More Recycling Won't Solve Plastic Pollution

https://blogs.scientificamerican.com/observations/more-recycling-wont-solve-plastic-pollution/ By Matt Wilkins on July 6, 2018

The only thing worse than being lied to is not knowing you're being lied to. It's true that plastic pollution is a huge problem, of planetary proportions. And it's true we could all do more to reduce our plastic footprint. The lie is that blame for the plastic problem is wasteful consumers and that changing our individual habits will fix it.

Recycling plastic is to saving the Earth what hammering a nail is to halting a falling skyscraper. You struggle to find a place to do it and feel pleased when you succeed. But your effort is wholly inadequate and distracts from the real problem of why the building is collapsing in the first place. The real problem is that single-use plastic—the very idea of producing plastic items like grocery bags, which we use for an average of 12 minutes but can persist in the environment for half a millennium—is an incredibly reckless abuse of technology. Encouraging individuals to recycle more will never solve the problem of a massive production of single-use plastic that should have been avoided in the first place.

As an ecologist and evolutionary biologist, I have had a disturbing window into the accumulating literature on the hazards of plastic pollution. Scientists have long recognized that plastics biodegrade slowly, if at all, and pose multiple threats to wildlife through entanglement and consumption. More recent reports highlight dangers posed by absorption of toxic chemicals in the water and by plastic odors that mimic some species' natural food.

Plastics also accumulate up the food chain, and studies now show that we are likely ingesting it ourselves in seafood. If we consumers are to blame, how is it possible that we fail to react when a study reports that there will be more plastic than fish in the oceans by 2050? I would argue the simple answer is that it is hard. And the reason why it is hard has an interesting history. Beginning in the 1950s, big beverage companies like Coca-Cola and Anheuser-Busch, along with Phillip Morris and others, formed a non-profit called Keep America Beautiful. Its mission is/was to educate and encourage environmental stewardship in the public. Joining forces with the Ad Council (the public service announcement geniuses behind Smokey the Bear and McGruff the Crime Dog), one of their first and most lasting impacts was bringing "litterbug" into the American lexicon through their marketing campaigns against thoughtless individuals.

Two decades later, their "Crying Indian" PSA, would become hugely influential for the U.S. environmental movement. In the ad, a Native American man canoes up to a highway, where a motorist tosses a bag of trash. The camera pans up to show a tear rolling down the man's cheek. By tapping into a shared national guilt for the history of mistreatment of Native Americans and the sins of a throwaway society, the PSA became a powerful symbol to motivate behavioral change. More recently, the Ad Council and Keep America Beautiful teams produced the "I Want to Be Recycled" campaign, which urges consumers to imagine the reincarnation of shampoo bottles and boxes, following the collection and processing of materials to the remolding of the next generation of products.

At face value, these efforts seem benevolent, but they obscure the real problem, which is the role that corporate polluters play in the plastic problem. This clever misdirection has led journalist and author Heather Rogers to describe Keep America Beautiful as the first corporate greenwashing front, as it has helped shift the public focus to consumer recycling behavior and actively thwarted legislation that would increase extended producer responsibility for waste management.

For example, back in 1953, Vermont passed a piece of legislation called the Beverage Container Law, which outlawed the sale of beverages in non-refillable containers. Single-use packaging was just being developed, and manufacturers were excited about the much higher profit margins associated with selling containers along with their products, rather than having to be in charge of recycling or cleaning and reusing them. Keep America Beautiful was founded that year and began working to thwart such legislation. Vermont lawmakers allowed the measure to lapse after four years, and the single-use container industry expanded, unfettered, for almost 20 years. In 1971 Oregon reacted to a growing trash problem by becoming the first U.S. state to pass a "bottle bill," requiring a five-cent deposit on beverage containers that would be refunded upon the container's return. Bottle bills provide a strong incentive for container reuse and recycling, and the 10 states with bottle deposit laws have around 60 percent container recovery rates compared to 24 percent in states without them. Yet Keep America Beautiful and other industrial lobbying groups have publicly opposed or marketed against bottle deposit legislation for decades, as it threatens their bottom line. Between 1989 and 1994 the beverage industry spent \$14 million to defeat the National Bottle Bill.

In fact, the greatest success of Keep America Beautiful has been to shift the onus of environmental responsibility onto the public while simultaneously becoming a trusted name in the environmental movement. This psychological misdirect has built public support for a legal framework that punishes individual litterers with hefty fines or jail time, while imposing almost no responsibility on plastic manufacturers for the numerous environmental, economic and health hazards imposed by their products.

