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Note

Fine Tuning Nutrition Disclosures: A Behavioral Law and Economics Critique of the Menu-Labeling Provision of the Affordable Care Act*

I. Introduction

In 2011, the Cheesecake Factory chain of restaurants announced plans to unveil a new "SkinnyLicious" Menu with lower calorie entrée offerings.[1] This business decision stemmed in part from criticism of the chain's foods as much too caloric across the board. For example, the website and book franchise *Eat This, Not That* had placed two Cheesecake Factory dishes on its list of the "Worst Foods in America."[2] The Bistro Shrimp Pasta entrée contained 2,730 calories,[3] dwarfing the recommended calorie intake for one day (2,000) in just one dish. The new SkinnyLicious Menu would contain fifteen entrees under 590 calories and twelve appetizers under 490 calories.[4] The growing pressure on the Cheesecake Factory is representative of increasing calorie consciousness in America. Health advocates have recognized that the calorie content of restaurant foods is a major contributing

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1. Bruce Horovitz, *Cheesecake Factory "SkinnyLicious" Menu Cuts Calories*, USA TODAY, Aug. 1, 2011, http://usatoday30.usatoday.com/money/industries/food/2011-07-29-chessecake-factory-lower-calorie-menu_n.htm, *archived at* http://perma.cc/7Y2Y-A97R; *see also The Today Show*, (NBC television broadcast Aug. 1, 2011), *available at* http://www.today.com/video/today/43969180#43969180, *archived at* http://perma.cc/3AP6-E5VW (discussing and sharing examples of the new menu and comparing the lower calorie entrees with regular Cheesecake Factory entrees).

2. Horovitz, *supra* note 1.

3. *Id.*

4. *Id.*

factor in the nation's obesity epidemic. These types of concerns led to the menu-labeling movement, which advocated for requiring restaurants to make nutrition information available to consumers (at a minimum)[5] or even post it conspicuously on their menus (at a maximum).[6] On the federal level, this effort culminated in the passage of a menu-labeling provision as part of the Patient Protection and Affordable Care Act of 2010 (ACA).[7]

The advocacy efforts on behalf of the new law were driven by a belief that these types of regulations could effectively combat obesity in America by influencing consumers to choose lower calorie meals. Throughout the 2000s, an increasing number of states and localities implemented their own menu-labeling regulations, which created an opportunity for empirical studies. While some of these studies found menu labeling did have a moderate effect on consumer choices,[8] others found no effect at all[9]—a discouraging prospect for proponents of menu-labeling laws.

The federal provision has now been enacted into law, and the Food and Drug Administration (FDA) has released rules pursuant to the legislation, but it has not been fully implemented. Thus, its effectiveness has not yet been put to the test. Nonetheless, the dynamics of mandatory disclosures have been researched and discussed extensively in a body of literature falling under the umbrella of behavioral economics, and more specifically in the field of behavioral law and economics (BLE). By examining human behavior and cognitive processes, BLE can quantify and predict various aspects of human behavior under certain conditions. The aim of this Note is to use insights from BLE to identify cognitive biases that inhibit the effectiveness of menu-labeling laws, and then explore potential regulatory solutions that could ameliorate the effects of those biases. In light of the dedication of resources to the implementation of these regulations, it would be sorely disappointing if they had a minimal—or worse, nonexistent or negative—effect on the obesity epidemic.

This Note proceeds in seven parts. After the introduction in Part I, Part II briefly describes the nature and scope of the obesity epidemic in the United States, with a particular aim toward examining the concomitant negative externalities, and outlines some of the existent and inadequate solutions. Part III outlines the recent history of federal, state, and local initiatives to put menu-labeling laws into place, which culminated in the federal provision. Part IV describes relevant effects and biases established in existing BLE literature and applies them to menu-labeling efforts. Part V lists and discusses possible improvements to the federal menu-labeling law based on

5. *See infra* subpart III(A).
6. *See infra* subpart III(A).
7. *See infra* subpart III(C).
8. *See infra* subpart III(D).
9. *See infra* subpart III(D).

the concepts explored in Part IV. Part VI examines other potential policy solutions to the obesity epidemic beyond menu labeling. Part VII briefly concludes.

II. Nature and Scope of the Problem

The widespread and severe nature of the obesity epidemic in the United States is often discussed and well recognized. This Part first reviews the current status of the obesity epidemic, then proceeds to delineate some of the many extant government policies and private services that attempt to combat the problem.

A. Obesity and Its Externalities

The proportion of Americans who are overweight or obese has grown steadily in recent decades. As of 2010, 68.8%, or more than two-thirds, of American adults were overweight or obese,[10] and 35.7% were obese.[11] The obesity rate doubled between the periods of 1976–1980 and 2007–2008.[12] One study's projection predicts that by 2030, 86.3% of all American adults will be overweight or obese, with 51.1% in the obese category.[13]

Obesity creates costly externalities for society as a whole, as well as deleterious health and quality of life effects for individuals. The growth of obesity in the population has been accompanied by an increase in the incidence of diabetes, hypertension, and dyslipidemia.[14] There is strong evidence indicating that these three conditions, in addition to obesity itself, create a higher risk of cardiovascular disease and mortality.[15] One meta-analysis of health-related quality of life (HRQoL) studies on obese and overweight adults found clear evidence of reduced physical HRQoL among

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10. WEIGHT-CONTROL INFO. NETWORK, U.S. DEPT. OF HEALTH & HUMAN SERVS., OVERWEIGHT AND OBESITY STATISTICS 2 (2012), *available at* http://win.niddk.nih.gov/publications/PDFs/stat904z.pdf, *archived at* http://perma.cc/MC87-97T2.

