic is especially perverse. The recycling movement had a superficial logic, at least at the outset. Municipal officials expected to save money by recycling trash instead of burying or burning it. Now that recycling has turned out to be ruinously expensive while achieving little or no environmental benefit, some local officials—the pragmatic ones, anyway—are once again sending trash [straight to landfills and incinerators](#).

The plastic panic has never made any sense, and it's intensifying even as evidence mounts that it's not only a waste of money but also harmful to the environment, not to mention humans. It's been a movement in search of a rationale for half a century. During the 1970s, environmentalists like Barry Commoner wanted the government to restrict the use of plastic because it was made from petroleum, which we needed to hoard because we would soon run out of it. When the "energy crisis" proved a false alarm, environmentalists looked for new reasons to panic.

They denounced plastic for not being biodegradable in landfills. They blamed it for littering the landscape, clogging sewer drains, and contributing to global warming. Plastic from our "throwaway society" was killing vast numbers of sea creatures, according to *Blue Planet II*, a 2017 BBC documentary series that became an international hit. Its depictions of sea turtles, dolphins, and whales in jeopardy prompted Queen Elizabeth II to ban plastic straws and bottles from the royal estates, and the documentary has galvanized so many other leaders that greens celebrate the "*Blue Planet Effect*."

More than 100 countries now restrict single-use plastic bags, and Pope Francis has called for the global regulation of plastic. The European Union parliament has voted to ban single-use plastic straws, plates, and cutlery across the continent next year. In the United States, hundreds of municipalities and eight states have outlawed or regulated single-use plastic bags. New York and other cities have banned plastic-foam food containers, and more sweeping edicts are in the

works. Greens in California are pushing a referendum to require all plastic packaging and single-use foodware in the state to be recyclable, and the EU has unveiled a similar plan. Celebrities and politicians photographed with the wrong beverage container or straw now endure online “plastic-shaming.”

Some reformers are well-intentioned, but they’re hurting their own cause. If you want to protect dolphins and sea turtles, you should take special care to place your plastic in the trash, not the recycling bin. And if you’re worried about climate change, you’ll cherish those gossamer grocery bags once you learn the facts about plastic.

Like the recycling movement, the plastic panic has been sustained by popular misconceptions. Environmentalists and their champions in the media have ignored, skewed, and fabricated facts to create several pervasive myths.

Your plastic straws and grocery bags are polluting the planet and killing marine animals. The growing amount of plastic debris in the seas is a genuine problem, but it’s not caused by our “throwaway society.” Environmental groups cite a statistic that 80 percent of the plastic debris in the oceans comes from land-based sources, but good evidence has never supported that estimate, and recent research paints a different picture.

After painstakingly analyzing debris in the north central Pacific Ocean, where converging currents create the “Great Pacific Garbage Patch,” a team of scientists from four continents reported in 2018 that more than half the plastic came from fishing boats—mostly discarded nets and other gear. These discards are also the greatest threat to marine animals, who die not from plastic bags but from getting entangled in the nets. Another study, published last year by Canadian and South African researchers, traced the origins of plastic bottles that had washed up on the shore of the aptly named Inaccessible Island, an uninhabited landmass in the middle of the southern Atlantic Ocean. More than 80 percent of the bottles came from China and must have been tossed off boats from Asia traversing the Atlantic.

Some plastic discarded on land does end up in the ocean, but very little of it comes from consumers in the United States or Europe. Most of the labels on the plastic packaging analyzed in the Great Pacific Garbage Patch came from Asia, the greatest source of what researchers call “[mismanaged waste](#).” Of the plastic carried into oceans by rivers, a 2017 study in *Nature Communications* [estimated](#), 86 percent comes from Asia and virtually all the rest from Africa and South America. Developing countries don’t yet have good systems for collecting and processing waste, so some of it is simply dumped into or near rivers, and these countries’ primitive processing facilities let plastic leak into waterways.

It’s true that some plastic in America is littered on beaches and streets, and some of it winds up in sewer drains. But researchers have found that laws restricting plastic bags (which account for less than 2 percent of litter) and food containers do not reduce litter (a majority of which consists of cigarette butts and paper products). The resources wasted on these anti-plastic campaigns would be better spent on more programs to discourage littering and to pick up everything that’s discarded—a direct approach that has proved effective.

When you recycle plastic, you prevent it from polluting the oceans. This myth is based on the enduring delusion that plastic from curbside bins can be efficiently turned into other products. But sorting the stuff is so onerous and labor-intensive—and the resulting materials of so little value—that recycling plastic is hopelessly unprofitable in the United States and Europe. Municipalities expected to make money selling their plastic waste to local recyclers, but instead they've had to pay to get rid of it, mostly by shipping it to Asian countries with low labor costs. The chief destination for many years was China; but two years ago, China banned most imports, so the plastic waste has been diverted to countries like Malaysia, Indonesia, Thailand, and Vietnam.