Because of a legal system that favors corporate generation of plastic, plus public acceptance of single-use items as part of the modern economy, consumers who want to reduce their plastic footprint are faced with a host of challenges. We should carry around reusable beverage and takeout containers. We should avoid bottled water or sodas at all costs. When we have to accept a single-use plastic container, we should inform ourselves about the complex nuances of which types of plastic are acceptable (No. 1–3, but not No. 5?), which forms are acceptable (bottles and jugs, but not bags?) and where they can be deposited (curbside or at a special location?).

In the case of most restaurants and gas stations, which almost never have customer-facing recycling facilities even where required by law, we should transport recyclables to another location that does recycle. Even then, we must live with the knowledge that plastics generally degrade with recycling, such that plastic bottles are more often turned into non-recyclable carpets and synthetic clothes than more bottles. Effectively, we have accepted individual responsibility for a problem we have little control over. We can swim against this plastic stream with all our might and fail to make much headway. At some point we need to address the source.

According to a 2016 Pew Research poll, 74 percent of Americans think the government should do "whatever it takes to protect the environment." So what would swift, informed and effective governmental action to stop the pollution of our water, food and bodies look like? Legislators could make laws that incentivize and facilitate recycling, like the national bottle deposit and bag tax bills that were proposed in 2009. These bills would have created a nationwide five-cent deposit on plastic bottles and other containers, and a nonrefundable five-cent charge on plastic bags at checkout. The U.K. launched a similar charge on all single-use grocery bags in 2015 and announced a nationwide bottle deposit requirement in March of this year. Within six months of the plastic bag charge being in place, usage dropped over 80 percent. Similarly, in Germany, where a nationwide bottle bill was put in place in 2003, recycling rates have exceeded 98 percent. In the U.S. these actions would go a long way toward recovering the estimated \$8 billion yearly economic opportunity cost of plastic waste.

Other actions could include a ban or "opt-in" policy on single-use items like plastic straws. That is, single-use plastic items would not be available or only upon request. A small tweak like this can lead to huge changes in consumer behavior, by making wastefulness an active choice rather than the status quo. Such measures were recently adopted by several U.S. cities, and are under consideration in California and the U.K.

And yet, some plastic producers continue to oppose legislation that would eat into their profit margins. Though California and Hawaii have banned the free distribution of plastic bags at checkout, a result of lobbying is that 10 U.S. states now have preemption laws preventing municipalities from regulating plastic at the local level. Plastic producers see their profits threatened and have taken a familiar tactic, forming the Save the Plastic Bag Coalition and the American Progressive Bag Alliance to fight bag bans under the guise of defending customers' finances and freedom to choose.

So what can we do to make responsible use of plastic a reality? First: reject the lie. Litterbugs are not responsible for the global ecological disaster of plastic. Humans can only function to the best of their abilities, given time, mental bandwidth and systemic constraints. Our huge problem with plastic is the result of a permissive legal framework that has allowed the uncontrolled rise of plastic pollution, despite clear evidence of the harm it causes to local communities and the world's oceans. Recycling is also too hard in most parts of the U.S. and lacks the proper incentives to make it work well.

Second: talk about our plastic problem loudly and often. Start conversations with your family members and friends. Call your local and federal representatives to support bottle bills, plastic bag taxes and increased producer responsibility for reuse and recycling. Stand up against preemptive bans on local plastic regulation. There are signs that corporations are listening to consumer opinions, too. After numerous petitions from customers and environmental organizations, McDonalds has pledged to use only sustainable packaging materials by 2025 and to phase out Styrofoam by the year's end.

Third: think bigger. There is now serious talk of zero waste. Instead of trying to reduce waste by a small fraction, some individuals and communities are shifting their lifestyles to ensure

that nearly everything is reused, recycled or composted. Non-recyclable straws and to-go cup lids do not fit into this system. Though inspiring, a zero waste lifestyle will be impractical or impossible for most of us within current economic systems.

A better alternative is the circular economy model, where waste is minimized by planning in advance how materials can be reused and recycled at a product's end of life rather than trying to figure that out after the fact. To make this happen, we can support groups like the Ellen MacArthur Foundation that are partnering with industry to incorporate "cradle-to-cradle" (i.e., circular economic) design into their products.

This could be our future—a future of clean cities, rivers and beaches but also simpler, more responsible choices for consumers. There are now too many humans and too much plastic on this pale blue dot to continue planning our industrial expansions on a quarterly basis. It's time to stop blaming consumers for our plastic crisis and demand a better system.