11. CYNTHIA L. OGDEN ET AL., U.S. DEPT. OF HEALTH & HUMAN SERVS., NCHD DATA BRIEF NO. 82: PREVALENCE OF OBESITY IN THE UNITED STATES, 2009–2010, at 1 (2012), *available at* http://www.cdc.gov/nchs/data/databriefs/db82.pdf, *archived at* http://perma.cc/H6HW-SUFX.

12. CYNTHIA L. OGDEN & MARGARET D. CARROLL, CNTR. FOR DISEASE CONTROL, NAT'L CTR. FOR HEALTH STATISTICS, PREVALENCE OF OVERWEIGHT, OBESITY, AND EXTREME OBESITY AMONG ADULTS: UNITED STATES, TRENDS 1960–1962 THROUGH 2007–2008, at 1, 3 fig.2 (2010), *available at* http://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf, *archived at* http://perma.cc/A2NK-DKKW.

13. Youfa Wang et al., *Will All Americans Become Overweight or Obese? Estimating the Progression and Cost of the US Obesity Epidemic*, 16 OBESITY 2323, 2326 (2008).

14. Patrick W. Sullivan et al., *The Effect of Obesity and Cardiometabolic Risk Factors on Expenditures and Productivity in the United States*, 16 OBESITY 2155, 2155 (2008).

15. *Id.*

overweight and obese individuals, along with evidence of reduced mental HRQoL among the most obese individuals.[16]

Medical spending related to obesity is increasing. In 2008 aggregate direct health care costs of the overweight and obesity epidemic were $113.9 billion, somewhere between five percent and ten percent of overall annual healthcare spending.[17] The same study that projected future growth in the rate of overweight and obese adults predicts that health care costs related to the obesity and overweight epidemic will more than double each decade, potentially reaching a level between $860 and $956 billion in 2030, which would amount to 15.8%–17.6% of total health care costs.[18] In addition to these high and increasing levels of medical spending, obesity has been shown to have negative effects on productivity. A 2007 study estimated that "common cardiometabolic risk factor clusters," which include obesity, result in $17.3 billion worth of lost productivity annually.[19] The Obama Administration has also argued that growing obesity rates are a national security problem because obesity has become a major hurdle to qualification for entrance into the armed forces.[20]

B. Existing, Inadequate Solutions

Although the obesity epidemic has grown in recent years, this is not for a lack of attempts by both private industry and government to combat its spread. Rather, the combination of existing solutions to the issue is inadequate to reduce or reverse obesity among Americans. Diet services and gyms comprise a booming industry, First Lady Michelle Obama has devoted much of her time to combatting obesity, and the government already mandates comprehensive food labeling of the products sold in grocery stores and other retail businesses. Each of these existing solutions is described in more detail below.

As of 2013, the dollar-value size of the U.S. weight-loss market was about $60.5 billion, split almost evenly between weight-loss products on one side and services on the other.[21] Within the smaller segment of weight-loss-

16. Zia Ul-Haq et al., *Meta-Analysis of the Association Between Body Mass Index and Health-Related Quality of Life Among Adults, Assessed by the SF-36*, 21 OBESITY E322, E325 (2013).

17. A.G. Tsai et al., *Direct Medical Cost of Overweight and Obesity in the USA: A Quantitative Systematic Review*, 12 OBESITY REVIEWS 50, 50 (2011).

18. Wang et al., *supra* note 13, at 2329. The study further states that due to certain assumptions of the projection, it is "likely an underestimation of the true impact." *Id.*

19. Patrick W. Sullivan et al., *Productivity Costs Associated with Cardiometabolic Risk Factor Clusters in the United States*, 10 VALUE HEALTH 443, 443 (2007).

20. Sheryl Gay Stolberg, *Childhood Obesity Battle Is Taken Up by First Lady*, N.Y. TIMES, Feb. 9, 2010, http://www.nytimes.com/2010/02/10/health/nutrition/10obesity.html?_r=0, *archived at* http://perma.cc/T4YK-DTZG.

21. Press Release, Market data Enters., Weight Loss Market Sheds Some Dollars in 2013 (Feb. 5, 2014), http://www.prweb.com/releases/2014/02/prweb11554790.htm, *archived at* http://perma.cc/ WUJ4-2RDX. This represented a contraction from the previous year, attributed to

service companies, market-share leaders as of 2012 included Weight Watchers ($1.8 billion in 2012 revenue); Nutrisystem ($400 million); Medifast ($365 million); and Jenny Craig ($319 million).[22] As of early 2014, 52.9 million Americans were members of health clubs, and the industry's 2013 revenues totaled $22.4 billion.[23]

The Obama Administration, specifically First Lady Michelle Obama, has devoted much of its political capital and resources to the cause of childhood obesity and nutrition.[24] In 2010, the White House announced the Let's Move Campaign, a comprehensive initiative aimed at eliminating childhood obesity within one generation through efforts aimed at promoting both better eating and more exercise.[25] The campaign has partnered with many government agencies, organizations, and private companies, including Walmart; Walgreens; Darden (operator of Olive Garden, Red Lobster, and other chain brands); Birds Eye; the Department of Defense; the U.S. Olympic Committee; and Disney.[26] The White House also developed a new visual aid for healthy eating, MyPlate, in 2011.[27] MyPlate replaced past versions of the familiar "food pyramid" with a visual representation of a plate divided into sections for fruits, vegetables, grains, and protein, with dairy represented on the side.[28] Thus, although Let's Move is primarily focused on combatting childhood obesity, its partnerships and initiatives have extended beyond that context.