That means that some of the plastic from your recycling bin has probably ended up in the ocean because it has gone to a country with a high rate of “mismanaged waste.” At the rudimentary recycling plants in Asia, [some of the plastic waste](#) leaks out into the environment, and much of the imported waste doesn't even reach a legitimate recycling plant. [Journalists](#) and [environmentalists](#) have been collecting horror stories in Malaysia and Indonesia of Western plastics piling up at illegal dumps and [spewing toxins](#) when they're burned in backyard kitchens. The people living near the dumps and recycling operations complain that foreign plastics are fouling their air and polluting their rivers.

The good news is that these countries are starting to share China's reluctance to accept the stuff from our recycling bins. Waste managers in America and Europe lament that their warehouses are overflowing with bales of plastic recyclables that nobody will take off their hands, and they've been forced to send the bales to local landfills and incinerators. It would have been smarter to do that in the first place instead of running a costly recycling program, but at least they're preventing that plastic from polluting the ocean. You can do your own bit for marine animals—and your town's budget—by throwing your plastic straight into the trash.

Single-use plastic bags are the worst environmental choice at the supermarket. Wrong: they're the best choice. These high-density polyethylene bags are a marvel of economic, engineering, and environmental efficiency: cheap and convenient, waterproof, strong enough to hold groceries but so thin and light that they require scant energy, water, or other natural resources to manufacture and transport. Though they're called single-use, surveys show that most people reuse them, typically as trash-can liners.

Once discarded, these bags take up little room in the landfill, and the fact that they're not biodegradable is a plus, not a minus, because they don't release methane or any other greenhouse gas, as decomposing paper and cotton bags do. The bags' tiny quantity of carbon, extracted from natural gas, goes back underground, where it can be safely sequestered from the atmosphere (and the ocean) in a modern landfill with a sturdy lining.

Every other grocery bag has a bigger environmental impact, as repeatedly demonstrated by environmental life-cycle analyses of the bags and by surveys of consumer behavior. Paper bags and reusable tote bags require more water to manufacture and more energy to produce and transport, which means a bigger carbon footprint. To compensate for that bigger initial

footprint of a paper bag, according to the [United Kingdom's environmental agency](#), you'd have to reuse it at least four times, which virtually no one does. The typical paper grocery bag is used just once (and takes up 12 times more landfill space than a plastic one).

People do reuse tote bags, but not as often as they plan to. One survey found that consumers forget to bring the bags to the supermarket nearly half the time. To offset the initial carbon footprint of a cotton tote bag, you'd have to use it 173 times, but the typical tote is used just 15 times, so the net effect is about nine times more carbon emissions than a thin plastic bag.

Environmentalists who have looked at these numbers advise greens to shun cotton bags (even their beloved organic ones) in favor of plastic tote bags, because a bag of nonwoven polypropylene needs to be used just 14 times to offset its initial carbon footprint. At first glance, that looks like a slight net plus for the atmosphere, given that the typical tote is used 15 times. But that benefit disappears once you consider another consequence observed in places that have banned single-use bags: when consumers are deprived of the bags they were using as bin liners, they [start buying plastic substitutes](#) that are thicker than the banned grocery bags—and thus have a bigger carbon footprint.

So the net effect of banning plastic grocery bags is more global warming. Exactly how much more depends on which researchers' life-cycle analysis you choose, but there's definitely more carbon dioxide in the atmosphere, as Julian Morris and Brian Seasholes of the [Reason Foundation](#) concluded. Using the range of available analyses, they calculated that San Francisco's plastic-bag ban had caused the greenhouse emissions related to grocery bags to rise by at least 9 percent, and possibly to more than double.

Moreover, as the Reason researchers note, those calculations understate the greenhouse impact because they're based on analyses that omitted an important factor: the need to wash tote bags to avoid contaminating food with bacteria that leaked from last week's groceries. Most shoppers don't bother to clean their bags—a study at supermarkets in California and Arizona found large numbers of bacteria in almost all the reusable bags—but health authorities advise washing them weekly in hot water to avoid food-borne illnesses. Whether people clean by hand or throw the bags into the washer and dryer, they're consuming energy and adding still more carbon dioxide to the atmosphere.

Plastic was once celebrated as a modern miracle substance. (© THE ADVERTISING ARCHIVES/BRIDGEMAN IMAGES)

If our goals are to reduce carbon emissions and plastic pollution, we can take some obvious steps. Stop forcing consumers to use grocery bags and other products that increase emissions. Stop exporting plastic waste to countries that allow it to leak into the ocean. Help those countries establish modern systems for collecting and processing their own plastic waste. Send plastic waste straight to landfills and incinerators. Step up the enforcement of laws and treaties that restrict nations from polluting the ocean and that prohibit mariners from littering the seas.

