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## FAT CHANCE: An Analysis of Anti-Obesity Efforts

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**Fat Chance: An Analysis of Anti-Obesity Efforts**

Paternalistic policymakers intend to improve social welfare by implementing a set of prescriptive policies designed to remedy systematic mistakes made by individuals. In recent years, some paternalists[1] have relied increasingly on the findings of behavioral economics research—a rapidly growing discipline that studies individuals' systematic biases—to justify paternalistic policies. The paternalists focus on devising "nudges" (soft paternalism) or "shoves" (hard paternalism) that steer individuals toward choices more in sync with their best interests. In effect, paternalists argue that policymakers can exploit individuals' departures from rationality in ways that correct what paternalists see as irrational individual mistakes. The paternalists aim to fix individual failure by introducing interventions devised by better-informed, benevolent policymakers.

Government paternalism has a long and storied history in the United States. Originating in the late nineteenth and early twentieth centuries, paternalistic government policies aimed to prevent people from smoking,[2] consuming alcohol,[3] or accessing materials deemed lewd and immoral by self-appointed censors.[4] Over time, advocates have abandoned many of these policies, which have not only failed to eliminate vice but, in many cases, fostered black markets and criminal violence. Paternalistic policies have prompted vigorous debates regarding the proper role of government and the extent to which it can intervene in decisions of private markets.

By the mid-twentieth century, policymakers confined economic regulation to addressing market failure.[5] In a number of cases, markets are assumed to fail to produce efficient results, and the presence of such conditions provides an impetus for government to intervene in market operations. Whether market failures *justify* government intervention remains a topic of debate.[6] In practice, though, they are sufficient cause for government action. For example, Executive Order 12866 instructs agencies to consider regulation when it is "made necessary by compelling public need, such as material *failures of private markets* to protect or improve the health and safety of the public, the environment, or the well-being of the American people" (emphasis added).

In recent years, however, government intervention has again been prompted by paternalistic motives. The motives underlying this new paternalism resemble those of the temperance crusaders a century ago. The crucial distinction between old and new paternalisms lies in the paternalists' view of the person. Temperance crusaders assumed that they knew, better than the average individual, what was best

[1] See for example Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, (New Haven, CT: Yale University Press, 2008); William J. Congdon, *Policy and Choice: Public Finance through the Lens of Behavioral Economics*, (Washington, DC: Brookings Institution Press, 2011); Ted O'Donoghue and Matthew Rabin, "Studying Optimal Paternalism, Illustrated by a Model of Sin Taxes," *American Economic Review* 93 (2): 186–191; Colin Camerer, Samuel Issacharoff, George Loewenstein, Ted O'Donoghue, and Matthew Rabin, "Regulation for Conservatives: Behavioral Economics and the Case for 'Asymmetric Paternalism,'" *University of Pennsylvania Law Review* 151, 3 (2003): 1211–54.
[2] John Dinan and Jac C. Heckelman, "The Anti-Tobacco Movement in the Progressive Era: A Case Study of Direct Democracy in Oregon," *Explorations in Economic History* 42, 4 (2005): 529–46.
[3] Daniel Okrent, *Last Call: The Rise and Fall of Prohibition*, (New York, NY: Scribner, 2010).
[4] Margaret A. Blanchard and John E. Semonche, "Anthony Comstock and His Adversaries: The Mixed Legacy of this Battle for Free Speech," *Communication Law and Policy* 11 (July 2006): 317–66.
[5] Clifford Winston, *Government Failure versus Market Failure: Microeconomics Policy Research and Government Performance* (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies, 2006).
[6] Michael L. Marlow, *The Myth of Fair and Efficient Government: Why the Government You Want Is Not the One You Get*, (Santa Barbara, CA: Praeger, 2011); Winston, *Government Failure versus Market Failure*.

for the latter. They "knew" that the average individual would be better off if he abstained from smoking and drinking. These paternalists protected individuals by removing their choice to engage in vice without regard for individual preferences. In contrast, new paternalists do not claim superior knowledge of conditions that would better the welfare of individuals. Their argument for paternalism is that individuals know what they want but do not always act rationally to achieve these goals.[7] Proponents of new paternalism attempt to use findings from behavioral economics research to demonstrate how cognitive biases and bounded self-control prevent individuals from maximizing their welfare, regardless of how they choose to define it. Hence, new paternalists advocate government policies that help individuals overcome their biases to achieve self-defined wellbeing.

New paternalism expands the scope of government intervention beyond regulating market failure to regulating individual failure. The implications of this broader regulatory scope could be far reaching. If individual failure becomes an accepted cause for government intervention, it could lead to policies that are far more intrusive and restrictive than present regulatory policies. Given the potential effects of such a policy shift, new paternalist motives and actions warrant a closer examination. In this paper, we examine the growing use of behavioral economics to justify government intervention regarding obesity.

Health advocates consider the recent prevalence of obesity a result of many individuals pursuing behaviors that are out of sync with their own best interests. Advocates view obesity not as a result of choices based on personal preferences but rather as a reflection of irrational behavior that can be amended via government policy. In addition to taxes, paternalistic policies believed to steer individuals toward leaner bodies—and thus improved lives—include regulations requiring calorie counts on restaurant menus and vending machines; bans on children's toys at fast food restaurants; bans on soda and unhealthy food at schools; and bans on new fast food restaurants.

We argue that the growing use of paternalism to justify government intervention in individual food and lifestyle choices is often misguided and that policies are too easily justified on the assumption that government officials are better informed than the individuals they seek to guide.[8] Our examination of the obesity issue demonstrates that government intervention is often ineffective in remedying individual failures and that, in some cases, its actions are counterproductive to society.

## I. Rising Prevalence of Obesity

The rising prevalence of obesity in the United States is often referred to as a public health epidemic because it is associated with so many health problems, including diabetes, hypertension, high cholesterol, heart disease, stroke, sleep apnea, some cancers, gallstones, gout, asthma and osteoarthritis.[9] In the United States, medical spending on treating obesity was estimated at $168 billion (in 2005 dollars), roughly 16.5 percent of all medical spending.[10]

[7] Mario J. Rizzo and Douglas G. Whitman, "The Knowledge Problem of New Paternalism," *Brigham Young University Law Review* 4 (2009): 905–68.
[8] This is, in fact, a crucial assumption on the part of paternalists. The paternalist assumes that he or she is better positioned than the subject to evaluate what is good for the subject. Hence, the paternalist substitutes the subject's judgment with his or her own.
[9] John B. Dixon, "The Effect of Obesity on Health Outcomes," *Molecular and Cellular Endocrinology* 316 (2010): 104–8.
[10] John Cawley and Chad Meyerhoefer, "The Medical Care Costs of Obesity: An Instrumental Variables Approach" (NBER Working Paper No. 16467, 2010).

Weight gain is caused by an imbalance between calorie intake versus calorie use. Obesity results when an individual's intake of calories sufficiently exceeds the use of calories such that the body mass index (BMI) reaches 30 or higher. Individuals whose BMI ranges from 25.0 to 29.9 are considered overweight. Among adults, the prevalence of obesity in the United States increased by 3.1 percent between 1997 and 1999, 1.9 percent between 2000 and 2002, 1.5 percent between 2003 and 2005, and 1.6 percent between 2006 and 2008. In 2007 and 2008, 32.2 percent of adult men and 35.5 percent of adult women were classified as obese.[11]

Researchers hypothesize many causes for excessive weight gain, including increased consumption of sugar-sweetened beverages;[12] falling food prices;[13] urban sprawl;[14] increase in calories consumed away from home;[15] food engineering that encourages food addiction;[16] sedentary lifestyles fostered by technology;[17] increased availability of restaurants;[18] fewer grocery stores selling healthy foods;[19] and agricultural policies that encourage production of unhealthy foods.[20]

Whether directly or indirectly, most of these studies point to individual failures—biased reasoning or lack of self-control—as the main causes of obesity. A recent *New England Journal of Medicine* article argues that:

> Many persons do not fully appreciate the links between consumption of these beverages and health consequences, they make consumption decisions with imperfect information. These decisions are likely to be further distorted by the extensive marketing campaigns that advertise the benefits of consumption. A second failure results from time-inconsistent preferences (i.e., decisions that provide short-term gratification but long-term harm). This problem is exacerbated