Food labeling is not new on the government-regulation scene. Most American consumers are familiar with the "Nutrition Facts" label required on many of the products purchased in grocery stores and other retail settings. These mandatory labels have been required since President H.W. Bush

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the fact that "[s]ales of diet soft drinks, artificial sweeteners and diet dinner entrees fell significantly and most other market segments were flat." *Id.*

22. Peter Cohan, *Weight Watchers Winning $61 Billion War on Fat*, FORBES (Nov. 14, 2012, 9:47 AM), http://www.forbes.com/sites/petercohan/2012/11/14/weight-watchers-winning-61-billion-war-on-fat/, *archived at* http://perma.cc/YVW9-Y4PL.

23. *Industry Research*, INT'L HEALTH, RACQUET & SPORTSCLUB ASSOC., http://www.ihrsa.org/industry-research/, *archived at* http://perma.cc/AG96-L699. For an empirical analysis indicating overly optimistic predictions of health-club attendance by individual members, see generally Stefano Della Vigna & Ulrike Malmendier, *Paying Not to Go to the Gym*, 96 AM. ECON. REV. 694 (2006).

24. While this Note is focused on obesity in adults, the childhood obesity initiatives undertaken by the First Lady illustrate the priority the Administration has placed on obesity and nutrition in the United States.

25. Stolberg, *supra* note 20.

26. *Accomplishments*, LETSMOVE.ORG, http://www.letsmove.gov/accomplishments, *archived at* http://perma.cc/6UNH-L9LR.

27. William Neuman, *Nutrition Plate Unveiled, Replacing Food Pyramid*, N.Y. TIMES, June 2, 2011, http://www.nytimes.com/2011/06/03/business/03plate.html, *archived at* http://perma.cc/2S9E-FBR4.

28. *Id.*

signed the Nutrition Labeling and Education Act (NLEA) of 1990 into law.[29] In early 2014, Michelle Obama, along with then-Health and Human Services Secretary Kathleen Sebelius and FDA Commissioner Margaret A. Hamburg, introduced a proposed rule revision that would alter the mandatory labels, placing more emphasis on the overall calorie count and the number of servings in a container.[30] Additionally, one of the two proposals would split the label's nutrient counts into three categories: "Quick Facts," "Avoid Too Much," and "Get Enough."[31] While it is too soon to tell whether these changes will promote meaningful improvements in Americans' eating habits, as the new labels will not appear on shelves for more than a year,[32] evidence concerning the overall efficacy of the previous nutrition labeling scheme, in existence for almost twenty-five years, is not encouraging.

Although reports estimate that around half of American consumers do use the labels to make purchasing decisions,[33] such labels are found only on packaged foods purchased in a retail setting. Until recently, there was no equivalent source of information about foods prepared "away from home" and purchased at restaurants, cafes, and other food-service establishments. This gap in information could certainly be related to increasing obesity, as Americans' consumption of foods prepared outside the home has also increased in the past decades. Specifically, the share of overall caloric intake from food prepared away from home increased from 17.7% in the period 1977–1978 to 31.6% in the period 2005–2008.[34] Fast food accounted for a disproportionately large share of the overall increase, more than quadrupling from 3% of the total to 13% of the total.[35] The mean daily caloric intake also increased from 1,875 to 2,002 calories during the same time span.[36] Studies also confirm what many may assume intuitively—food prepared away from home is generally higher in overconsumed food components, such as fat,

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29. Nutrition Labeling and Education Act of 1990, Pub. L. No. 101-535, 104 Stat. 2353 (codified as amended in scattered sections of 21 U.S.C.). Notably, the NLEA explicitly exempted restaurants and similar establishments from having to display nutrition information. *Id.* § 2(a), 104 Stat. 2353–56 (codified at 21 U.S.C. § 343(q)(1)(5)(A)(i)–(ii) (2012)).

30. Ariana Eunjung Cha & Krissah Thompson, *Food Labels to Get First Makeover in 20 Years with New Emphasis on Calories, Sugar*, WASH. POST, Feb. 26, 2014, http://www.washingtonpost.com/national/health-science/food-labels-to-get-first-makeover-in-20-years-with-new-emphasis-on-calories-sugar/2014/02/26/c8feeb4c-9f08-11e3-9ba6-800d1192d08b_story.html, *archived at* http://perma.cc/94RW-MLY4.

31. *Id.*

32. *Id.*

33. *Id.*

34. BIING-HWAN LIN & JOANNE GUTHRIE, U.S. DEP'T OF AGRICULTURE, ECON. RESEARCH SERV., NUTRITIONAL QUALITY OF FOOD PREPARED AT HOME AND AWAY FROM HOME, 1977–2008, at iii (2012), *available at* http://www.ers.usda.gov/media/977761/eib-105.pdf, *archived at* http://perma.cc/9JBE-W9PK.

35. *Id.* at 6.