But politicians and environmentalists have other ideas. They're doubling down on their mistakes by banning more plastic products and demanding alternatives that are more expensive, less convenient, and worse for the environment. Even experts familiar with the facts succumb to magical thinking. Yes, they acknowledge, we shouldn't be exporting our plastic waste to Asia, but the solution is to recycle it at home. And yes, that's impractical today, but everything will change after we create a "circular economy," which merely requires a transformation of society. Guided by wise central planners, manufacturers will redesign their products and retool their factories so that everything can be reused or recycled, and consumers will painstakingly sort everything into just the right recycling bin, and we will all live happily ever after in a world with "zero waste."

This fantasy isn't merely a waste of time and money. It is interfering with practical solutions to dealing with plastic pollution. Improving sanitation systems was traditionally a top priority for public-health officials and foreign-aid donors, but it has been neglected as they've redirected money and attention to "sustainable development" schemes for recycling and conserving water and energy. This shift in priorities has hampered the development of effective waste-management systems that would keep plastic out of the oceans, according to Mikko Paunio, an epidemiologist in Finland who has studied public-health programs in rich and poor countries around the world.

"Ideologically motivated environmentalists in the 1980s and their dreams of recycling and a 'circular economy' are the ultimate cause of the marine waste problem," [he concludes](#), "because they have discouraged development of municipal waste schemes in Asia and Africa, and because they have encouraged developed nations to use management schemes that make it hard or expensive to deal with waste and therefore tend to 'leak' to the environment, sometimes catastrophically so."

Even if the dream of a circular economy were possible, it would accomplish remarkably little, at enormous expense. Suppose a miraculous revolution occurs in consumer behavior. Suppose you used the tote bags with the lowest carbon footprint (the ones of nonwoven polypropylene) every time you went to the supermarket, and you conscientiously washed the bags with water heated by solar panels on your roof. Over the course of a year, the Reason researchers calculate, you would reduce your carbon emissions by less than the amount spewed by the typical car in two trips to the supermarket. You could have done more for the planet by eliminating those car trips, and there's a convenient way to do that a lot more often than twice a year: order your groceries online from a service like FreshDirect or Peapod. University of Washington engineers [estimate](#) that online grocery shopping can reduce the related carbon emissions by at least half—clearly a more effective method than banning plastic grocery bags.

Then why do environmentalists hector consumers about plastic bags instead of urging them to shop online? Why not focus on something that not only reduces greenhouse emissions but also makes people's lives easier? The short answer: because the plastic panic isn't really about saving the planet—and it's certainly not about making people's lives easier.

“San Francisco’s plastic-bag ban caused greenhouse emissions from grocery bags to rise by at least 9 percent.”

I have been trying to understand the green psyche since 1996, when I set a record for hate mail at the *New York Times Magazine* with a cover story titled “[Recycling Is Garbage](#).” It was obvious then that the cheapest way to dispose of trash was to bury it in a landfill, and that there would never be a shortage of landfill space, yet people were clamoring to pay extra for the privilege of sorting their own waste. I concluded that recycling was a sacrament to expiate guilt, a rite of atonement for the sin of buying too much stuff. I subsequently [found support](#) for that theory from James B. Twitchell’s 2002 analysis of consumer passions, *Lead Us into Temptation*. “While we claim to be wedded to responsible consumption,” he wrote, “we spend a lot of our time philandering. Trash is lipstick on the collar, the telltale blond hair.” Recycling is our way of saying, “I’m sorry, honey.”

The plastic panic involves consumer guilt, too, but that explains just a small part of it. While recycling programs have long enjoyed [broad public support](#) (even as [the economics have worsened](#)), similar enthusiasm doesn’t exist for restricting plastic. Market researchers [have found](#) that only 15 percent of consumers care enough about environmental issues to change their buying habits and that 50 percent will change only if it comes at no extra cost or hassle. Yet politicians eagerly go on banning plastic bags and looking for more ways to annoy voters, like California’s new law [forbidding hotels](#) from providing disposable plastic toiletries.

Why would the California legislature and governor deprive their constituents of those handy little bottles of shampoo? It seemed bizarre to me until I discovered scholars’ analysis of just this sort of petty tyranny in the past. Today’s plastic bans represent a revival of sumptuary laws (from *sumptus*, Latin for “expense”), which fell out of favor during the Enlightenment after a long and inglorious history dating to ancient Greece, Rome, and China. These restrictions on what people could buy, sell, use, and wear proliferated around the world, particularly after international commerce increased in the late Middle Ages.