[11] Katherine M. Flegal, Margaret D. Carroll, Cynthia L. Ogen, and Lester R. Curtain, "Prevalence and Trends in Obesity among US Adults, 1999–2008." *Journal of American Medical Association* 303, 3 (2010): 235–241.
[12] Sara N. Bleich, Y. Claire Wang, Youfa Wang, and Steven L. Gormaker, "Increasing Consumption of Sugar-sweetened Beverages among US Adults: 1988–1994 to 1999–2004," *American Journal of Clinical Nutrition* 89, 1 (2009): 372–81; Vasanti S. Malik, Matthias B. Schulze, and Frank B. Hu, "Intake of Sugar-sweetened Beverages and Weight Gain: A Systematic Review," *American Journal of Clinical Nutrition* 84, 2 (2006): 274–88; Lenny R. Vartanian, Marlene B. Schartz, and Kelly D. Brownell, "Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis," *American Journal of Public Health* 97, 4 (2007): 667–75.
[13] -John Cawley, "The Economics Of Childhood Obesity." *Health Affairs* 29, 3 (2010): 364-71; Charles Courtamanche and Art Carden, "The Skinny on Big Box Retailing: Wal-Mart, Warehouse Clubs, and Obesity." *Mimeo*, Department of Economics, University of North Carolina, UNC-Greensboro. (October 31, 2008) Available at http://www.unc.edu/the/archives/courtemanche.pdf; Chou, Grossman, and Saffer, "Economic Analysis of Adult Obesity."
[14] Zhenxiang Zhao and Robert Kaestner, "Effects of Urban Sprawl on Obesity," *Journal of Health Economics* 29, 6 (2010): 779–87.
[15] Nicole I. Larson, Mary T. Storey, and Melissa C. Nelson, "Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S," *American Journal of Preventive Medicine* 36, 1 (2009): 74–81; Chou, Grossman, and Saffer, "Economic Analysis of Adult Obesity."
[16] Christopher Ruhm, "Understanding Overeating and Obesity," (NBER Working Paper No. 16149, 2010.)
[17] Tomas J. Philipson and Richard A. Posner, "The Long-run Growth in Obesity as a Function of Technological Change," *Perspectives in Biology and Medicine* 46, 3 (2003): 87–107; Darius Lakdawalla and Tomas Philipson, "The Growth of Obesity and Technological Change," *Economics and Human Biology* 7, 3 (2009): 283–93.
[18] Larson, Storey, and Nelson, "Neighborhood Environments"; Chou, Grossman, and Saffer, "Economic Analysis of Adult Obesity."
[19] Larson, Storey, and Nelson, "Neighborhood Environments."
[20] David Wallinga, "Agricultural Policy and Childhood Obesity: A Food Systems and Public Health Commentary." *Health Affairs*, 29, 3 (2010): 405-10.

in the case of children and adolescents, who place a higher value on present satisfaction while more heavily discounting future consequences.[21]

The evidence for systematic biases in individual decision-making is found in behavioral economics. A discipline that has developed at the intersection of psychology and economics, behavioral economics examines whether people make rational choices in various economic scenarios. Traditional economic theories assume that people are rational, that they know exactly what they want, and that they choose the best way to increase their own welfare within the limits of the information at their disposal. As long as people are free to choose, they will achieve the best outcomes for themselves given their circumstances and information. They will also learn from their mistakes. The traditional paradigm is simply to let people manage their own lives, because they are best able to determine their own welfare.

Behavioral economists challenge this view by documenting numerous instances in which individual actions demonstrate *bounded rationality*.[22] Not only do individuals make mistakes in their decision-making, but they repeat the same mistakes under similar conditions. Behavioral economists assert that, rather than some people making random irrational choices, all people deviate from rational decisions in consistent and predictable manners. In other words, choices are systematically biased.

Systematic bias in human behavior falls into two broad categories.[23] First, *cognitive biases* prevent people from pursuing actions that improve their welfare. Individuals are believed to lack powers of reasoning necessary to implement rational actions. Behavioral economists identify a number of such biases. For example a default option or status quo bias leads individuals to stick with what they have rather than search for a better alternative. In one natural experiment, a number of Western European countries (e.g., Austria, Belgium, France) adopted a policy that assumed individuals to be organ donors by default.[24] Individuals had the right to opt out and refuse to be donors. In contrast, other countries (e.g., Germany, Denmark, the United Kingdom) required explicit individual consent prior to organ donation. While organ donation was optional in all cases, the difference in organ donation rates between opt-in and opt-out countries was striking. It ranged from 4 to 27 percent in opt-in countries but hovered above 98 percent for most opt-out countries.[25] Changing the default option from opt-in to opt-out led to remarkable difference in individual decisions.

In the second category, behavioral economists question individuals' willpower to choose rational courses of action. In economic jargon, such individuals are said to suffer from *hyperbolic discounting* that leads them to exhibit time inconsistency—discounting future tradeoffs between the present self and the future self. A smoker may find it hard to quit today but may decide to quit tomorrow when the benefits of better health outweigh costs of quitting. Yet, when tomorrow arrives, the individual reverses this decision when he believes costs of quitting outweigh benefits. Consequently, the individual finds it exceedingly

[21] Kelly D. Brownell, Thomas Farley, Walter Willett, Barry Popkin, Frank Chaloupka, Joseph Thompson, and David S. Ludwig, "The Public Health and Economic Benefits of Taxing Sugar-sweetened Beverages," *New England Journal of Medicine* 361, 16 (2009): 1601.
[22] For numerous examples, see Dan Ariely. *Predictably Irrational: The Hidden Forces That Shape Our Decisions* (New York: HarperCollins, 2008); Richard B. McKenzie, 2009. *Predictably Rational?: In Search of Defenses for Rational Behavior in Economics* (London: Springer, 2009).
[23] F. H. Buckley, *Fair Governance: Paternalism and Perfectionism*, (New York: Oxford University Press, 2009).
[24] Eric Johnson and Daniel Goldstein, "Defaults and Donation Decisions," *Transplantation* 78, 12 (2004): 1713–6.
[25] Sweden is a partial exception with its 85.9 percent consent rate, which is still far higher than the rate for opt-in countries.

difficult to quit smoking. The same logic applies to an obese person trying to stick to a diet or an exercise program. In effect, individuals are believed to suffer from persistent difficulty in self-control.

Seemingly irrational behavior prompts many public health advocates to call for government intervention on behalf of obese citizens. Local, state, and federal governments have responded by issuing policies aimed at curbing individual failures. Policies range from highly stringent (e.g., bans or taxes on unhealthy foods) to less intrusive (e.g., food labeling requirements and public service announcements that exercise is helpful). In 2006, New York became the first major city to ban trans fats, followed by Philadelphia.[26] At the state level, California followed suit by a partial ban on trans fats. Legislation requiring restaurants to print calorie counts of their meals on their menus was first introduced at the local level in New York City and King County, Washington.[27] Similar legislation is under consideration at the federal level.[28] As discussed below, these measures have achieved little to no success.

## II. Government Intervention Is Ineffective

For most of the twentieth century, regulation was used to correct market failures. *Market failure* describes a situation in which a market fails to achieve efficient outcomes. Regulatory policy most commonly addresses two types of market failure: *information asymmetry* and *negative externalities*. Consequently, a standard government regulatory toolkit was developed to deal with these types of market failure.

This toolkit contains two approaches to deal with market failure. The first approach requires information disclosure and is commonly used in cases of information asymmetry. For instance, when a drug company makes health claims for its products, few consumers have enough knowledge to evaluate such claims. Similarly, few consumers can easily verify claims made by food companies concerning the low-fat properties of their products. Regulation addresses information asymmetries by requiring drug companies to go through a drug testing process and food companies to disclose calorie counts.

