

Carnegie Mellon University

Seminar 2, Professor Dave Kaufer

Argument

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“I’m Breaking up with You”

The Case for Ending our Nationwide Love Affair with Bottled Water

It’s 7 pm on Tuesday, and Shannon is preparing to head out to the gym after a long, stressful day at work. She changes into her stretch pants and t-shirt, laces up her Nikes, and throws a towel, shampoo, and shower gel into her gym bag. Before leaving, Shannon opens her refrigerator and pulls out a chilled, 20-ounce bottle of water. She buys bottled water in bulk at her local grocery store and always keeps a couple bottles in the fridge, ready to pick up as she rushes out the door. Convenient and fresh-tasting, bottled water is an essential part of Shannon’s daily routine.

It was not long ago that I, too, was in love with bottled water. I would automatically pick up my daily bottle while on my way out the door. I loved the convenience; I loved the consistent taste; I loved the fact that I could buy it whenever I was thirsty, at any vending machine or gas station.

Shannon and I are not alone. U.S. citizens are in a codependent relationship with bottled water. Every day, we as a nation consume 1,500 bottles of water *per second*.¹ A few years ago, I would have said, “So what’s the problem? Water is healthy!”

Well, one major problem is that, despite our passion for bottled water, U.S. citizens are apathetic when it comes to recycling. According to one estimate, 38 billion water bottles end up in landfills each year—that’s more than \$1 billion worth of plastic.² A second estimate from the Container Recycling Institute states that we recycle only 14% of the plastic water bottles we use.³ Since I have always considered myself environmentally-friendly, I made sure that I recycled all of my used water bottles. But as I became more invested in the green movement and began reading online blogs and articles about sustainability, I realized that recycling, on its own, is not the best answer. I learned that, in addition to the serious environmental problems with bottled water, there are possible adverse health effects as well. Finally, I decided that it was time to make a clean break and trade in my “disposable” bottles for a more permanent, reusable one.

I believe that the time has come for us as a nation to end our love affair with bottled water. As I share with you three common myths about this topic, I invite you to consider whether you should break up with bottled water too.

Myth #1: Bottled water is more pure, and thus safer, than tap water

In a world in which 1 billion people have no access to clean drinking water, and 3,000 children die daily from water-spread diseases, we in the U.S. are extremely fortunate to have some of the safest municipal water in the world. Tap water is extremely regulated and constantly tested. If you're lucky enough to live in San Francisco, for example, your tap water comes straight from Yosemite National Park—it's so pure that it doesn't even need to be filtered! New York City is known for its delicious tap water as well. Tap water in many places in the U.S. is so good, in fact, that bottled water companies, including Nestle, Coke, and Pepsi, actually repackage tap water to use in their bottles. Read the fine print on the label. If it says "purified," "drinking water," or "from municipal sources," it's just filtered tap water.

The fact that the companies filter the water does not mean it's safer—in fact, FDA regulations for bottled water are much less stringent than tap water, and if the water is bottled and consumed within the same state, it is not required to be filtered at all.⁴ The filtering primarily ensures that each bottle tastes consistent. This means that, if you're accustomed to drinking bottled water, the water from your tap at home may not taste like you want it to. Although some cities' water is certainly less pure than others, this usually has more to do with the pipes in your home than the quality of the water itself. If you are concerned about the safety of your water, however, the best approach is to test it first. The Watersafe test kit, for example, tests for pesticides, chlorine, nitrates, lead, pH levels, and iron, and can be bought online or at Whole Foods. If the test results are normal, buying a pitcher with a carbon filter will remove any unpleasant taste. For more thorough—but expensive—purification, you can buy a reverse osmosis filter, but most municipal sources are pure enough that this is an unnecessary expense.

There is a flip side to this myth about health and purity as well. Lately, scientists have become increasingly concerned about the chemicals in plastic, which can leach into the water that we drink. You may have heard the recent uproar over the chemical bisphenol A (BPA), a common substance found in many plastics, including baby bottles, reusable water bottles, and even the inside linings of canned food. BPA has been found in scientific studies to cause a wide variety of problems, from mammary cancer, to male genital defects, to neurobehavioral problems. In 2008, Canada banned the sale of baby bottles using BPA, and many American retailers, including Wal-Mart, soon followed Canada's example. You'll notice now that most reusable plastic water bottles you can buy in stores are advertised as being "BPA-free."

