

THE PLASTIC PROBLEM: A FREE MARKET SOLUTION

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Abstract

Plastic bottles have been considered environmental anathema on many college campuses, and elsewhere in our society. Plastic is seen by environmental critics of the market as particularly harmful, and must therefore be all but banned from polite society. The free enterprise system has been thought to have failed to price this substance out of use. However, the contention of the present paper is that this is not a case of market failure. Rather, on the assumption that plastic is indeed harmful, prices do not reflect this fact due to the nationalization (municipalization) of garbage dumps. If they were privatized, then disposal prices would tend to reflect the harm done by plastic.

In the summer of 2012, I attended the National Jesuit Student Leaders Conference,¹ a gathering at the College of the

¹ The first three paragraphs of this paper were written mainly by the first mentioned author. We thank Jimmy Trinchard for helpful comments on an

Holy Cross in quaint Worcester, Massachusetts. It was aimed at spreading cutting-edge ideas among students attending Jesuit institutions of higher learning.

Discussion topics ranged from Lesbian-Gay-Bi-Sexual-Trans Gendered (LGBT) campus centers, to extensive social action programs, to the peculiar highlight of the conference—the campus-wide plastic water bottle ban. This pollution prohibition quickly became the hot topic of discussion after a presentation by Loyola University Chicago students on the initial day of the conference who explained the plastic water bottle ban they had implemented on their campus in 2011.

The message conveyed by the presenters, members of Loyola University Chicago’s Student Environmental Alliance and Student Government Association, mirrored that of the organizations’ joint statement to ABC News: “We consider the sale of bottled water on campus in conflict with the Jesuit tradition and Loyola’s mission ‘to be in service of humanity through learning, justice, and faith’,” (ABC News, 2012).

As an economics student, I could not ignore the underlying admonition of the free market implied throughout the presentation, specifically the contention that the necessity of a campus-wide ban on plastic water bottles illustrates the failure of the free market price system to promote environmental concerns. Having built my knowledge of economics at a different Jesuit institution, from professors who teach the value of personal liberty, I found the presenters’ condemnation of the free market in the name of “Jesuit values” as entirely misguided.

The Jesuit tradition has long been at the forefront of promoting the benefits of the free market as evidenced throughout *New Light on the Prehistory of the Austrian School*, in which Murray Rothbard attributes the development of many fundamental economic principles to Jesuit Scholastics of the School of

earlier draft of this paper. All remaining errors and infelicities are our own responsibility, of course.

Salamanca including Luis de Molina (2.3.9), Leonardus Lessius, and Cardinal Juan de Lugo (2.3.26).² As this water bottle ban conflicts with the free market ideals that the Jesuit order has been instrumental in both developing and propagating, it is inaccurately advertised as a means to uphold Jesuit social values.³ Furthermore, that a plastic water bottle ban should be implemented at *any* American university is remarkable, as such policies' violation of personal liberty conflicts not only with the Jesuit understanding of social service, but also with the ideal of personal liberty on which our country was founded.

Thus, I was astonished to find that, along with Loyola Chicago, "more than 90 schools, among them Brown University, Seattle University, and Harvard University are banning the sale or restricting the use of plastic water bottles on campus," (Savage, 2012). It is odd that American universities, institutions founded on the value of harboring creative thought, are indoctrinating their students, people in arguably their most formative years, with a dependence on "nanny-state" policies. Informing university students that they are not "smart enough"⁴ to make the "correct" decision to *not* buy plastic water bottles is actually becoming the

² Molina, Lessius, and de Lugo's influence on the development of free market economics is described in Joseph Schumpeter's *History of Economic Analysis* as well. Schumpeter deems the three, "the three great Jesuits." (p.91)

³ For the claim that Jesuit values in this regard have undergone a 180 degree change in direction from their free market oriented inception in the 16th century (Luis de Molina, Francisco Suarez, Juan De Mariana, Leonard Lessius, Juan de Lugo, Etienne Bauny, Antonio de Escobar y Mendoza) to the present day (pretty much any Jesuit scholar apart from Fr. James Schall, S.J., Fr. James Sadowsky, S.J. and Fr. Hank Hilton, S.J.), see Booth, 2007; Carden, 2007; Chafuen, 1986; Rockwell, 1995; Rothbard, 1995; Sirico, 1996, 2001; de Soto, 1996; Watner, 1987; Woods, 2002, 2004, 2005