The second approach increases the cost of "bad" behavior. It is most commonly used in cases of negative externalities. For example, a chemical plant that pollutes a river imposes a negative externality on the downstream community that may be using the river for recreation, drinking water, or irrigation. Community members suffer as a result of the chemical plant's pollution. Yet, the plant has little incentive to clean up its pollution as long as no one owns the river. Neither its suppliers nor its customers (outside the community) care much about the pollution. While it may be good for the plant's public image to control its pollution and the plant may also be concerned about lawsuits, it is unlikely to deal with pollution perfectly. Government may attempt to remedy this problem through command-and-control regulation, penalties, or taxes. Thus, intervention provides the plant with an incentive to control its pollution.

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[26] M. Ashe, S. Graff, and C. Spector, "Changing Places: Policies to Make a Healthy Choice the Easy Choice," *Public Health* 125, 12 (2011): 889–95.

[27] B. Elbel, R. Kersh, V. L. Brescoll, and L. B. Dixon, "Calorie Labeling and Food Choices: A First Look at the Effects on Low-income People in New York City," *Health Affairs* 28, 6 (2009): 1110–21; Eric A. Finkelstein, Kiersten L. Strombot, Nadine L. Chan, and James Krieger, "Mandatory Menu Labeling in One Fast-Food Chain in King County, Washington," *American Journal of Preventive Medicine* 40 (2): 122–7.

[28] U.S. Food and Drug Administration, "Food Labeling; Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments," *Federal Register* 76 (April 6, 2011b): 19192–19236.

Paternalistic policymakers have used both approaches in attempts to deal with obesity. Federal, state, and local governments have required food producers and servers to disclose calorie counts, sugar and fat contents, and other information to steer consumers toward healthier choices. Regulations are based on the assumption that consumers are poorly informed about the negative effects of their choices and that fuller disclosure will remedy the problem of information asymmetry. Some governments press even further by imposing higher taxes on various unhealthy foods or banning them altogether. This heavy-handed, command-control approach presumes consumers lack sufficient incentives to watch what they eat or to exercise to maintain healthy weight. Paternalists thus attempt to selectively punish such "bad" behavior by increasing the cost of unhealthy choices—not unlike policies aimed at correcting negative externalities such as pollution.

It is important to note that, while the paternalistic case for intervention implicitly rests on the notion that optimal obesity prevalence is greater than zero, behavioral economists have stopped short of identifying an optimal rate. Marlow and Shiers argue that behavioral economists typically assume that reducing obesity prevalence is desirable, but they have not addressed more fundamental questions of obesity's optimal level, whether optimal levels have grown over time, and whether optimal levels are identical for all individuals. This is an important issue since, unlike instances in which the policy is zero tolerance, there is no clear point at which paternalistic goals will be achieved. While the federal Healthy People 2010 program aims to limit obesity to 15 percent of adults and 5 percent of children, Marlow and Shiers argue that it remains unclear why those percentages were chosen or even why a BMI of 30 has been designated the obesity threshold. These numbers appear to have been chosen because they were convenient, not because they were the product of a careful, publicly available analysis of optimal weight. They conclude that adopting a one-size-fits-all policy goal for weight places an excess burden on those subgroups that exhibit optimal weight gain in excess of government goals.[29]

In this paper, we argue that government policies designed to remedy market failures are ineffective in mitigating the consequences of individual failures.[30] Problems arising from individual failure differ from problems of market failure. Thus, it is inappropriate to borrow claims that markets suffer from information asymmetries and negative externalities and then presume that such problems also influence individual behavior.

This paper explores the possibility of individual failure—not the market failure commonly associated with arguments that obese persons do not pay their full healthcare costs because their above-average medical costs raise insurance costs for all other insured individuals and because some portion of their medical costs are publicly funded. Marlow and Shiers argue that the external-cost argument is less than persuasive since obese persons' life expectancies are shorter than those of non-obese persons; thus their lifetime medical costs are actually lower.[31] McPherson analyzed data from a study conducted in the United Kingdom and concluded that, although annual healthcare costs are highest for obese people earlier in life (until age 56), and are highest for smokers at older ages, lifetime costs are highest for the healthy

[29] Michael L. Marlow and Alden F. Shiers, "Optimal Weight: Are Government Goals for Reducing Obesity Sensible?" *Regulation* 34, 3, (2011): 10–15.
[30] This is not to argue that government is necessarily efficient in dealing with market failures. In fact, government attempts to solve market failures are replete with problems. However, government paternalistic polices add a layer of inefficiency beyond those that plague its market-failure interventions. For a review of problems with government intervention into market failure, see Marlow, *The Myth of Fair and Efficient Government*.
[31] Michael L. Marlow and Alden F. Shiers, "Would Soda Taxes Really Yield Health Benefits?" *Regulation* 33,3, (2010): 34–38.

(nonsmoking, non-obese) people. Moreover, McPherson found that life expectancy from age 20 is reduced by 5 years for obese people.[32] Thus, healthy people live to incur greater medical expenditures on average, which more than compensates for earlier excess costs related to obesity. Bhattacharya and Packalen argue that there is a positive innovation externality associated with the obese that roughly matches any negative Medicare-induced health insurance externality of obesity.[33] They conclude that no rationale exists for "fat taxes," given the Medicare-induced subsidy of obesity. Finally, Marlow and Shiers also argue that, even if obesity raises healthcare costs for the obese, health insurers could correct this externality by imposing surcharges, reflecting these additional costs, on obese policyholders.[34]

***Obese Do Not Suffer From Lack of Information***

Obesity may be a widespread problem, but it does not necessarily result from lack of information. Most obese individuals know they are heavy and face the stigma often linked to obesity. They hardly need the government to give them additional incentives to lose weight. Consequently, regulators using flexible, incentive-based approaches are unlikely to elicit much change in individual behavior. People aware of their mistakes already have strong incentives to correct them. Thus, interventions focusing on health risks of obesity may provide minimal new information and steer few toward losing weight.

Studies indicate that adults recognize various personal health risks associated with obesity. Finkelstein et al. conducted a survey of 1,130 adults in the United States to test whether overweight and obese individuals believe they are at greater risk of obesity-related diseases and premature mortality. They found that obese and overweight adults forecast life expectancies that are 3.9 and 2.4 years, respectively, shorter than those of normal-weight adults.[35] Excess weight was associated with greater self-perceived risk of developing diabetes, cancer, heart disease, and stroke. The authors concluded that mortality predictions generated from the survey were "reasonably close" to those generated from actual life tables for adults in the United States. These results are consistent with the findings of Falba and Busch that overweight and obese adults predict they will have shorter life expectancies. Examining data on 9,035 individuals aged 51 to 61, they found that overweight and obese adults believe their weight will reduce their life expectancy by an average of 2.5 years and 4 years, respectively.[36]

It is no surprise that recent interventions are relatively ineffective when they simply repeat information individuals already know. A study of New York City's 2008 law requiring restaurant chains to post calorie counts examined how menu calorie labels influenced fast food choices. Information provided by patrons of fast food restaurants in New York City was compared with information provided by patrons in Newark, New Jersey, a city without labeling laws. While 28 percent of New York patrons said the information influenced their choices, researchers could not detect a change in calories purchased after the law.[37] Finkelstein reached a similar conclusion in a study of a mandatory menu-labeling regulation requiring all restaurant chains with 15 or more locations to disclose calorie information in King

[32] Klim McPherson, "Does Preventing Obesity Lead to Reduced Health-Care Costs?" *PLoS Medicine* 5, 2 (2008): e37.
[33] Jay Bhattacharya and Mikko Packalen, "The Other Ex-ante Moral Hazard in Health," (NBER Working Paper No. 13863 March 2008).
[34] Marlow and Shiers, "Soda Taxes Yield Benefits?"
[35] Eric A.Finkelstein, Derek S. Brown, and W. Douglas Eva, "Do Obese Persons Comprehend Their Personal Health Risks?" *American Journal of Health Behavior* 32, 5 (2008): 508-16.
[36] Tracy A. Falba and Susan H. Busch, "Survival expectations of the Obese: Is Excess Mortality Reflected in Perceptions?" *Obesity Research* 13, 4 (2005):754 –761.
[37] Elbel, Kersh, Brescoll, and Dixon, "Calorie Labeling and Food Choices."