20-ounce containers used for bottled water do not contain BPA. They are made out of PET plastic, which is widely regarded as safe. However, these bottles have their own risks. They should not be reused or left out in the sun, as they are weak and can easily obtain small scratches, which can harbor bacteria and leach other chemicals into the water. Additionally, German scientists found frightening evidence last year that PET

plastics may “interfere with estrogen and other reproductive hormones,” just like BPA.⁵ While the evidence is still inconclusive, one thing is for certain: our love affair with plastics is a risky relationship. There is much that we still don’t know about the long-term effects of certain chemicals on the human system. Therefore, your best option is to buy a reusable, BPA-free water bottle. Personally, I recommend a stainless steel bottle, which can be washed in the dishwasher countless times and will not leach any chemicals into your water.

Myth #2: Drinking bottled water isn’t bad for the environment, as long as I recycle the bottles.

As I said earlier, this was a myth that I believed for years. However, this myth touches on two issues of which I later became aware.

First, while I am a strong advocate for recycling and all of the warm, fuzzy feelings that come along with it, recycling is an imperfect relationship. Unlike glass bottles, which can be almost endlessly recycled into more bottles, PET plastic bottles are often not actually made into new bottles. Instead, they’re made into secondary products, such as carpet, packaging materials, or parking lot bumpers—all non-recyclable products.⁶ Thus, unlike glass or aluminum, PET bottles are only one step away from a landfill. And while recycling uses less energy than creating new bottles from virgin plastic, it still uses energy, which causes pollution. When it comes to the “3Rs,” recycling should be the last step: reduce, reuse, and *then* recycle.

The second issue that is often overlooked concerns the resources needed to create plastic bottles in the first place. Because plastic is made out of oil, drinking bottled water means we are only prolonging another self-destructive relationship—our dependence on foreign oil. According to the Pacific Institute, in 2006, producing plastic water bottles for the U.S. market required the equivalent of more than 17 million barrels of oil, which does not even include the gasoline needed for transportation.⁷ To put it into perspective, this amount of oil is enough to keep 1 million cars driving for 12 months.⁸ In fact, if we add up all of the energy needed to produce, package, transport, cool, and recycle all of those bottles, it is as if we’ve filled each bottle a quarter full with pure oil.

Instead of maintaining this vicious cycle of consumption, just imagine that quarter-bottle of oil each time you fill up your reusable water bottle. You can keep your new relationship fresh by reminding yourself how much better your decision is for the environment, and thinking about all of the resources you’re saving.

Myth #3: Reusable bottles are boring and ugly.

Before committing myself to a reusable bottle, I have tried out many different brands, and I am confident that it is possible to find the perfect match for you! Klean Kanteen makes stainless steel bottles in all different colors and sizes, with no metallic aftertaste. For a stylish look, Sigg produces lightweight aluminum bottles and has numerous creative, colorful designs to choose from.

If you don't mind buying plastic, there are also options beyond the standard college-student Nalgene bottles. Vapur (<http://vapour.us/>) has created an extremely convenient bottle that, when empty, can roll up and fit in a pocket or purse. Camelbak offers bottles with a straw, easily accessible for hiking and biking. For the more cautious water consumer, check out the Bobble water bottle (www.waterbobble.com), which has its own carbon filter built in so you can filter your water while on the go.

When you to commit to a reusable water bottle, you can rest assured that it will be a healthy, lasting relationship. By drinking filtered water from the tap, you'll be staying hydrated without toxic chemicals entering your system. By reusing instead of recycling, you're saving energy and oil from consumption and freeing up natural resources. Give yourself a pat on the back—you can feel good about your choice to break up with bottled water.

¹ <http://mslk.com/reactions/watershed-a-new-mslk-eco-installation>

² www.fastcompany.com/magazine/117/features-message-in-a-bottle.html

³ David B. Berman, *Do Good Design: How Designers Can Change the World*, 2009, page 166.

⁴ "Tapped," directed by Stephanie Soechtig and Jason Lindsey. Atlas Films, 2009.

⁵ www.abc.net.au/science/articles/2009/04/29/2555698.htm

⁶ www.ecologycenter.org/ptf/misconceptions.html, www.designboom.com/eng/education/pet/recycling.html

⁷ www.pacinst.org/topics/water_and_sustainability/bottled_water/bottled_water_and_energy.html

⁸ <http://kids.nationalgeographic.com/Stories/SpaceScience/Water-bottle-pollution>