Truth About Recycling

I’ve often wondered if recycling really made sense. Before exploring some of the possible answers to this question, I better define my terms so that there is no chance of misunderstanding. By recycling I mean the usual gathering and separating of the various materials of modern life (e.g. paper, plastic, glass, etc.) for subsequent pickup, future processing, and reappearance in some other guise in consumer packaging or content. Contrast this with conservation where the original material is saved and reused locally or simply isn’t used to begin with. Conservation always makes sense – it is always better to not waste a thing – but recycling may be another thing entirely.

Despite the conventional wisdom that immediately insists that recycling it the ‘green way to go’, there are several possible wrinkles in a recycling scenario that may sway the logic one way or another. I’ll focus on two questions central to the decision to recycle: 1) is it better for the environment to recycle and 2) is it economically viable to recycle.

The answer for question 1 seems obvious; any passing examination usually and unequivocally supports recycling since it seems always better to recycle a thing rather than simply to toss it out. But deeper considerations usually lead to far less certainty. Take a moment to reflect on the fact that it takes energy to run a recycling program. Most experts agree that the energy used to recycle is usually less than the energy expended in creating the product from raw resources but the recycling process consumes fossil fuels in order to take used content and transform it into recycled product. It is possible that the carbon footprint of a recycling process is larger than generating fresh from raw materials. In addition, other pollutants can also result. Paper processing, for example, creates a variety of unwanted fluids (effluents are often the name used) that have the vestiges of the dyes and inks and toner that once decorated the paper as well as the chemicals used to bleach the paper.

In [*The Reign of Recycling*](https://www.nytimes.com/2015/10/04/opinion/sunday/the-reign-of-recycling.html), John Tierney notes similar issues. Tierney cites Chris Goodall’s book *How to Live a Low-Carbon Life*, in which Goodall calculates that the carbon footprint associated with washing plastic materials in hot water that was heated by coal-derived electricity can easily result in more atmospheric carbon than is saved in the recycling. This undesired outcome results since recycling one ton of plastic saves just a bit more than one ton of carbon. The mandatory washing of the plastic prior to its pickup can easily tip the scales into a negative environmental impact. Plastic is not alone as a dubious recyclable. It, glass, and compostable materials (food and yard waste) are the worst three materials to recycle, with compostable materials resulting in 20 tons of released carbon for every ton of material processed. According to Tierney, the EPA estimates that more than 90 percent of greenhouse benefits come from a few materials: paper, cardboard, and metals like aluminum. He also stresses that modern incinerators ‘…release so few pollutants that they’ve been widely accepted in the eco-conscious countries of Northern Europe and Japan for generating clean energy’ and yet are completely banned from discussion in the U.S..

In [*Can Recycling Be Bad for the Environment?*](https://www.forbes.com/sites/amywestervelt/2012/04/25/can-recycling-be-bad-for-the-environment/#782c1af3bec5), Amy Westevelt argues that the recycling trend lulls the consumer market into a false sense of comfort, giving ‘manufacturers of disposable items a way to essentially market overconsumption as environmentalism.’ Her point is that, while it is always a good idea to recycle waste and to conserve virgin materials by using less in packaging or content, reporting on modern recycling misdirects public sentiment to focus on rising recycling rates rather than the continued increase in consumption that has kept pace with or exceeded the levels of recycling. She suggests that the backers of plastic recycling (American Plastics Council and the Society of the Plastics Industries, Inc.) sell recycling success as a way to distract or assuage the consumer conscience into believing that no change in behavior is warranted.

Westevelt isn’t alone in her concern about the environmental impact of this plastic bait-and-switch. As the 5gyres suggests in [*The Truth About Recycling*](https://www.5gyres.org/truth-about-recycling/), thinking that we’ve solved the plastic problem by recycling is not only false it also prevents us from fully appreciating the possibility of exploring alternative materials.

Likewise, a careful consideration of question 2, based partly on the analysis of question 1, points to economic forces that point towards creating from virgin materials rather than recycling existing products.

Michael Kanellos, in his article [*Profits Become Elusive In Recycling*](https://www.forbes.com/sites/michaelkanellos/2013/11/12/profits-become-elusive-in-recycling/#37059a1e1229), points out that the economics of recycling are as susceptible to the laws of the supply and demand as any other business. If the commodity market stays high then there financial incentive to dig into the ‘garbage mines’ to find value. If it is low, then the cost of recycling fails to support the value gained from the reclaimed products. Kanellos coins the term ‘garbitrage’ to describe the thin and fluctuating profit margins that the recycling vendor has to contend with to make recycling worth the effort. As an example, Kanellos presents the case of Waste Management, one of the largest waste haulers and processors in the US. In 2008, Waste Management was an enthusiastic recycler, looking to triple it processing load within a next decade. By 2012, less than halfway through their program, Waste Management was reporting an operating loss for the previous 18 months.

Investor’s Business Daily recently ran an editorial, entitled [*Some Inconvenient Truths About Recycling*](https://www.investors.com/politics/editorials/recycling-china-landfills-cost-waste-environment-global-warming/), in which they attack the ‘article of faith in the U.S. that recycling is a good thing’. They stress that mounting evidence is showing that recycling is a waste of time and money. The reason for this is the changing relationship between the U.S. and China, whose had been the biggest importer of recyclable product. Given the current economic climate, China is effectively closing its shores to our waste. As a result, many of the activities associated with recycling are merely rituals that waste time and economic resources that would more profitably spent elsewhere.

All the commentators agree that much of the collected, recyclable material now finds its way into landfills, often after a lengthy preparation, collection, and sorting processes. Given the associated opportunity costs of these ultimately useless activities, we would all be better off by:

1. focusing our recycling efforts on paper, cardboard, and aluminum,
2. simply throwing the rest away,
3. and investing the saved time on more important pursuits like minimizing our production and consumption of plastic.

That way we can properly conserve our time and resources and direct them to something better than recycled common wisdom.