Worried by the flood of new consumer goods and by the rising affluence of merchants and artisans, rulers across Europe enacted thousands of sumptuary laws from the thirteenth to the eighteenth centuries. These included exquisitely detailed rules governing dresses, breeches, hose, shoes, jewelry, purses, bags, walking sticks, household furnishings, food, and much more—sometimes covering the whole population, often specific social classes. Gold buttons were verboten in Scotland, and silk was forbidden in Portuguese curtains and tablecloths. In Padua, no man could wear velvet hose, and no one but a cavalier could adorn his horse with pearls. It was illegal at dinner parties in Milan to serve more than two meat courses or offer any kind of sweet confection. No Englishwoman under the rank of countess could wear satin striped with silver or gold, and a German burgher’s wife could wear only one golden ring (and then only if it didn’t have a precious stone).

Religious authorities considered these laws essential to curb “the sin of luxury and of excessive pleasure,” in the words of Fray Hernando de Talavera, the personal confessor to Spain’s Queen Isabella. “Now there is hardly even a poor farmer or craftsman who does not dress in fine wool and even silk,” he wrote, echoing the common complaint that imported luxuries were upsetting the social order and causing everyone to spend beyond their means. In justifying her sumptuary edicts, England’s Queen Elizabeth I lamented that the consumption of imported goods had led to “the impoverishing of the Realme, by dayly bringing into the same of superfluitie of forreine and unnecessarie commodities.”

But like the Americans who go on using plastic bags, the queen’s subjects refused to give up their “unnecessarie commodities.” The sumptuary laws failed to make much impact in England or anywhere else, despite the rulers’ best efforts. Their agents prowled the streets and inspected homes, confiscating taboo luxuries and punishing violators—usually with fines, sometimes with floggings or imprisonment. But the conspicuous consumption continued. If silk was banned, people would find another expensive fabric to flaunt. Rulers had to keep amending their edicts, but they remained one step behind, and often the laws were flouted so widely that the authorities gave up efforts to enforce them.

For historians, the great puzzle of sumptuary laws is why rulers went on issuing them for so many centuries despite their ineffectiveness. The specific explanations vary from country to country, but there’s a common theme: the laws persisted because they benefited the right people. In a recent collection of scholarly essays, *The Right to Dress*, the laws’ appeal is summarized by Maria Giuseppina Muzzarelli, a medieval historian at the University of Bologna: “Whatever the lawmakers’ original or prevailing purpose might have been, sumptuary laws were useful instruments of rule.”

The laws didn’t curb the public’s sinful appetite for luxury or contribute to national prosperity, but they comforted the social elite, protected special interests, enriched the coffers of church and state, and generally expanded the prestige and power of the ruling class. For nobles whose wealth was eclipsed by nouveau-riche merchants, the laws reinforced their social status. The restrictions on imported luxuries shielded local industries from competition. The fines collected for violations provided revenue for the government, which could be shared with religious leaders who supported the laws. Even when a law wasn’t widely enforced, it could be used selectively to punish a political enemy or a commoner who got too uppity.

The laws persisted until the waning of royal sovereignty and church authority, starting in the eighteenth century. As intellectuals promoted new rights for commoners and extolled the economic benefits of free trade, sumptuary laws came to be seen as an embarrassing anachronism. Yet the urge to rule inferiors never goes away.

Today’s plastic bans are even less rational than the old sumptuary laws, but they, too, benefit elites. Cheap plastic products have been a boon to the poor and the middle class, which just makes plastic seem even tackier to their social superiors. The old-money scions who used to join the clergy today do their preaching as green activists, and they’ve got the power to impose their preferences now that environmentalism is essentially the new state religion in progressive

strongholds. They can lord it over the modern merchant class—the corporations desperately trying to curry social favor by touting their green credentials and making the proper financial obeisance. The plastic panic gives politicians and greens the leverage to extract contributions from companies afraid that they'll be regulated out of business. It provides fund-raising pitches for greens and subsidies for environmentally correct companies and nonprofit groups.

Most important, the plastic panic gives today's political rulers and modern nobility a renewed sense of moral superiority. With her half-dozen regal residences, Queen Elizabeth II has one of the world's largest carbon footprints, but now that she has banned plastic bottles and straws, she can share the first Queen Elizabeth's dismay at her subjects' "inordinate excess." No matter how much fuel politicians and environmentalists burn on their flights to international climate conferences, they can still feel virtuous as they issue their edicts to grocery shoppers.

For now, their power seems secure, but perhaps the public will eventually come to agree with Adam Smith. In *The Wealth of Nations*, he dismissed sumptuary laws as not just terrible economics but also rank hypocrisy. "It is the highest impertinence and presumption, therefore, in kings and ministers to pretend to watch over the economy of private people, and to restrain their expense, either by sumptuary laws, or by prohibiting the importation of foreign luxuries," Smith wrote. "They are themselves always, and without any exception, the greatest spendthrifts in the society. Let them look well after their own expense, and they may safely trust private people with theirs." We could even be trusted with our plastic bags and straws.