County, Washington. No effect on purchasing behavior—measured by transaction trends and calories per transaction at one fast food restaurant chain—was found.[38]

Bollinger and colleagues studied the impact of mandatory calorie posting on consumers' purchase decisions at Starbucks.[39] While they found that average calories per transaction fell by 6 percent, the effect was almost entirely related to changes in consumers' food choices. There was virtually no change in purchases of beverage calories. Starbucks is well known for high-calorie coffee drinks loaded with cream, and apparently mandatory calorie disclosure did little to avert consumer taste for these specialties. Thus, there was no effect on (what appears to be) the main reason consumers frequent Starbucks.

Apparently, consumers were well informed prior to regulations, or they chose to ignore any new information such regulations provided. If consumers are well informed when making choices, no market failure—and therefore no economic justification for intervention—exists. However, paternalists might object to this conclusion and push for even stronger measures aimed at correcting what they view as repeated mistakes on the part of consumers who do not change eating patterns at establishments paternalists argue are sources of obesity. Paternalists appear to view curtailing consumption as the only rational response to regulation; thus, unchanged behavior indicates continued consumer irrationality.

This is evident in the Food and Drug Administration's (FDA) recent proposal to alter cigarette-packaging regulations, aimed at steering citizens who continue to smoke to quit their nasty habits. A recent FDA regulation required manufacturers to feature one of nine rotating images on cigarette packs with graphic warning labels that included images of diseased lungs, a body on an autopsy table, and a man exhaling cigarette smoke through a hole in his throat. Images are required to cover the top half of both front and back of packages.[40] Although the regulation is on hold, awaiting a final ruling by the U.S. District Court for the District of Columbia, the graphic, color labels would be the largest change to required labels since the mid-1980s.

The FDA argued that current regulations on health warnings associated with smoking were ineffective in deterring current smokers and preventing initiation. Its analysis implicitly assumed that the major reason people smoke is that they do not understand that it is unhealthy. Cigarette consumption per capita has fallen from 2,626 to 1,001 (62 percent reduction) since the 1964 Surgeon General's report on the health hazards associated with smoking.[41] Viscusi has provided ample evidence that the net effect of past information campaigns designed to educate consumers about the risks of smoking has caused the public to greatly overestimate its health risks.[42]

It does not appear that the FDA entertains the possibility that smokers understand the extent to which smoking damages health. However, the extent to which smokers understand the detrimental effects of smoking clearly impacts the effectiveness of stronger FDA health warnings. Rondondi and colleagues

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[38] Eric A. Finkelstein, Kiersten L. Strombot, Nadine L. Chan, and James Krieger, "Mandatory Menu Labeling in One Fast-Food Chain in King County, Washington," *American Journal of Preventive Medicine* 40, 2 (2011): 122–7.
[39] Bryan Bollinger, Phillip Leslie, and Alan Sorensen. "Calorie Posting in Chain Restaurants," (NBER Working Paper No. 15648 January 2010).
[40] U.S. Food and Drug Administration. "Required Warnings for Cigarette Packages and Advertisements," *Federal Register* 75 (November 12, 2010): 69524–69565.
[41] William Orzechowski and Robert C. Walker, *The Tax Burden on Tobacco: Historical Compilation* vol. 45, (Arlington, VA: Orzechowski and Walker, 2010).
[42] W. Kip Viscusi, "The New Cigarette Paternalism," *Regulation* 25, 4 (2002): 58–64.

recently concluded that smokers who viewed images of plaque accumulating inside their carotid arteries as part of an intensive smoking-cessation program were no more likely to improve their cardiovascular risk factors or quit smoking than others oblivious to the appearance of their carotids.[43] Assuming that paternalists view smokers as ill informed about health risks associated with smoking, the randomized controlled trial study offers little support for the view that scare tactics promote the behavioral changes that paternalists seek. Despite dramatic reduction in smoking prevalence over time, it appears paternalists believe that irrationality persists as long as smokers persist in smoking.

***Obese Do Not Suffer From Lack of Motivation***

The obese do not lack economic motivation to watch their weight. Individuals making poor food choices have strong incentives to correct them. Obese individuals generally want to lose weight for reasons that may include better health, longer lifespan, and higher wages. Employers, too, have a vested interest in healthy-weight employees if they understand the effect of an obese workforce on productivity and profits. Private companies thus have incentives to address employers' and obese individuals' concerns, providing products that help control excessive weight.

It is well known that the obese earn less than the non-obese. Baum and Ford conclude that both men and women experience a persistent obesity wage penalty during the first two decades of their careers. After controlling for various socioeconomic and familial variables, they also find that standard covariates do not explain why obese workers continue to experience persistent wage penalties. They suggest that job discrimination, health-related factors, or obese workers' behavior patterns may explain why obesity continues to adversely affect wages.[44]

Obese individuals' income loss can be substantial. Cawley found that obese white females earned 11.2 percent less than their non-obese counterparts.[45] A difference in weight of two standard deviations (roughly 65 pounds) was associated with a 9 percent difference in wages—equivalent to the wage effect of roughly one-and-one-half years of education or three years of work experience. Bhattacharya and Bundorf find that cash wages for obese workers are lower than those for non-obese workers because the employers' costs for providing health insurance to obese workers is higher.[46] Obese workers who receive employer-sponsored health insurance pay for their higher medical costs by receiving lower cash wages than non-obese workers.

Employers also benefit when employees' poor food and exercise choices are replaced by healthier choices. When obese employees reduce their weight, employers benefit from reduced healthcare costs (and health insurance premiums) and workers who are more productive and miss fewer work days. One

[43] Nicolas Rodondi, Tinh-Hai Collet, David Nanchen, Isabella Locatelli, Michèle Depairon, Drahomir Aujesky, Pascal Bovet, and Jacques Cornuz, "Impact of Carotid Plaque Screening on Smoking Cessation and Other Cardiovascular Risk Factors. A Randomized Controlled Trial," *Archives of Internal Medicine*, published online January 23, 2012.
[44] Charles L. Baum II and William F. Ford, "The Wage Effects of Obesity: A Longitudinal Study," *Health Economics* 13, 9 (2004): 885–99.
[45] John Cawley, "The Impact of Obesity on Wages," *Journal of Human Resources* 39 2, (2004): 451–74.
[46] Jay Bhattacharya and M. Kate Bundorf, "The Incidence of the Healthcare Costs of Obesity," *Journal of Health Economics* 28, 3 (2009): 649–58.

study estimates that, in the United States, higher job absenteeism associated with obesity costs $4.3 billion annually.[47]

Henke and colleagues studied how the Johnson & Johnson family of companies introduced its workplace health promotion program in 1979. They found that Johnson & Johnson experienced an average annual growth in total medical spending that was 3.7 percent less than comparable peer companies.[48] This amounted to an average annual per employee savings of $565 in 2009 dollars—approximately $1.88 to $3.92 for every dollar spent. It is difficult to argue that business owners are ill informed about the importance of cultivating employee health.

Gabel and colleagues examined data from a survey of 505 randomly selected private and public employers with fifty or more employees and a survey of 1,352 households with employer-based insurance.[49] A majority of employers with 5,000 or more employees offered programs such as onsite exercise facilities and nutritional counseling. They conclude that, regardless of many large employers' views about personal responsibility regarding weight, they accept the workplace as an appropriate venue for addressing body weight. This view is attributed to employers' overriding concerns about rising health-care costs and lower productivity. Smaller firms appeared slower to offer such programs, and their programs remained quite limited in scope.

In a critical meta-analysis of the literature on costs and savings associated with such programs, Baicker and colleagues found that medical costs fall by about $3.27 and absenteeism costs fall by about $2.73 for every $1 spent on wellness programs.[50] Although further exploration of the mechanisms at work and the broader applicability of the findings is needed, this return on investment suggests that wider adoption of such programs could prove beneficial for budgets and productivity as well as health outcomes. They also found that employer-based wellness initiatives were even likely to result in substantial near-term savings.

The trucking industry provides a case study in employer incentives to encourage obesity reduction among employees. Martin and colleagues quantified healthcare costs of truckers across categories of normal weight, overweight, and obese between 2004 and 2005. In their study, truck drivers' overall obesity rate, 55 percent, was much higher than the national rate of 33 percent among adult males in between 2005 and 2006.[51] Obese and overweight subjects incurred, on average, $591 and $383 higher total healthcare costs, respectively, than did normal-weight participants. Both overweight and obese individuals also had higher prevalence of hyperlipidemia, diabetes, and hypertension than their normal-weight counterparts. The authors cautioned that, despite a clear relationship between obesity and health plan costs, it is less clear whether trucking causes obesity or if obese and overweight individuals self-select trucking as an occupation.