36. *Id.* at 5.

cholesterol, and sodium, and lower in underconsumed components such as calcium and dietary fiber.[37]

There is some evidence that the economic crisis of 2008–2009 led to at least a temporary decrease in overall consumption outside the home.[38] The total share of food expenditures spent on food prepared away from home increased from 25.9% in 1970 to a high level of 41.9% in 2006–2007, then declined to 41.3% in 2010,[39] a modest decrease relative to the overall increase. In addition, even as overall sales were down, six restaurant chains reported same-store sales growth in the third quarter of 2009: Krispy Kreme, Tim Hortons, Panera Bread, Chipotle, McDonald's, and Wendy's.[40] Overall, these statistics illustrate that a significant and generally increasing proportion of overall calorie consumption in the United States comes from foods not covered by the "Nutrition Facts" food labeling regulations, that those foods tend to be nutritionally inferior, and that larger chains comprise an important and popular segment of the food industry. Any comprehensive effort aimed at combatting obesity through nutritional awareness must address food prepared away from home. Over time this became apparent to local and national lawmakers, and new efforts emerged to mandate nutrition labeling of away-from-home foods. Those efforts are the subject of the next Part.

III. Recent Nutrition Labeling Regulatory Initiatives

In 2003, the Center for Science in the Public Interest released a report called *Anyone's Guess*, which discussed the obesity crisis and ultimately recommended that "Congress and/or state and local legislatures should require food-service chains with ten or more units to list the calorie, saturated and trans fat (combined), and sodium contents of standard menu items on their menus."[41] The following year, the FDA Obesity Working Group released a report that included among its recommendations "[urging the] restaurant industry to launch nation-wide, voluntary, and point-of-sale nutrition information campaign for consumers."[42] Legislators took note of such recommendations—federal efforts began almost right away, but did not

37. *Id.* at 11–12.

38. A. Elizabeth Sloan, *What, When, and Where America Eats*, INST. FOOD TECHNOLOGISTS (Jan. 2010), http://www.ift.org/food-technology/past-issues/2010/january/features/america-eats/americaeats/, *archived at* http://perma.cc/2UVM-4C7A.

39. LIN & GUTHRIE, *supra* note 34, at 1.

40. Sloan, *supra* note 38. All of these restaurant chains are covered by § 4205.

41. CTR. FOR SCI. IN THE PUB. INTEREST, ANYONE'S GUESS: THE NEED FOR NUTRITION LABELING AT FAST-FOOD AND OTHER CHAIN RESTAURANTS 16 (2003), *available at* http://www.cspinet.org/restaurantreport.pdf, *archived at* http://perma.cc/4KDQ-8H5L.

42. U.S. DEP'T OF HEALTH & HUMAN SERVS., CALORIES COUNT: REPORT OF THE WORKING GROUP ON OBESITY ii (2004), *available at* http://www.fda.gov/Food/FoodScienceResearch/ConsumerBehaviorResearchucm081696.htm, *archived at* http://perma.cc/E37J-AWFY.

succeed until the ACA; while state and local governments slowly began to adopt the recommendations in the following years.

A. *Failed Federal Initiatives*

Beginning in 2003, Representative Rosa Delauro and Senator Tom Harkin repeatedly introduced a bill called the Menu Labeling and Education (MEAL) Act in their respective Houses of Congress, to no avail.[43] As of the 2006 version, the MEAL Act would have extended the labeling requirements of the NLEA to "large chain restaurants"—specifically, restaurants would have had to list calorie, saturated fat, trans fat, carbohydrate, and sodium information on menus and calorie content on menu boards.[44] In 2008, Senator Thomas Carper and Representative Jim Matheson introduced a new menu-labeling bill entitled the Labeling Education and Nutrition (LEAN) Act.[45] The LEAN Act was less demanding than the MEAL Act in that it limited labeling requirements to calorie information only and expressly preempted state and local labeling regulations.[46] In contrast with the MEAL Act, the LEAN Act was supported by the restaurant industry.[47] Nonetheless, it ultimately failed in Congress also.[48]

B. *State and Local Initiatives*

In the same time span during which multiple federal bills were unsuccessful, menu-labeling regulations were introduced in many states and counties, and some of those proposed laws were passed and implemented. As of April 2011, labeling policies were in force in multiple counties in New York, including in New York City; Suffolk County, New Jersey; Philadelphia, Pennsylvania; Montgomery County, Maryland; King County, Washington; the state of Vermont; and the state of California.[49] Similar laws had been passed in Maine, Massachusetts, New Jersey, Oregon, three California counties, and one New York county.[50] Further still, menu-labeling laws were introduced in approximately twenty additional states between 2003 and 2009.[51]

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43. Michelle I. Banker, *I Saw the Sign: The New Federal Menu-Labeling Law and Lessons from Local Experience*, 65 FOOD & DRUG L.J. 901, 904 (2010).

44. *Id.*

45. *Id.*

46. *Id.* at 904–05.

47. Tamara Schulman, Note, *Menu Labeling: Knowledge for a Healthier America*, 47 HARV. J. ON LEGIS. 587, 607 (2010).

48. Banker, *supra* note 43, at 905.

49. *State and Local Menu Labeling Policies*, CTR. SCI. PUB. INT. (Apr. 2011), http://cspinet.org/new/pdf/ml_map.pdf, *archived at* http://perma.cc/TN7Q-DV8R.

