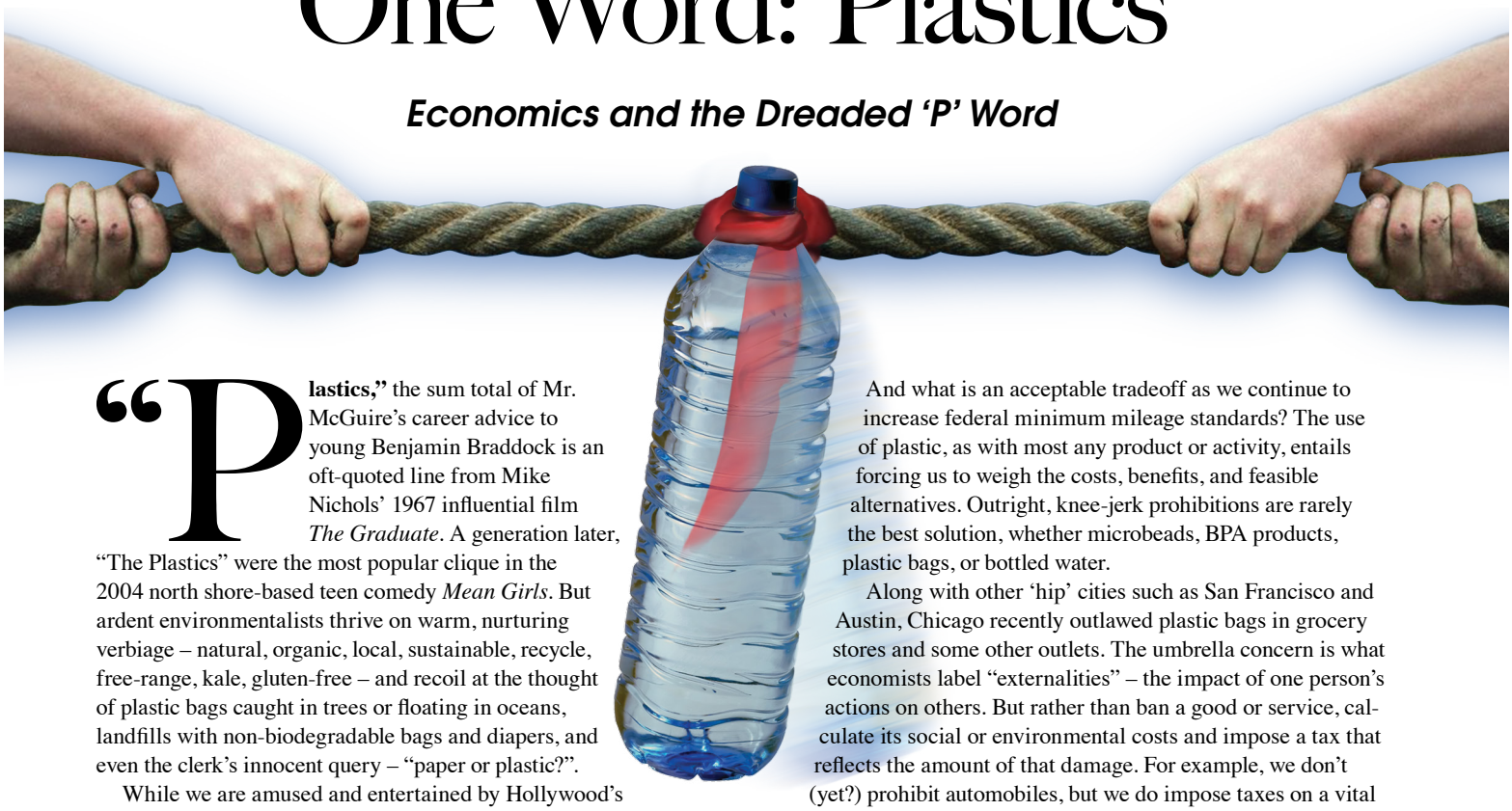
"One Word: Plastics"

Economics and the Dreaded 'P' Word



"Plastics," the sum total of Mr. McGuire's career advice to young Benjamin Braddock is an oft-quoted line from Mike Nichols' 1967 influential film *The Graduate*. A generation later, "The Plastics" were the most popular clique in the 2004 north shore-based teen comedy *Mean Girls*. But ardent environmentalists thrive on warm, nurturing verbiage – natural, organic, local, sustainable, recycle, free-range, kale, gluten-free – and recoil at the thought of plastic bags caught in trees or floating in oceans, landfills with non-biodegradable bags and diapers, and even the clerk's innocent query – "paper or plastic?".

