



Summary of “Five Major Myths About Garbage, and Why They’re Wrong”*

Activity H.q Grades 9 - 12

By William Rathje and Cullen Murphy
Smithsonian Magazine, July 1992

Although most Americans have had opinions and beliefs about the nature of our refuse, there was little empirical evidence to confirm or deny these ideas. In 1973, the Garbage Project (directed by Dr. William Rathje) was created at the University of Arizona, with the goal of examining contemporary trash by employing many of the same archaeological methods used to interpret the detritus of past cultures. During the last two decades the Garbage Project has been excavating landfills, sorting through “fresh” garbage in a number of U.S. cities, and doing surveys to find out what Americans believe and how they behave regarding their refuse. Among their findings, the Project has identified five myths about garbage and has collected data disproving these widely-held beliefs.

1. “Fast-food packaging, polystyrene foam and disposable diapers are major constituents of American garbage.” Popular opinion is that each of these three components takes up about 30 percent of a typical landfill’s volume. The Project’s excavations tell a very different story. Fast-food packaging takes up about one-third of 1 percent of landfill volume, polystyrene foam 1 percent, and disposable diapers no more than 1.4 percent. The myth probably arose because these items are so visible among litter.

2. “Plastic is also a big problem.” Plastic materials of all types comprise about 22 percent of average landfill volume upon their initial deposition in the landfill, and only 16 percent after compaction. Paper, by comparison, takes up more than 40 percent of landfill volume. Although we are using more plastic packages and other plastic objects than twenty years ago, today’s plastics take up much less volume than their 1970s counterparts. Plastic manufacturers are constantly trying to find ways to “light-weight” their products; that is, to use smaller amounts of plastic to make the same item. For example, 1974 plastic soda bottles weighed 67 grams, while today’s weigh 48 grams. Not only do light-weighted plastics save landfill volume, they also save transportation energy.

3. “A lot of biodegradation takes place in landfills.” Some biodegradation of organic matter does occur in landfills, which is why they must be constructed with vents for methane gas. But most waste in landfills is fairly dry (e.g., paper, construction debris), and it is all cut off from air once it has been covered. After the oxygen in a landfill layer has been consumed by digesting organisms, there is very little decomposition under the anaerobic conditions which follow. In fact, the Garbage Project has found whole hot dogs in all of their landfill excavations! Decades-old newspapers are legible, “mummified,” one might say. But is the lack of biodegradation a bad thing? Not really. Should organic matter decompose, it could release

undesirable – even toxic – components (e.g., lead-containing ink from newspapers). Biologically inert landfills can help prevent a great deal of pollution, especially water pollution.

4. “America is running out of safe places to put landfills.” The truth is closer to, “America is running out of politically acceptable places to put landfills” Many landfills have been closed in the last few years, but many of them were in reality open dumps that needed to be shut down. Remaining landfills tend to be larger and better designed and managed. Some people have become concerned because of reports that half of the landfills in use today will be closed within five years. However, the waste management industry has never maintained a great deal of excess capacity. The difference today is that landfill permits are more difficult to obtain than they were in the past. Sometimes the opposition to landfills is cost-based. A modern sanitary landfill is expensive to design and construct, and the cost of acquiring the land on which it is sited can also be a factor. More often, the opposition is some variation on NIMBY – Not In My Back Yard. The United States has plenty of space for solid waste disposal for centuries to come; the political decision of which particular spaces to use is the problem.

5. “On a per capita basis, Americans are producing garbage at a rapidly accelerating rate.” It is difficult to measure the rate of waste generation due to the dearth of data from the past. In Milwaukee, however, there is information on per-capita waste amounts for two periods twenty years apart. In 1959 Milwaukee per capita waste was approximately 1.9 pounds; in the late 1970s it was 1.5 pounds. While it seems upon casual examination that Americans are discarding more consumer good today, there are significant amounts of trash that do not appear in household waste now. In 1900, when coal was used extensively for household heating and cooking, the average American generated 1,200 pounds of coal ash per year. Our cities are no longer required to dispose of large quantities of manure and livestock carcasses. Refrigeration and efficient packaging have greatly reduced food waste. However, regardless of per capita waste quantities, the American population is much larger today than it was in the past. There were 63 million Americans in 1890, versus 250 million today.

Although many American beliefs about garbage have proven to be myths, solid waste management remains a serious concern. One possibility that may help ease our solid waste difficulties is the imposition of higher fees for collection and disposal of nonrecyclable waste. This method, it is assumed, will lead consumers to demand recyclable packaging and more recyclable products. An associated idea is that consumers should be educated and encouraged to buy goods containing post-consumer recycled waste, thus increasing demand for recyclables. An educated, waste-aware populace is essential for the future of sound solid waste management.

*Source: Tennessee Solid Waste Education Project, 1996