⁴ with the help of the free enterprise system of property rights, profits and losses, which, we will show, generates prices that lead us "as if by an invisible hand" (Smith, 1776) to do the right thing for the environment.

norm. This widespread indoctrination of a reliance on paternalist⁵ school administrations to protect students from their own harmful plastic consumption frighteningly parallels the socialist worship of an all-powerful, all-knowing government. Ronnie Lipshutz details the impact of the “governmentalization” of lifestyle characteristic of both socialist regimes and the increasingly popular campus-wide plastic water bottle ban:

Although we tend to regard lifestyles as a matter of “freedom of choice,” they are, in fact, heavily-regulated in terms of what we are permitted to do, what we are encouraged to consume, and what happens if we “violate” the rules and regulations that constrain our “freedom.” The governmentalization of lifestyle thus becomes a set of internalized norms and practices through which individual members of specified populations shape themselves. (23-24)

While lifestyle regulation is the end point of socialism, that socioeconomic system originates with the condemnation of the free market. Similarly, the erroneous attribution to free market prices of failure to encourage consumption preferences to ecologically friendly goods is the foundation for the campus-wide plastic water bottle ban. Plastic water bottle banners fail to recognize that the prices currently ascribed to plastic water bottles are not a product of a free market; instead, a lack of property rights and pervasive

⁵ The preference for paternalism among the masses is addressed perfectly in Ludwig von Mises’ *Human Action*: “The God-sent ruler knows better what is good for his wards than they do themselves. It is his duty to guard them against the harm they would inflict upon themselves if left alone. Self-styled ‘realistic’ people fail to recognize the immense importance of the principles implied. They contend that they do not want to deal with the matter from what, they say, is a philosophic and academic point of view. Their approach is, they argue, exclusively guided by practical considerations,” (728).

government interference prevent the price mechanism from most efficiently allocating resources in this market.

Evaluating this price system—or lack thereof—governing plastic water bottles (which, for the sake of argument, will be assumed to be just as environmentally harmful as popular opinion claims) is the initial step in formulating a solution to the plastic problem, as doing so will establish an understanding of why people buy environmentally unfriendly plastic water bottles in the first place. Currently, the price of a plastic water bottle at the C-store, Loyola University New Orleans' on-campus market, is \$1.59.

Comparatively, it costs \$9.95 to purchase a reusable water bottle from the campus bookstore. Based on this price discrepancy, the purchase of 6 or fewer plastic water bottles over the period of time that a reusable water bottle would alternatively serve is an obviously rational economic decision because the total cost of 6 bottles is less than \$9.95. However, some Loyola students purchase far more than 6 plastic water bottles per reusable water bottle in fact, many buy a plastic water bottle from the C-store every day. The familiar condemnation of such daily plastic water bottle buyers (DPWBBs) asserts that their perpetuation of a consumption preference both environmentally harmful and cost inefficient not only is irrational but should even be punished.

Environmentalists assert that people should place the value of ecological sustainability and the well-being of their fellow man above their silly preferences, and, thus, should forego consumption of supposedly environmentally-detrimental plastic water bottles. Such reasoning is rooted in a fallacious assumption about human action prevalent throughout the environmentalist movement—that benevolence alone facilitates the determination of societal consumption preferences.

Good will towards others is simply not sufficient to incentivize consumption preferences because neglecting one's own interests for the sake of others guarantees capital misallocation and, thus, assures the loss of a condition-improving opportunity. Instead, everyday interactions between market participants

sufficiently illustrate that self-interest, of course in addition to benevolence, dictates the allocation of capital between the various outputs of human labor. Some commentators stress the importance of the former: “It is not from the benevolence of the butcher the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages,” (Smith 15).⁶

As Smith addresses the most powerful incentive in the world, that which would cause a DPWBB to forego his personal preferences and replace his consumption of plastic water bottles with that of reusable water bottles, is to hit him where it hurts—his wallet. In other words, the solution to the plastic water bottle problem lies in making a shift in consumption from plastic to reusable water bottles in DPWBBs’ own interest. In order for people to most efficiently allocate capital between alternative goods, however, the existence of an efficient price mechanism is essential. Contrary to popular belief, a closer look at the plastic water bottle problem illuminates that the free market is not to blame for the inability of the price nexus’ to presently direct consumption towards reusable water bottles. Instead, the fault lies with the nationalized garbage disposal service.