While we are amused and entertained by Hollywood's addiction to plastic surgery, and TSA screeners tremble as terrorists perfect plastic explosives, our lives would be far different, and far worse, without the myriad of creative everyday uses we have found for these low-cost, lightweight, convenient, impervious-to-water synthetic polymers over the last hundred years. We are truly living better through chemistry.

BY ALLEN R. SANDERSON

Think reconstructive surgery, including knee and hip replacements; plastic pipes that resist corrosion; home insulation; lightweight flat-screen televisions, winter gear and food containers; bottles for prescription medicines and other drugstore products; plastic conditioner and shampoo bottles for the shower; and for urban denizens walking their dogs, those poop bags.

Then toss in the many countries, including our neighbor to the north, that have switched from paper to longer-lasting, higher-security plastic for their currencies (though as we all shift more to electronic point-of-sale transactions, banknotes themselves will eventually become obsolete).

In transportation we continue to discover more and more uses for plastics, including fiberglass, in our commuter buses and trains, aircraft, and automobiles. One important upside with regard to the latter is lighter cars, which consume less gas, and thus less oil, to get us from point A to point B. The downside: these lighter-weight vehicles mean their occupants are more vulnerable in a crash.

Thus here, as in many aspects of our lives, there are both benefits and costs inherent in production and consumption, and we face tradeoffs; in this case, barrels of oil saved vs. lives lost.

And what is an acceptable tradeoff as we continue to increase federal minimum mileage standards? The use of plastic, as with most any product or activity, entails forcing us to weigh the costs, benefits, and feasible alternatives. Outright, knee-jerk prohibitions are rarely the best solution, whether microbeads, BPA products, plastic bags, or bottled water.

Along with other 'hip' cities such as San Francisco and Austin, Chicago recently outlawed plastic bags in grocery stores and some other outlets. The umbrella concern is what economists label "externalities" – the impact of one person's actions on others. But rather than ban a good or service, calculate its social or environmental costs and impose a tax that reflects the amount of that damage. For example, we don't (yet?) prohibit automobiles, but we do impose taxes on a vital complement – gasoline – to account for congestion, air pollution, and accidents associated with this form of transportation.

The same rationale applies for cigarettes and alcohol. And it should hold for disposable plastic grocery bags or single-use bottled water. In these instances we want to discourage use by altering incentives of participants in the market to account for these negative costs, but that does not mean the optimal quantity or use is zero.

That Chicago did not levy a tax on these bags nor impose a universal ban – the legislation applies only to certain establishments – reveals a broader underlying agenda of activists: grasping at (plastic) straws as a protest against large corporations and market systems that they loathe. This is similar to the "living wage" ordinance we enacted in 2010: it only applied to "big box" retailers. In addition, by most accounts energy and water use associated with producing a paper bag are similar to those of a plastic bag, and exempt thicker reusable plastic and canvas totes have significant environmental costs of their own. Even with the best of intentions, indirect effects and unforeseen consequences often come home to roost.

At first blush, Chicago did better on the bottled-water front. Eight years ago, in a first-in-the-nation move, instead of caving in to "ban the bottle" pressures, we imposed a $0.05 per bottle tax. Give City Hall credit for opting for taxation over prohibition, though very likely this excise tax was more for the revenue it generated than out of concern for the environment.

So, here's to you, Mrs. Robinson, and to everyone who played with Lego bricks, owns polyester clothing, uses Tyvek products, is experimenting with 3-D printing, wears a bicycle helmet, or carries an iPhone. ❑