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[47] John Cawley, John A. Rizzo, and Kara Haas, "Occupation-Specific Absenteeism Costs Associated with Obesity and Morbid Obesity," *Journal of Occupational and Environmental Medicine* 49, 12 (2007): 1317–24.
[48] Rachel M. Henke, Ron Z. Goetzel, Janice McHugh, and Fik Isaac, "Recent Experience in Health Promotion at Johnson & Johnson: Lower Health Spending, Strong Return on Investment," *Health Affairs* 30, 3 (2011): 490–9.
[49] Jon R. Gabel, Heidi Whitmore, Jeremy Pickreign, Christine C. Ferguson, Anjali Jain, Shova KC, and Hilary Scherer, "Obesity and the Workplace: Current Programs and Attitudes among Employers and Employees," *Health Affairs* 28, 1 (2009): 46–56.
[50] Katherine Baicker, David Cutler, and Zirui Song, "Workplace Wellness Programs Can Generate Savings," *Health Affairs* 29, 1 (2010): 1–8.
[51] B. C. Martin, T. S. Church, R. Bonnell, R. Ben-Joseph, and T. Borgstadt, "The Impact of Overweight and Obesity on the Direct Medical Costs of Truck Drivers," *Journal of Occupational and Environmental Medicine* 51, 2 (2009): 180–4.

Given the high costs of obesity already present in the marketplace, raising the costs of obesity though taxes or outright bans is unlikely to be effective. Fletcher and colleagues examine two nationally representative data sets and find no evidence that taxing soft drinks or restricting access to vending machines curbs child obesity.[52] In a related study, Fletcher and colleagues find that a 1 percent increase in the soda tax rate was associated with a decrease of just 0.003 points in BMI.[53] In other words, large tax increases are unlikely to exert much effect on population weight. Evidence indicates that a 58 percent tax on soda, equivalent to the average federal and state tax on cigarettes, would drop the average body mass by only 0.16 points—a trivial effect given obesity is defined as a BMI of at least 30.

Recent evidence also calls into question interventions aimed at steering obese individuals away from junk and fast food. Van Hook and Altma recently concluded that children with access to junk food (e.g., soft drinks, candy bars, potato chips) were no heavier than those without.[54] The study followed nearly 20,000 students from kindergarten through the eighth grade in 1,000 public and private schools and found that in the eighth grade, 35.5 percent of children in schools with junk food were overweight, while 34.8 percent of those in schools without it were overweight. The authors suggest that children's food preferences and dietary patterns may be firmly established before adolescence. The evidence thus offers little support for anti-obesity interventions aimed at stopping junk food consumption in middle school. The authors conclude that food sales within schools are, on average, unrelated to obesity; this result supports other research that school-based interventions to reduce childhood obesity are often unsuccessful.[55]

Anderson and Matsa found that the causal link between the consumption of restaurant foods and obesity is minimal at best, based on an examination of data collected between 1990 and 2005.[56] Analyses of food intake data revealed that, although restaurant meals were associated with greater caloric intake, additional calories were mostly offset by reductions in eating during the rest of the day. They concluded that efforts to reduce fast food consumption might be ineffective in lowering obesity because consumers may overturn such efforts by substituting other foods or simply eating more food at home. In other words, unhealthy food or even overindulgence of healthy food does not require ready access to fast food restaurants when grocery stores and full service restaurants are available. Further, it should be understood that fast food does not necessarily mean unhealthy food. In a recent study, Marlow and Shiers found no evidence demonstrating that fast food causes obesity after examining the link between obesity and fast food employment between 2001 and 2009 in all states and controlling for other factors that might influence obesity prevalence.[57] This study supports the view that intervention in the fast food industry is unlikely to reduce the prevalence of obesity.

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[52] Jason M. Fletcher, David Frisvold, and Nathan Tefft, "Taxing Soft Drinks and Restricting Access to Vending Machines to Curb Child Obesity," *Health Affairs* 29, 5 (2010b): 1059–66.
[53] Jason Fletcher, David Frisvold, and Nathan Tefft, "Can Soft Drink Taxes Reduce Population Weight?" *Contemporary Economic Policy* 28, 1 (2010a): 23–35.
[54] Jennifer Van Hook and Claire E. Altman, "Competitive Food Sales in Schools and Childhood Obesity: A Longitudinal Study," *Sociology of Education* 85,1 (2012): 23–39.
[55] Jonathan A. Kropski, Paul H. Keckley, and Gordon L. Jensen, "School-based Obesity Prevention Programs: An Evidence-based Review," *Obesity* 16 (2008): 1009–18. M. Sharma, "School-based Interventions for Childhood and Adolescent Obesity," *Obesity Reviews* 7 (2006): 261–69.
[56] Michael L. Anderson and David A. Matsa, "Are Restaurants Really Supersizing America?" *American Economic Journal: Applied Economics* 3, 1 (2011): 152–88.
[57] Michael L. Marlow and Alden F. Shiers. "The Relationship between Fast Food and Obesity," *Applied Economics Letters,* Forthcoming.

### *The Private Market for Weight Reduction*

In contrast to market failures, individual failures do not result from lack of information or incentives. Obese individuals understand the effect of poor food choices on their health and have strong incentives to control their weight. These personal motivations create a demand for solutions that help obese individuals overcome their poor decision-making. As discussed below, markets respond with a wide array of innovative products and services. Some products prove effective; others fall by the wayside. Some may appeal to a broader public, while others target a narrower niche. Over time, experimentation leads to discovery of the most effective tools to deal with poor decision-making.

The growing demand for weight reduction is evidenced by the market for diet books, health foods, weight loss centers, exercise equipment, athletic clubs, and other methods people use to control their weight. Hotel chains offer memberships to their fitness facilities to nonresidents for a monthly fee. Exercise equipment can be purchased for home use. Diet sodas and low-calorie meals can be purchased at supermarkets and other food outlets.

There is substantial strength in consumer preferences for healthy foods. The typical U.S. supermarket stocks roughly 40,000 food products. The growing variety of food products reflects an industry that adapts to consumer preferences regarding health-related choices. Between 1987 and 2004, 35,272 new food products labeled "low fat" or "no fat" were introduced into the U.S. food market. This evidence led researchers at the U.S. Department of Agriculture to conclude that unhealthy food consumption patterns do not stem from a market failure to supply healthy food and beverage choices.[58]

Diet soda sales have grown rapidly. Sales of Diet Coke overtook those of Pepsi-Cola for the first time in 2010, making Diet Coke the number two carbonated soft drink in the United States.[59] The Subway sandwich chain, known for healthier fare, has recently surpassed McDonald's Corporation as the world's largest restaurant chain as measured by number of locations.[60]

An active private market that provides healthy choices again suggests that paternalists overstate their case for intervention in citizens' consumption decisions. By ignoring market efforts to remedy obesity, paternalists create the latitude to overstate the effectiveness of their interventions; they appear to believe that, without government, we are unlikely to see any reduction in obesity prevalence. Unfortunately, as discussed below, individuals experience reduced wellbeing when government intervention crowds out innovation in private markets.

## III. Government Intervention Is Counterproductive

While paternalists use behavioral economics to point out systematic biases in individuals' decision-making processes, they fail to apply the same framework to policymakers. Inexplicably, they assume that the very individuals who make irrational private choices will act as paragons of rationality in their capacity as bureaucrats.[61] In fact, Buckley points out, policymakers are likely to suffer from

[58] Fred Kuchler and Elise Golan, "Is There a Role for Government in Reducing the Prevalence of Overweight and Obesity?" *Choices* (Fall 2004): 40–6.
[59] Mike Esterl, "Diet Coke Wins Battle in Cola Wars," *Wall Street Journal* (March 17, 2011).
[60] Julie Jargon, "Subway Runs Past McDonald's Chain," *Wall Street Journal* (March 12–13, 2011).
[61] Christine Jolls, Cass Sunstein, and Richard Thaler, "A Behavioral Approach to Law and Economics," *Stanford Law Review* 50 (2006): 1471–1550.

hindsight bias.[62] To a paternalist reviewing an accident after the fact, a low-probability accident may look like a certainty. This is part of a more general egocentric bias in which paternalists greatly overestimate their forecasting abilities.