50. *Id.*

51. *Id.*

C. *Section 4205 of the Affordable Care Act*

In 2009, a bipartisan coalition of senators, representatives of the restaurant industry, and "numerous public health organizations" came to an agreement on a federal menu-labeling provision[52] that eventually became § 4205 of the Affordable Care Act.[53] The agreement was a compromise between the extremes of the failed MEAL and LEAN Acts.[54] Both as initially agreed in 2009[55] and as later enacted in the ACA, the law applied to restaurant chains with twenty or more locations "doing business under the same name" and mandated both calorie counts on menus and more detailed nutrition available to consumers on demand.[56] It further extended to items sold in vending machines owned by individuals or companies operating more than twenty machines.[57]

While § 4205 was signed into law in 2010, the FDA has been slow to promulgate regulations putting it into effect. In 2013, FDA Commissioner Margaret Hamburg stated some of the obstacles to promulgation of such regulations, citing "very, very strong opinions and powerful voices both on the consumer and public health side and on the industry side."[58] Hamburg also referred to practical difficulties in implementing the law, at least in certain establishments.[59] It was not until November 2014 that the FDA released rules pursuant to the law.[60] Though the rules are broader than anticipated, covering movie theaters, amusement parks, alcohol, and grocery store prepared foods, they will still not take effect for at least another year from their release, and in the meantime legal challenges from stakeholders are likely.[61]

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52. Press Release, Sen. Tom Carper, Senators, Public Health Community & Restaurant Industry Reach Historic Agreement to Provide Nutrition Information at Chain Restaurants (June 10, 2009), *available at* http://www.carper.senate.gov/public/index.cfm/pressreleases?ID=b04b1433-d449-47e9-bd7b-928f41e8d128, *archived at* http://perma.cc/M5A3-FFQU.

53. Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, § 4205(b), 124 Stat. 119, 573–76 (codified at 21 U.S.C. § 343(q)(5)(H)(i)–(ii) (2012)).

54. Press Release, *supra* note 52.

55. *Id.*

56. § 4205(b), 124 Stat. at 573–76.

57. *Id.*

58. Mary Clare Jalonick, *FDA Head Says Menu Labeling "Thorny" Issue*, ASSOCIATED PRESS, Mar. 12, 2013, http://health.usnews.com/health-news/news/articles/2013/03/12/fda-head-says-menu-labeling-thorny-issue, *archived at* http://perma.cc/GS5R-CZZD. While the restaurant industry has apparently bought into the new law and have helped draft new regulations, convenience stores and other establishments selling prepared foods have been more resistant. *Id.*

59. *Id.*

60. Sabrina Tavernise & Stephanie Strom, *F.D.A. to Require Calorie Count, Even for Popcorn at the Movies*, N.Y. TIMES, Nov. 24, 2014, http://www.nytimes.com/2014/11/25/us/fda-to-announce-sweeping-calorie-rules-forrestaurants.html?emc=edit_hh_20141125&nl=health&nlid=61876134&_r=0, *archived at* http://perma.cc/9D9H-YH69.

61. *Id.*

D. Mixed Evidence of Effectiveness

While § 4205 has not actually gone into effect, the implementation of similar state and local menu-labeling provisions has provided real-world laboratories for those seeking to establish whether the regulations actually work as predicted. While some studies show at least limited success, others show little to no positive effect at all. In short, the evidence on the effectiveness of menu-labeling laws is mixed. What follows is a brief survey of a few of the relevant studies.

At most, the evidence suggests menu labeling has a moderate effect on consumer behavior. For instance, one study of college students found that women, but not men, tended to order meals with fewer calories when calorie information was provided.[62] The study even noted that past studies had indicated a possibility that young men sometimes use nutrition information in hopes of gaining weight, rather than losing it.[63] In an example of a study that found no significant effect resulting from menu-labeling regulations, the authors examined a King County, Washington regulation that went into effect in 2008.[64] The study was based on transaction data from a chain called Taco Time, from both before the menu-labeling regulation went into effect (the control condition) and after the regulation was in effect.[65] The authors found the regulation had no impact on purchasing behavior, and concluded that in the context of their study, "mandatory menu labeling did not promote healthier food-purchasing behavior."[66] The King County study also summarized earlier research, noting that one study on nutrition information in Subway restaurants indicated that menu labeling led to lower calorie purchases overall; but another study of multiple chains in New York City showed "no significant effects of [menu-labeling regulations] on caloric intake."[67] In addition to these individual study examples, at least one other survey of the relevant literature has concluded that "[m]ost current evidence generally seems to suggest either a modest effect or no effect, on consumers, from calorie labeling."[68]

Thus, at best the evidence is moderately positive; while at worst the outlook for changes in consumer behavior is bleak. Such a state of affairs is discouraging in light of the emphasis placed on menu-labeling laws and the

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62. Mary A. Gerend, *Does Calorie Information Promote Lower Calorie Fast Food Choices Among College Students?*, 44 J. ADOLESCENT HEALTH 84, 85 (2009).

63. *Id.* at 84.

64. Eric A. Finkelstein et al., *Mandatory Menu Labeling in One Fast-Food Chain in King County, Washington*, 40 AM. J. PREV. MED. 122, 123 (2011).

65. *Id.*

66. *Id.* at 122.

67. *Id.* at 122–23.