Since its municipalization in the early 20th century, the garbage collection industry has been characterized by “garbage bins overflowing and city dumpsters spilling out with trash. It

⁶ The power of self-interest to determine capital allocation among members of society has been discussed by philosophers throughout time. This includes Voltaire (1733): “It is love of self that encourages love of others, it is through our mutual needs that we are useful to the human race. That is the foundation of all commerce, the eternal link between men. Without it not a single art would have been invented, no society of ten people formed.” States Mises (1977, 88): “In social cooperation everyone in serving his own interests serves the interests of his fellow men (or the environment). Driven by the urge to improve his own conditions, he improves the conditions of other people. The baker does not hurt those for whom he bakes bread; he serves them” (material in brackets inserted by present authors).

stinks. It's disgusting. It's uncivilized. It's probably dangerous to some extent,” (Tucker, 2009). The inability of government-run waste management services to adequately respond to consumer demands is indicative of the necessity of a free market in waste management. Due to government control, the garbage disposal industry, and a long list of other government entities including the United States Postal Service and Medicare, provide services well below the standard demanded by consumers; however, these government agencies will never go out of business.⁷

While government ownership may keep nationalized garbage disposal alive, the inability of the industry to incentivize profit maximization through self-interest driven by healthy market competition is the sole reason consumer preferences tend towards harmful goods like plastic water bottles rather than alternatives congruent with environmental concerns. Furthermore, the nonexistence of a price system in garbage disposal—the only cost of garbage disposal use in the United States is an insignificant tax—prevents the communication of consumers’ preferences to entrepreneurs who ultimately determine which products are supplied to the public by calculating alternative investments’ net present value.⁸

The establishment of a free market in garbage management dictated by a price mechanism responsible for establishing a structure of production that reflects consumer demand would undoubtedly solve the plastic water bottle problem in a manner more effective than a campus-wide water bottle ban, and, most importantly, it would do so without compromising freedom.

⁷ In the view of Sowell (<http://thinkexist.com/quotation/it-is-hard-to-imagine-a-more-stupid-or-more/347045.html>): “It is hard to imagine a more stupid or more dangerous way of making decisions than by putting those decisions in the hands of people who pay no price for being wrong.”

⁸ According to Mises: “The task of the entrepreneur is to select from the multitude of technologically feasible projects those which will satisfy the most urgent of the not yet satisfied needs of the public,” (*Planning for Freedom* 117).

Privatization of all facets of the garbage disposal industry is integral to a free market solution to the plastic water bottle problem. When control of garbage collection is passed to private companies that aim to make a profit and face the threat of bankruptcy if they fail to meet consumer demands, the formation of a price mechanism to generate successful and unsuccessful firms is enhanced. Led by competition among companies to provide the highest quality service to customers for the cheapest price, the price to dispose of garbage items would be derived from the cost that a garbage dump owner bears in storing environmentally harmful trash, such as plastic water bottles,⁹ on his land.

Should the market determine that the cost borne in storing one plastic water bottle is reflected in a market price of \$10.00, then garbage disposal sites will charge this market equilibrium price to collect and store each and every plastic water bottle. By its nature, nature the free market will discourage any deviation from this equilibrium. If a garbage dump, for example, decides to charge more than \$10.00 to store a plastic water bottle, the dump will quickly lose customers as those with knowledge of lower-cost alternatives will choose to dispose of their trash elsewhere at the equilibrium price.

On the other hand, if a dump decides to charge less than \$10.00 to store a plastic water bottle, the money received will not compensate for the damage that it causes to the land and, therefore, the dump will face bankruptcy if they do not raise the price. This automatic equilibration of prices will tend to maintain garbage disposal prices that accurately reflect the environmental damage caused by harmful products, like plastic water bottles.

Through the implementation of disposal costs based on environmental impact, the free market garbage disposal system would directly penalize those who choose to consume environmentally harmful products. Thus, consumers' preferences

⁹ We are now assuming, *arguendo*, that plastic of any type is as horrendous as environmental critics claim it is: non biodegradable, poisonous, etc.

would be guided towards environmentally friendly alternatives with lower disposal costs. For example, if the cost borne by a garbage dump owner in storing a reusable water bottle is less than that of a plastic water bottle, this would be reflected in a disposal cost lower than that of the plastic water bottle, like, for simplicity's sake, \$0.

With the newly implemented environmentally-conscious disposal costs, the total cost of a plastic water bottle at the C-store would be \$11.59, that is \$1.59 for purchase and a \$10.00 charge for the university to dispose of the plastic water bottle. The university would inevitably pass the tax incidence on to students through higher plastic water bottle prices at the C-store. Concurrently, the price of a reusable water bottle would remain \$9.95, and now, virtually no student would choose to consume the more expensive plastic water bottle unless, to the student, the value of the plastic water bottle is greater than \$11.59.