In addition to systematic biases, paternalistic policymakers often possess insufficient information required for effective policymaking. Advocates of government paternalism often assume that a government official is not only fully rational but also fully informed and fully committed to improving the welfare of others. Yet, dealing with individual failures requires not just general knowledge (e.g., health impact of trans fats) but also very specific knowledge of individual circumstances and preferences dispersed across society (e.g., when individuals are more likely to consume unhealthy foods; how a government policy would interfere with their private weight loss initiatives; etc.). Absent such information, policies initiated by paternalists are likely to be misguided and ineffective.[63]

Further, paternalistic regulation requires policymakers to pick market winners, even when evidence is ambiguous and does not favor any given option. When forced to choose a specific alternative, paternalists may not necessarily choose the most effective option. In one recent case, the FDA proposed a regulation that would require vending machines to display calorie content of vended items. Its reasoning for the proposed rule is illuminating. The FDA acknowledges that the vending market is highly competitive.[64] If consumers demanded calorie counts displayed on vending machines, the market would oblige; no market failure to provide consumers with calorie-count information exists. Consumers make unhealthy nutritional choices at the vending machines not because they lack information but because they lack willpower (that is, exhibit *hyperbolic discounting*) to avoid tempting but unhealthy snacks. Providing information that they have and disregard, which is what the rule requires, would be unlikely to benefit consumers but would still cost society $24.5 million each year. Not only does such an ineffective paternalistic policy fail to improve public health, but it also wastes societal resources that could be used more efficiently to cope with obesity.

Paternalistic policies may also lead to unintended consequences, which may, all things considered, hurt the people such policies were meant to help. For example, since the 1970s, USDA Dietary Guidelines have urged Americans to eat low-fat diets to reduce their risk of coronary heart disease and obesity.[65] The advice seemed straightforward; the outcome is less so. Americans heeded the government's advice to switch to foods with less fat content. But because they were eating healthier foods, they ate more. Thus, while the share of calories coming from fat decreased between 1970 and 2000, the actual amount of fat calories in their diet increased, due primarily to the overall increase in calories consumed.

Beyond unintended consequences, paternalistic policies open up a new area of private activity to special interest and lobbying influence within the legislative context. When policymakers decide which products or technologies should dominate a market, they boost some industries at the expense of others. Consequently, industries affected by paternalistic policies have a strong incentive to shape policies to

[62] F. H. Buckley, *Fair Governance*.
[63] Mario J. Rizzo and Douglas G. Whitman, "The Knowledge Problem of New Paternalism," *Brigham Young University Law Review* 4 (2009): 905–68.
[64] U.S. Food and Drug Administration, "Food Labeling; Calorie Labeling of Articles of Food in Vending Machines," *Federal Register* 76 (April 6, 2011a): 19238–19255.
[65] Paul R. Marantz, Elizabeth D. Bird, and Michael H. Alderman, "A Call for Higher Standards of Evidence for Dietary Guidelines," *American Journal of Preventive Medicine* 34, 3 (2008): 234–240.

their own benefit. Yet, paternalists often forget that policymaking itself is a political process. Paternalistic policies are not crafted by benevolent, perfectly rational, fully informed bureaucrats. Rather, they are the product of highly contentious political processes in which competing interests collide on a range of issues. The final compromise may be far from the most efficient course of action (even if one were available).

***Unintended Consequences***

The burdens of government policies are not only borne by those citizens—among them those who are obese and those who smoke—who lack sufficient information or self-control. Research demonstrates that tax hikes on alcohol and tobacco serve primarily to decrease consumption by light, not heavy, users. In other words, raising taxes causes those without problems to reduce consumption, leaving those with problems simply to pay higher taxes.[66] There is little reason to suspect anything different when taxes are imposed on individuals believed to eat too much and exercise too little. Taxes steer elastic, not inelastic, consumers away from taxed products, exerting little to no effect on those citizens regulations actually target. Such interventions are also often regressive in nature, placing higher burdens on the poor rather than the non-poor.

A recent review of the obesity epidemic notes a paucity of clear evidence for specific causes.[67] There is no question that obesity prevalence in the United States has risen over time, but there is no evidence specifying an optimal societal obesity level, whereby marginal benefits and reduction costs would be equalized. Nevertheless, the federal government has set a goal of 15 percent for adult prevalence and 5 percent for child prevalence, adopting a one-size-fits-all policy goal for weight. These goals exert excess burdens on subgroups that exhibit weight in excess of government goals. Subjecting all individuals to identical goals for obesity rate reduction also imposes excess burdens on those who differ from government's mandated "ideal" weight. Nonetheless, government readily provides a goal even though it has not been substantiated by economic analysis.[68]

Interventions also impose adverse unintended consequences on the public health. Tax hikes on cigarettes harm smokers, for example, who switch to higher tar and nicotine brands to smoke fewer, but more intense, cigarettes.[69] Epidemiological research indicates that outcomes of such smoking patterns are more detrimental to health.[70] One study found that teen marijuana consumption rose following state tax increases on beer, thus indicating that policies targeted at one problem (excessive alcohol consumption) may also affect other problems (youth marijuana consumption).[71] Chou and colleagues found that higher cigarette prices stemming from tax hikes reduce smoking but also are associated with higher rates of

[66] Padmaja Ayyagari, Partha Deb, Jason Fletcher, William T. Gallo, and Jody L. Sindelar, "Sin Taxes: Do Heterogeneous Responses Undercut Their Value?" (NBER Working Paper No. 15124, July 2009).
[67] B. Rokholm, J. L. Baker, and T. I. A. Sorensen, "The Leveling off of the Obesity Epidemic Since the Year 1999: A Review of Evidence and Perspectives," *Obesity Reviews* 11, 12 (2010): 835–46.
[68] Michael L. Marlow and Alden F. Shiers, "Optimal Weight: Are Government Goals for Reducing Obesity Sensible?" *Regulation* 34, 2 (2011): 10–15.
[69] M. C. Farrelly, C. T. Nimsch, A. Hyland, and M. Cummings, "The Effects of Higher Cigarette Prices on Tar and Nicotine Consumption in a Cohort of Adult Smokers," *Health Economics* 13, 1 (2004): 49–58; Jerome Adda and Francesca Cornaglia, "Taxes, Cigarette Consumption, and Smoking Intensity," *American Economic Review* 96, 4 (2006): 1013–28.
[70] Michael J. Thun, Cathy A. Lally, John T. Flannery, Eugenia E. Calle, W. Dana Flanders, and Clark W. Heath, Jr., "Cigarette Smoking and Changes in the Histopathology of Lung Cancer," *Journal of the National Cancer Institute* 89, 21 (1997): 1580–86.
[71] John DiNardo and Thomas Lemieux, "Alcohol, Marijuana, and American Youth: The Unintended Consequences of Government Regulation," *Journal of Health Economics* 20, 6 (2001): 991–1010.

obesity—suggesting that policies aimed at correcting individual failures (smoking) can unintentionally promote other individual failures (obesity).[72]

Little evidence exists to indicate that previous government intervention has lowered obesity among the poor. The U.S. Department of Agriculture concludes that, though many low-income individuals are both obese and participating in one or more food assistance programs, the research literature does not demonstrate that program participation lowers obesity.[73] The same review, however, cites two studies that find a positive correlation between food stamps and obesity in women, although neither study tested for a causal connection.[74] Zagorsky and Smith find that the typical female participant of the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamp Program) has a BMI that is significantly higher than the BMI of someone with the same socioeconomic characteristics who does not participate in the program.[75] For the average five-foot, four-inch American woman, this equals a 5.8-pound weight increase. Good intentions aside, we should be skeptical of the notion that new interventions will lower obesity when research indicates that past programs may in fact have promoted obesity, even if unintentionally.