68. George Loewenstein et al., *Disclosure: Psychology Changes Everything* 19 (Harvard Pub. Law Working Paper No. 13-30, Aug. 18, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2312708, *archived at* http://perma.cc/G8JN-TZ3N.

energy and resources spent on enacting such regulations in the past decade. The theory seems straight forward: many consumers want to make healthier choices, but they previously lacked information that could help them do so. Now that they have the information, they should make better choices, at least in the aggregate. Yet it seems they generally do not, or at best only do so some of the time. What is going on?

For one, the predictions above are quite rational, yet in recent decades research in the fields of psychology and economics has shown that humans deviate from rational behavior often and in systematic patterns. This type of research first came to be known as "behavioral economics," and has since spread to legal scholarship as well. In the legal sphere, this research has coalesced in the field of "behavioral law and economics" (BLE). By applying BLE insights and research to this particular public health and policy issue, this Note's aim is to identify biases and phenomena that inhibit the effectiveness of menu-labeling provisions, despite their intuitive appeal. The Note then proceeds to evaluate § 4205 in light of these biases, ultimately making a few recommendations for improvement, delineating certain limitations of menu labeling, and briefly discussing other possible public policy avenues for addressing the obesity crisis.

IV. How Can Behavioral Law and Economics Help?

A. A Brief Introduction to Behavioral Law and Economics

In a foundational 1998 article originating the concept of BLE, the authors noted their goal was "to advance an approach to the economic analysis of law that [compared to traditional economics] is informed by a more accurate conception of choice, one that reflects a better understanding of human behavior and its wellsprings."[69] The article noted that behavioral research and analysis had become increasingly common in other fields, particularly economics itself.[70] The article defined BLE in contrast to the law and economics school of thought, noting that BLE would instead be based on actual human behavior, as opposed to the fictional "homo economicus," or purely rational actor.[71] Drawing from the advances of behavioral economics, the authors noted three broad characteristics that differentiate actual humans from homo economicus: (1) bounded rationality; (2) bounded willpower; and (3) bounded self-interest.[72]

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69. Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1473 (1998).

70. *Id.*

71. *Id.* at 1476.

72. *Id.* at 1477–79.

Since the inception of BLE, many scholars have applied its methodologies and insights to an ever-increasing variety of areas of law and policy. Cass Sunstein's ideas in particular have gained notoriety since his tenure as head of the Office of Information and Regulatory Affairs (OIRA) during the first term of the Obama Administration[73] and have been disseminated to the public in the book Nudge (written with Richard Thaler, also a coauthor of the foundational 1998 article).[74] Nudge is part of Sunstein's recent formulation of the idea of "libertarian paternalism," which uses a seemingly oxymoronic phrase to advocate for changes that promote well-being without inhibiting individual choice.[75] This particular Note builds on others specifically examining mandated disclosures and other regulatory policies from a behavioral perspective. The next subpart surveys demonstrated behavioral biases and phenomena that best explain why menu-labeling laws have been less effective than advocates had hoped.

B. Relevant Biases and Phenomena

1. The Overload Effect.—The human mind can only process so much information at once. When disclosures such as those mandated by § 4205 become too lengthy, complex, and confusing, target audiences (i.e. consumers) are increasingly likely not to read them, rendering them useless. Omri Ben-Shahar and Carl E. Schneider have discussed the overload effect in the context of mandated disclosures, noting that the overload effect means that disclosees are unable to "understand, assimilate, and analyze the avalanche of information."[76] Evidence suggests the limited capacity of short-term memory; indications are that people can keep seven items at most in their short-term memories[77] and can process no more than seventy-five words of a verbal disclosure such as a Miranda warning.[78] Thus, too much data inhibits effective disclosure.

In the menu-labeling context, it is likely that most individuals will not thoroughly process or consider each piece of information provided. Consumers may simply fixate on only one factor as a simple heuristic for

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73. John M. Broder, *Powerful Shaper of U.S. Rules Quits, with Critics in Wake*, N.Y. TIMES, Aug. 3, 2012, http://www.nytimes.com/2012/08/04/science/earth/cass-sunstein-to-leave-top-regulatory-post.html?_r=0, *archived at* http://perma.cc/YPZ8-U895.

74. RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE (2008).

75. *See generally* Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 CHI. L. REV. 1159 (2003).

76. Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PA. L. REV. 647, 687 (2011).

77. *Id.*; *see also* Brad Tuttle & F. Greg Burton, *The Effects of a Modest Incentive on Information Overload in an Investment Analysis Task*, 23 ACCT. ORGS. & SOC. 673, 675, 683 (1999) (concluding, consistently with previous studies that individuals tend to use a maximum of about six "cues" in decision making).

78. Ben-Shahar & Schneider, *supra* note 76, at 687.

making a desirable choice.[79] Or, overwhelmed by an overabundance of data, they may simply disregard the nutrition information entirely and choose based on their tastes and present desires, just as they would in the absence of the disclosures. Overloaded disclosures are therefore ineffective disclosures. If consumers cannot adequately process or analyze the information disclosed, the resources spent mandating and creating disclosures are wasted.