Herein lies the beauty of a free market solution: as the result of the privatization of the garbage collection industry, which necessitates the establishment of a price mechanism to govern the garbage market and initiates the dynamic process of competition among firms, the consumer, the garbage collector, and the environment, all benefit.

On the other hand, a university-wide ban on plastic water bottles, which simply piles inefficient regulation on top of inefficient regulation, will inevitably produce lackluster results. According to an article in the Hub Bub, a collection of work from students enrolled in the School of Communication at Loyola University Chicago, "Most (Loyola Chicago students) felt the idea was great in theory, but isn't working out in reality," (Avila). The article describes instances where students found carrying around reusable water bottles a hassle and simply turned to alternatives still sold in plastic bottles on campus.

Such disappointing results are not surprising, as unintended consequences are an inevitable result of any policy attempting to

direct consumption behavior through superficial means rather than an appeal to human beings' self-interest.¹⁰

In order to truly solve the plastic water bottle problem, the root of the issue must be addressed. The nationalization of garbage disposal has long prevented the market from allocating capital in a way that aligns market participants' preferences with the preservation of the natural environment. Government-controlled waste management, by eliminating the benefits of market competition has kept the price¹¹ of plastic water bottles artificially low relative to the (supposed) harmful effect of the bottles on the environment. Thus, the solution to the plastic water bottle problem is to allow for a free market in garbage disposal, complete with a pricing system that incentivizes consumption of environmentally friendly alternatives.

Nowadays, the widespread acceptance of and reliance on paternalist solutions to predicaments like the plastic water bottle problem have contributed to a deterioration of Americans' personal liberties. Now, more than ever, it is important that we recognize that the most effective solutions to environmental, social, and economic problems are not those which compromise the personal freedom of American citizens; instead, they are predicated on the goal of upholding liberty and decreasing the spread of lifestyle nanny state governmentalization.

So far, we have been assuming, *arguendo*, that plastic is an environmental nightmare. If this is indeed true, then the costs of disposing of this substance will be substantive. This does not mean plastics will not be used in the free enterprise system. They will be,

¹⁰ Hazlitt (2008, 17) deems the analysis of unintended consequences as the foundation for economic thought: "The whole of economics can be reduced to a single lesson, and that lesson can be reduced to single sentence. The art of economics consists in looking not merely at the immediate but the longer effects of any act or policy; it consists in tracing the consequences of that policy not merely for one group but for all groups."

¹¹ Here we refer to the total price: purchase plus disposal costs, at full market rates.

but only when their benefits outweigh their costs, as in the case, for example, of saline solution containers used in hospitals. However, according to Rathje (1989), the very opposite is correct; plastic is really inert, and not much of a threat to the environment at all. Under these conditions, market based disposal prices will tend to be low, thus encouraging the use of this material.

Let us conclude by considering an objection to our thesis. To wit: if they had to pay a price for disposing of their plastic bottles, people would not do so. Instead, they would just throw them away in some public space (a park, a highway, for example), and thus our analysis is not a valid one. To this we reply, first, we are assuming lawful behavior on the part of society. Not every paper can deal with every problem. If there is criminal action of this sort, we assume, *arguendo*, that the authorities can nip it in the bud. If this is not a valid response to this objection, then every scholarly paper would have to be forced to deal with possible law-breaking. Second, we respond that this constitutes yet another argument in favor of privatization of these public amenities. If roads, for example, were privately owned (Block, 2009), the owners would compete, among many other margins, on their ability to ensure they are not over-run by the dumping of plastic bottles on their property.

REFERENCES

- ABC News. "Loyola University Chicago Bans Water Sales on Campus." May 3, 2012. <http://abclocal.go.com/wls/story?section=news/local&id=8647025>
- Avila, Kathryn. "Water Bottle Ban: Was it Worth it?" October 22, 2012. <http://blogs.luc.edu/hubbub/uncategorized/water-bottle-ban-was-it-worth-it/>
- Block, Walter E. 2009. *The Privatization of Roads and Highways: Human and Economic Factors*; Auburn, AL: The Mises Institute; <http://www.amazon.com/Privatization-Roads-And-Highways->