Even if food stamp programs have contributed to obesity, it is not so easy to somehow steer recipients toward healthier choices. Since becoming mayor of New York City, Michael Bloomberg has launched a number of initiatives to improve New Yorkers' diets, including a ban on the use of trans fats in restaurants and a requirement that restaurants post their foods' calorie counts. In 2010, mayor Bloomberg proposed to bar his city's SNAP participants from using food stamps to buy soda or other sugared drinks. But, substitution effects are likely since nothing bars food stamp recipients from buying high-fat foods and sweets or from simply adding more sugar to home-brewed iced tea, substituting one high-calorie drink for another. Food manufacturers might also respond with new soft drink offerings creatively engineered to avoid the sugar tax, despite potential unknown health effects.

Paternalist approaches to remedying the obesity epidemic carry additional unintended consequences. Consider again food-labeling laws that require restaurants to list their fat and calorie contents. These laws might lead some diners to exercise less caution and personal judgment simply because paternalists have assumed that responsibility. Paternalism reduces the need to think independently and may even indirectly suggest that the "eat less, exercise more" adage no longer is a sure-fire recipe for controlling weight. Substituting government for personal responsibility rarely works according to paternalists' visions of steering individuals toward their "better" selves. It could also prove especially harmful to the obese, who must struggle with self-discipline—and in some cases genetic predisposition or medical conditions—to lose weight.

### *Rent Seeking*

[72] Chou, Grossman, and Saffer. "Economic Analysis of Adult Obesity," 565–87.
[73] Paul Linz, Michael Lee, and Loren Bell, "Obesity, Poverty, and Participation in Nutrition Assistance Programs," (Report No. FSP-04-PO. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis, Nutrition and Evaluation, 2004), http://www.fns.usda.gov/ora/menu/published/NutritionEducation/Files/ObesityPoverty.pdf.
[74] Diane Gibson, "Food Stamp Program Participation Is Positively Related to Obesity in Low Income Women," *Journal of Nutrition* 133, 7 (2003): 2225–31; Marilyn Townsend, Janet Peerson, Bradley Love, Cheryl Achterberg, and Suzanne P. Murphy, "Food Insecurity Is Positively Related to Overweight in Women," *Journal of Nutrition* 131, 6 (2001): 1738–45.
[75] Jay L. Zagorsky and Patricia K. Smith, "Does the U.S. Food Stamp Program Contribute to Adult Weight Gain?" *Economics & Human Biology* 7 (2009): 246–58.

Even if paternalists proposed policies that could remedy individual failures, it is unlikely those policies would survive the policymaking process intact. Special interests and lawmakers often push regulatory policies that do not promote the public interest. Lawmakers often use regulation to reward their constituents and financial benefactors. In fact, they may find it easier to promote regulation favorable to their constituents than to reward them with direct subsidies, tax reduction, or government contracts, especially when their spending capacity is limited or subject to too much public scrutiny.[76]

Industries can, and frequently do, use regulation to their benefit. In the 1960s, the growing popularity of artificial sweeteners, particularly in diet sodas and low-calorie foods, threatened the sugar industry. By the industry's own estimates, it stood to lose $1 billion (in 1967 dollars) from this competition.[77] To counter the threat, it channeled $500,000 through its Sugar Research Foundation to fund research that linked cyclamate, the more popular artificial sweetener, to the risk of bladder cancer. This research led the FDA to ban the use of cyclamates in 1969. The FDA maintained its ban even when later evidence indicated that the link between cyclamates and cancer is inconclusive and most likely nonexistent.[78]

Further, paternalistic policymakers do not operate in a vacuum. Even well-intentioned policies can be undermined by other executive-branch agencies or other branches of government. Currently, for example, the federal school-lunch program classifies pizza as a vegetable because it contains tomato paste.[79] Recent attempts by the Department of Agriculture to replace pizza with more vegetables were blocked in Congress by legislation attached to a 2012 appropriations bill.[80] The same bill proposed to block the USDA from implementing the new guidelines that would require more whole grains in school food while cutting sodium and starchy vegetables like potatoes.

In a separate case, the USDA undermined its programs that promote a healthy diet by supporting other programs aiding the food industry. The 2005 USDA Dietary Guidelines recommended balancing calories consumed with calories expended. The guidelines expressed doubt regarding the long-term efficacy of "fad" diets, including low-carbohydrate diets and high-dairy diets, which claim to boost metabolism and reduce weight more effectively than calorie restriction alone. Yet, the doubts expressed in the USDA Dietary Guidelines did not prevent the USDA's congressionally mandated, generic commodity-promotion programs from using fad diets to their advantage.[81] For example, the National Pork Board promoted pork as a low-carb healthy alternative with its "Counting Carbs" initiative, while the National Dairy Council promoted the weight-loss qualities of dairy products with its "3-A-Day of Dairy" campaign.[82]

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[76] Noel D. Johnson, Matthew Mitchell, and Steven Yamarik, "Pick Your Poison: Do Politicians Regulate When They Can't Spend?" (working paper, Mercatus Center at George Mason University, 2011). http://mercatus.org/sites/default/files/publication/Partisan_Policies_Johnson_Mitchell_Yamarik_WP1128_0.pdf.
[77] Science News, "Bitter Battle over Sweets," *Science News* 92, 9 (1967): 199–200.
[78] Peter Asch, "Food Safety Regulation: Is the Delaney Clause the Problem or Symptom?" *Policy Sciences* 23, 2 (1990): 97–110.
[79] Bill Tomson, "Lawmakers Step Into Food Fight Over Pizza," *Wall Street Journal* (November 18, 2011).
[80] Consolidated and Further Continuing Appropriations Act of 2012, H.R. 2112, 112th Cong. (2012).
[81] The generic commodity promotion—or checkoff—programs were created through congressional mandates to advertise a range of agricultural products, including beef, dairy, pork, eggs, cotton, etc. The agricultural industries lobbied for federal involvement by arguing that individual companies would hesitate to advertise products individually, since the advertisement would benefit all producers and not just the advertising company. The checkoff programs aim to benefit agribusinesses, not the general public.
[82] Parke Wilde, "Federal Communication about Obesity in the Dietary Guidelines and Checkoff Programs," in *Obesity, Business and Public Policy*, ed. Zoltan Acs and Alan Lyles, (Northampton, MA: Edward Elgar, 2007), 156–170.

***Retarding Innovation***

Stringent regulation can actually reduce rather than increase problem-solving innovation. Stewart analyzes the effect of regulation on innovation along three dimensions: stringency, flexibility, and information.[83] *Stringency* refers to the severity of efforts required in order to comply with a regulation. *Flexibility* describes the variety of implementation strategies permitted by the regulation. *Information* indicates whether regulation increases or decreases information uncertainty in the market. When regulations are stringent, inflexible, and produce uncertainty, they can increase both compliance burdens and the frequency of unviable inventions. Consequently, regulation's effect on innovation can be twofold. When regulations impose high compliance costs, they encourage companies to invest in circumventive innovation (company efforts to avoid regulation) and compliance innovation. Thus, firms may divert resources from research and development to accounting or legal efforts. In contrast, compliance innovation aims to produce technologies that reduce regulation compliance costs. In both cases, regulation diverts company resources and focus from developing products that meet customers' needs into regulation-appeasing efforts.[84]

Flexible, incentive- or performance-based regulation imposes the lowest compliance burdens. It allows companies to experiment with different options and select the one that works best for the particular circumstance. In contrast, regulation based on command-control or specification-standards can drastically increase compliance burdens, reducing companies' innovation efforts. It can also lead to unviable inventions that do not meet strict standards prescribed by regulation. Unviable inventions waste resources in compliance efforts. Stringent regulation has the same effect as inflexible regulation, increasing the compliance burden and unviable invention rate. Finally, regulations that increase compliance uncertainty further increase compliance costs.