2. Overoptimism and Hyperbolic Discounting.—Behavioral studies show that people tend to make overly optimistic predictions about their own future behavior. They also tend to justify overconsumption in the present through a phenomenon known as "hyperbolic discounting." Through hyperbolic discounting, consumers mispredict their future preferences, underestimating the intensity of their reactions to costs and benefits associated with given choices at a given time, also known as a "discount rate."[80] Neoclassical economics predicts, through the discounted-utility model, that people will apply an equal discount rate to costs and benefits in the present, the near-term, and the long-term.[81] However, numerous studies have shown that people actually engage in hyperbolic discounting, applying a larger discount rate to events in the near future than to events in the more distant future.[82] Oren Bar-Gill has explained and applied hyperbolic discounting extensively in his behavioral analysis of consumer misuse of credit.[83] Because of hyperbolic discounting, Bar-Gill argues, a consumer who may prefer in the present (T = 0) not to borrow at a future time (T = 1) will then in fact borrow at T =1, underestimating the costs of that decision, because the costs will not accrue until T = 2.[84] Through this preference reversal over time, the consumer underestimates her own future borrowing at T = 0.[85]

Bartels and Rips have explained hyperbolic discounting in psychological terms. They hypothesized, and their study found, that the less psychological

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79. *See id.* at 721 ("The more overwhelming a decision, the more appealing radical short-cuts become. Indeed, confronted with disclosures containing many items, people consider only the simplified shortcut—some bottom line."); Troy A. Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 442 (2003) (gathering empirical evidence that people "shift to simplifying decision strategies . . . as tasks become more complicated" and noting that a decision maker will both "make fewer comparisons across choices and attributes" and "become more selective in the information she analyzes" as complexity increases).

80. Angela Littwin, *Beyond Usury: A Study of Credit-Card Use and Preference Among Low-Income Consumers*, 86 TEXAS L. REV. 451, 467 (2008).

81. *Id.* at 468.

82. *Id.* at 467–68.

83. *See generally* Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373 (2004).

84. *Id.* at 1397–98.

85. *Id.*

connectedness one feels with his future self, the more biased he is toward his present self, as indicated by his preference to speed up rewards and privilege the desires of the present self over those of the future self.[86] Thus, the more temporally remote a future self is, the greater the disparity in discount rates between the present and future (and the greater the magnitude of the preference reversal).

In the same way that hyperbolic discounting leads to skewed estimations of the costs and benefits of borrowing, so too can it lead to skewed estimations about the costs and benefits of a given food-consumption decision. For example, on a given day (T = 0) a consumer may plan to visit a certain restaurant for lunch the next day. At T = 0, the consumer has a given estimation of the costs and benefits of certain food choices. She may underestimate her future consumption (akin to future borrowing) and predict she will not consume above a given calorie level at lunch the next day. When the lunch occasion arrives (T =1), the consumer's preferences may have reversed due to hyperbolic discounting. She will emphasize the current benefits and underestimate the future costs of her consumption decision at (T = 2) and other points in the future. Because the costs of the decision (possible weight gain and health problems for example) lie further in the future than the attendant present benefits (enjoyment of her lunch selection), the consumer might overconsume at T = 1 as compared to her preference at T = 0. This pattern could also occur through the justification of present consumption through underestimation of future consumption. For example, if another consumption decision will occur at T = 2, the consumer might justify consumption at T = 1 by predicting less consumption at T = 2. But when T = 2 becomes the present, hyperbolic discounting will lead to a repetition of the same pattern.

Psychological interconnection has a role to play in food consumption decisions as well. The consumer in the example above will likely give insufficient attention in the present to costs that are especially remote in time, such as a shortened life span (a difference of five years or so thirty years in the future, for example), or other health issues that could compromise quality of life in old age. Hyperbolic discounting minimizes the importance of future costs of consuming high-calorie foods while overemphasizing the more immediate benefits of the same decision.

3. Self-Serving Biases and Underestimation.—Behavioral studies have also demonstrated a wide variety of "self-serving biases." In the context of menu-labeling, self-serving biases are cognitive biases that justify preexisting

86. Daniel M. Bartels & Lance J. Rips, *Psychological Connectedness and Intertemporal Choice*, 139 J. EXPERIMENTAL PSYCH. 49, 49 (2010).

preferences,[87] leading to possible overconsumption of calories. The common thread in each individual self-serving bias is that it leads the consumer to underestimate his actual calorie consumption—even in an environment with calorie information posted clearly on the menu. Such underestimation can lead to greater prevalence of obesity. Not only is this relationship intuitive, but it has also been borne out by data.[88]

As a baseline, without calorie disclosure consumers tend to underestimate the calories in food sold in restaurants. A study across multiple Starbucks locations found that in the absence of disclosures, customers tended to underestimate both the calories in the food they purchased and the calories in a standard food item (a blueberry muffin).[89] Seattle and San Francisco consumers underestimated their food choices by 20.2 and 61.6 calories, respectively, and underestimated the calories in a blueberry muffin by an average of 68.3 calories.[90]

Because of behavioral biases, simply supplying the missing calorie information may not always remedy the underestimation problem. To the extent that menu-labeling laws motivate restaurants to increase the healthy entrée options on their menus, the increased presence of healthy options may have a "halo effect" on the rest of the menu, leading consumers to perceive all entrée items as healthier.[91] This pattern was documented in a study comparing the estimates of Subway and McDonald's consumers.[92] Subway advertises itself as a healthier fast-food option.[93] The study compared

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87. *See, e.g.*, Sharon Hannes, *Compensating for Executive Compensation: The Case for Gatekeeper Incentive Pay*, 98 CALIF. L. REV. 385, 415 n.160 (2010) ("Self-serving bias causes people to overlook matters that can cause them disutility . . . .").