[Factors/dp/1279887303/ref=sr_1_1?s=books&ie=UTF8&qid=1336605800&sr=1-1](http://www.amazon.com/Christian-Ethics-Formal-Institutions-And-Economic-Growth/dp/1279887303/ref=sr_1_1?s=books&ie=UTF8&qid=1336605800&sr=1-1)

- Booth, Phillip, ed. 2007. *Catholic social teaching and the market economy*. London, U.K.: Institute of Economic Affairs
- Carden, Art. 2007. Christian Ethics, Formal Institutions, and Economic Growth. *American Review of Political Economy* 5(1):34-53;
<http://www.arpejournal.com/ARPEvolume5number1/carden.pdf>
- Chafuen, Alejandro A. 1986. *Christians for Freedom: Late Scholastic Economics*, San Francisco: Ignatius Press;
<http://www.amazon.com/Christians-Freedom-Late-Scholastic-Economics/dp/0898701104>
- Hazlitt, Henry. 2008 [1946]. *Economics in One Lesson*. Auburn, AL: Mises Institute;
http://mises.org/books/economics_in_one_lesson_hazlitt.pdf
- Huerta de Soto, Jesús. 1996. "New Light on the Prehistory of the Theory of Banking and the School of Salamanca." *The Review of Austrian Economics*, Vol. 9, No. 2, pages 59-81;
http://mises.org/journals/rae/pdf/RAE9_2_4.pdf
- Lipshutz, Ronnie. "The Governmentalization of 'Lifestyle' and the Biopolitics of Carbon." 7 July 2012.
<http://escholarship.org/uc/item/472341ct>.
- Mises, Ludwig von. *Planning for Freedom, and Sixteen Other Essays and Addresses*. Libertarian Press, 1980. Print.
- Mises, Ludwig von. *The Ultimate Foundation of Economic Science: An Essay on Method*. Sheed Andrews and McMeel, 1977. Print.
- Rathje, William L. 1989. "Rubbish!," *Atlantic Monthly*, December, pp. 99-109.
- Rockwell, Jr., Llewellyn H. 1995. "Free Market Economists: 400 Years Ago." *The Freeman*: Ideas on Liberty. **Vol. 45, No. 9**, September;
<http://www.fee.org/publications/the-freeman/article.asp?aid=4482>

- Rothbard, Murray. "New Light on the Prehistory of the Austrian School." Dolan, Edwin G., ed., *The Foundations of Modern Austrian Economics*. 1976. Library of Economics and Liberty. 12 December 2012.
- Rothbard, Murray N. 1995. *An Austrian Perspective on the History of Economic Thought*. London: Edward Elgar;
http://www.amazon.com/s/ref=nb_ss_b?url=search-alias%3Dstripbooks&field-keywords=An+Austrian+Perspective+on+the+History+of+Economic+Thought.&x=14&y=19
- Savedge, Jenn. "College Campuses Ban Bottled Water." March 13, 2012. <http://www.mnn.com/money/sustainable-business-practices/blogs/college-campuses-ban-bottled-water>
- Schumpeter, Joseph. *History of Economic Analysis*. Oxford UP, 1954. Print.
- Sirico, Robert A. 1996. *Moral Base for Liberty*. Irvington-on-Hudson, N.Y.: Foundation for Economic Education
- Sirico, Robert A. 2001. *Capitalism, Morality and Markets*. London, UK: Institute for Economic Affairs.
- Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. W. Strahan and T. Cadell, 1776. Print
- Tucker, Jeffrey A. "Municipalized Trash: It's Uncivilized." September 14, 2009. <http://mises.org/daily/3698>
- Voltaire. *Letters on England*. 1733. Print.
- Watner, Carl. 1987. "'All Mankind is One': The Libertarian Tradition in Sixteenth Century Spain," *The Journal of Libertarian Studies*, Vol. 8, No. 2, Summer, pp. 293-310; http://mises.org/journals/jls/8_2/8_2_9.pdf
- Woods, Jr., Thomas E. 2002. "Catholic Social Teaching and Economic Law: An Unresolved Tension."
<http://www.mises.org/asc/2002/asc8-woods.pdf>
- Woods, Jr., Thomas E. 2004. "Morality and Economic Law: Toward a Reconciliation."
<http://www.mises.org/fullstory.asp?control=1481>

Woods, Jr., Thomas E. 2005. *The Church and the Market*. Lanham, MD: Lexington Books. ISBN 0-7391-1036-5; <http://www.amazon.com/Church-Market-Catholic-Defense-Economics/dp/0739110365>