This leaves regulators with only limited room to maneuver. However, most paternalistic regulation is highly prescriptive, stringent, and inflexible. Such regulations impose high compliance burdens and divert resources from product innovation. For example, the FDA recently proposed a rule requiring restaurants to publish calorie counts on the menus.[85] The agency's reasoning is simple: if consumers have access to caloric information, they will make healthier choices. The rule goes to a considerable length to describe what qualifies as disclosure of caloric information, including placement, font size, and color. Commenting on this rule, Panera LLC noted that the FDA requirements may not be the most effective way to inform consumers of the caloric content of menu items.[86] Panera's knowledge—knowledge unavailable to FDA regulators—comes not from research laboratories but from years of experimenting with informing customers. If the rule is adopted, it would restrict the ability of Panera and

[83] Luke A. Stewart, *The Impact of Regulation on Innovation in the United States: A Cross-Industry Literature Review*, (Washington, DC: Institute of Medicine, June, 2010), http://www.iom.edu/~/media/Files/Report%20Files/2011/Health-IT/Commissioned-paper-Impact-of-Regulation-on-Innovation.pdf.

[84] This point has been tested in the context of the "Porter Hypothesis." The hypothesis, put forward by Michael Porter in the 1990s, claimed that environmental regulation spurs innovation, since companies seek ways to reduce compliance costs. Empirical studies confirm the hypothesis—regulation does lead to innovation—but they also find that regulation negatively affects productivity. Thus, increased innovation is mostly compliance, not product innovation. For a review, see Stefan Ambec, Mark A. Cohen, Stewart Elgie, and Paul Lanoie. "The Porter Hypothesis at 20: Can Environmental Regulation Enhance Innovation and Competitiveness?" Resources for the Future Discussion Paper No. 11-01 (January 18, 2011).

[85] U.S. Food and Drug Administration, "Food Labeling; Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments," *Federal Register* 76 (April 6, 2011b): 19192–19236.

[86] Panera, LLC, Public Interest Comment on Food and Drug Administration, Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments, Docket No: FDA-2011-f-0172, 2011, available at www.regulations.gov.

other providers of healthy food choices to develop innovative means of guiding their customers toward better choices.

Recent studies indicate that providing calorie counts may not be the most effective way of informing customers of healthy food choices, especially when it requires some calculation on the part of consumers.[87] An FDA study showed that while most consumers were able successfully to compare the nutritional qualities of two products, less than half were able to use the information to follow a comprehensively balanced diet over the course of the day. Only one-fifth could calculate the contribution of a food item to their daily diet.[88] Some researchers argue that a simple, universal symbol system that would clearly indicate healthier food options may be a better way to inform consumers.[89]

In fact, a few studies have found that the traditional assumption behind information disclosures (providing consumers with more information is always better) may not hold true in every case. Testing the effectiveness of information disclosure in the U.S. mortgage market, a Federal Trade Commission study found that some well-intentioned disclosure requirements may in fact mislead consumers regarding the full cost of their mortgages.[90] In this case study, both test and control groups were shown information on two loans, one more expensive than the other. The information shown to the test groups disclosed mortgage broker compensation, while the information shown to the control groups did not. In the control groups, 90 percent of individuals were able to identify the cheaper loan, compared to 63 to 72 percent of individuals in the test groups.[91] Furthermore, 16 to 27 percent of individuals in the test groups indicated they would choose the more expensive loan based on the loan information received, compared to only 3 percent in control groups. In the context of food labeling, Wansink and colleagues found that providing less information can actually improve customer comprehension of nutritional information and increase customer trust in the disclosed information.[92]

The effectiveness of nutritional labeling is subject to debate. Private companies have experimented with various types of nutritional labeling, and studies show that these are far more effective than government programs in communicating health information to customers.[93] Stringent government regulation that prescribes particular disclosure methods constrains private experimentation. Thus, anti-obesity regulation may reduce the number of innovative solutions that could help individuals control their

[87] Russell L. Rothman, Ryan Housam, Hilary Weiss, Dianne Davis, Rebecca Gregory, Tebeb Gebretsadik, Ayumi Shintani, and Tom A. Elasy, "Patient Understanding of Food Labels: The Role of Literacy and Numeracy," *American Journal of Preventive Medicine* 31, 5 (2006): 391–8; Gill Cowburn and Lynn Stockley, "Consumer Understanding and Use of Nutrition Labeling: A Systematic Review," *Public Health Nutrition* 8, 1 (2005): 21–8.
[88] Alan S. Levy and Sara B. Fein, "Consumers' Ability to Perform Tasks Using Nutrition Labels," *Journal of Nutrition Education* 30, 4 (1998): 210–217.
[89] David L. Katz, Valentine Y. Njike, Zubaida Faridi, Lauren Q. Rhee, Rebecca S. Reeves, David J. A. Jenkins, and Keith T. Ayoob, "The Stratification of Foods on the Basis of Overall Nutritional Quality: The Overall Nutritional Quality Index," *American Journal of Health Promotion* 29, 4 (2009): 133–143.
[90] James Lacko and Janis K. Pappalardo, *The Effect of Mortgage Broker Cowmpensation Disclosures on Consumers and Competition: A Controlled Experiment*, (Washington, DC: Bureau of Economics, Federal Trade Commission, 2004).
[91] The case study included two control groups and three test groups. The format of information shown to each group varied slightly.
[92] Brian Wansink, Steven T. Sonka, and Clare M. Hasler, "Front-label Health Claims: When Less Is More," *Food Policy* 29 (2004): 659–67.
[93] Pauline M. Ippolito and Alan D. Mathios, "Association Information and Advertising: The Case of Fat Consumption in the United States," *American Economic Review* 85, 2 (1995): 91–95; Pauline M. Ippolito and Janis K. Pappalardo, *Advertising Nutrition & Health: Evidence from Food Advertising 1977–1997*, (Washington, DC: Bureau of Economics, Federal Trade Commission 2002).

weight. Unfortunately, because regulation stymies experimentation, more effective, less expensive solutions to the problem may simply remain undiscovered.

## IV. Conclusions

Obesity is a serious health problem. However, advocates of paternalistic policies overstate the benefits of intervention, even as they understate the costs. Paternalistic policymakers justify policies all too easily on the assumption that they are better informed than the individuals they seek to guide. Government intervention regarding obesity stems from good intentions; as one recent paper puts it, "after all, who can question actions intended to improve health?"[94] In this paper, however, we demonstrate that paternalism, no matter how well-intentioned, is a poor guide for regulation and can adversely affect obese and non-obese citizens alike.

It is difficult to argue that obesity results from lack of information. Obese individuals know they are heavy and also suffer the stigma linked to obesity. Research indicates that the obese understand health implications of obesity, and that they earn lower incomes because of their weight. Research also demonstrates that employers have incentives to push employees to lose weight; there is no market failure that requires government intervention. The obese hardly need the government to give them additional incentives to lose weight, since lack of motivation does not appear to cause obesity. Interventions focusing on steering them away from particular foods or toward more exercise are thus unlikely to provide new information or to result in much weight loss. These predictions are consistent with the research that shows government interventions have little to no effect on obesity. Unfortunately, upon realizing that softer interventions are ineffective, regulators are tempted to turn to harder paternalism.

Somewhat lost in the public health debate regarding obesity is the reality that people who know they are overweight also experience strong personal incentives to lose weight. Individuals' growing demand for weight reduction is evidenced by the market for diet books, health foods, weight-loss centers, exercise equipment, athletic clubs, and other independent weight-control methods. Paternalists appear to disregard market attempts to deal with obesity, since its prevalence offers them latitude to overstate the effectiveness of interventions. Further, this disregard coheres with the paternalistic belief that reduction of obesity prevalence is unlikely sans government intervention.

Substituting government for personal responsibility regarding weight has other disadvantages. Regulators choose one-size-fits-all interventions, glossing over the reality that not all obese individuals suffer from the same problems. Moreover, as they impose interventions on citizens, regulators cannot differentiate between those who are and who are not overweight. Regulation requires government officials to choose one strategy to the exclusion of others without winning customers in a competitive marketplace. Thus, government interventions crowd out the market solutions that arise as firms compete and innovate to provide customers a variety of products and services that serve their needs. Regulation thus can retard innovation in the search for better solutions. (Of course, even if paternalists knew which policies to enact, it is unlikely that their proposals would come through the political process and the intervention of special interests and lawmakers unscathed.)

[94] Barrie Craven, Michael L. Marlow, and Alden F. Shiers. Forthcoming. "Fat Taxes and Other Interventions Won't Cure Obesity," *Economic Affairs*.

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