88. *See, e.g.*, Pierre Chandon & Brian Wansink, *Is Obesity Caused by Calorie Underestimation? A Psychosocial Model of Meal Size Estimation*, 44 J. MARKETING RES. 84, 84 (2007) ("Evidence linking calorie underestimation and obesity is strong and comes from health science research that compares actual caloric intake (measured using 'doubly labeled water' [DLW] biomarkers) with self-reported estimates of intake (measured in calories, volume, or frequency) for people with high and low body masses.").

89. Bryan Bollinger et al., *Calorie Posting in Chain Restaurants*, 20 (NBER Working Paper Series, Working Paper No. 15,648, Jan. 2010), *available at* http://www.nber.org/papers/w15648.pdf?new_window=1, *archived at* http://perma.cc/NQF4-ZWML. The study found that consumers actually *underestimated* the calories in beverage purchases. *Id.* The study also concluded that menu-labeling laws had an effect on food calories purchased (causing them to decrease) and no effect on beverage calories purchased. *Id.*

90. *Id.*; *see also* Jessica Wisdom et al., *Promoting Healthy Choices: Information Versus Convenience*, 2 AM. ECON J.: APPLIED ECON. 164, 172 (2010) (study found that without nutrition disclosures, consumers "greatly underestimated daily recommended calorie intake" and "the calories in their meal").

91. Loewenstein et al., *supra* note 68, at 20.

92. Pierre Chandin & Brian Wansink, *The Biasing Health Halos of Fast-Food Restaurant Health Claims: Lower Calorie Estimates and Higher Side-Dish Consumption Intentions*, 34 J. OF CONSUMER RESEARCH 301, 301 (2007).

93. *Id.*

consumer estimates of the calories in comparable meals at McDonald's and Subway and found that Subway consumers systematically and significantly underestimated calorie counts more than McDonald's consumers did.[94] The McDonald's and Subway study also revealed a type of "substitution effect": Subway consumers, who believed the food there was healthier and underestimated its calorie content, also ordered higher calorie beverages and sides than McDonald's consumers.[95] In that particular portion of the study, consumers receiving a Subway coupon chose meals with 56% more calories than the meals of those receiving a McDonald's coupon.[96] The substitution effect was also observed in a study in which participants were "nudged" toward lower calorie sandwiches by a "convenience menu."[97] The customers more often chose lower calorie sandwiches, but a simultaneous calorie increase in beverages and sides cancelled out any calorie decrease from the lower calorie sandwich choices.[98]

For the most part, the halo and substitution effects above were observed in environments lacking calorie disclosure. It is tempting to conclude that menu labeling should easily eliminate them, but there are strong arguments against such a conclusion. First, the "convenience menu" study included at least some menus with calories information prominently displayed next to the food item.[99] The authors of the study suggested that perhaps the mechanism behind the substitution effect was that "[c]hoosing from the healthy menu may have led to a sense of deservingness upon seeing the unhealthy sandwiches that were passed up, leading people to reward themselves with higher-calorie side dishes and drinks."[100] This sense of "deservingness," if it indeed animates the substitution effect, will not be ameliorated by calorie disclosures. In fact, it may even be exacerbated.

Adding to the argument that menu labeling cannot erase the halo and substitution effects is the phenomenon of "information neglect." One subset of information neglect is the "above-average effect," which describes the fact that people tend to believe themselves to be above average in various regards, in defiance of the mathematical definition of "average."[101] This overconfidence has been shown to translate into overoptimism about one's own health and risks of certain medical problems.[102] If a consumer is unrealistically optimistic about their own health outlook, that could cause

94. *Id.* at 304–06.

95. *Id.* at 307.

96. *Id.*

97. Wisdom et al., *supra* note 90, at 170–71.

98. *Id.*

99. *Id.* at 167.

100. *Id.* at 171.

101. David Dunning et al., *Flawed Self-Assessment: Implications for Health, Education, and the Workplace*, 5 PSYCH. SCI. PUB. INT. 69, 72 (2004).

102. *Id.* at 79.

him to neglect calorie information or at the very least, skew its importance. In combination with the overload effect discussed above, information neglect could result from consumers using the calorie content of the main entrée as a simple heuristic for a good choice, while neglecting the calorie content of sides and beverages.

4. Bounded Willpower.—Of all the insights BLE can bring to this particular issue, the role of bounded willpower may be the most intuitive. We often realize we should eat better than we do, but we give in to temptation and order something more appealing (and less healthy) than what we think we should. BLE scholarship has documented this pattern with more precise labels. As a general matter, Christine Jolls and her coauthors use "bounded willpower" to describe "the fact that human beings often take actions that they know to be in conflict with their long-term interests."[103]

George Loewenstein has described a "hot" self and "cold" self, and used those concepts to describe a "hot–cold empathy gap."[104] Loewenstein examines the role of visceral factors in decision making. The hot self is hungry, angry, jealous, sad, or in some other type of "visceral state," while the cold self is not in such a state (not hungry, angry, in pain, or a similar condition).[105] Loewenstein argues that the cold self does not adequately remember past visceral states, leading people to underestimate the effects of visceral factors in the future.[106] On the flip side, he argues that the hot self lacks understanding of the cold self and "miscalculate[s] the speed with which [the hot state] will dissipate."[107] Loewenstein has labeled this interplay the "hot–cold empathy gap."[108] On the whole, he finds not only that people underestimate the effect of future visceral factors on their behavior but that elevated visceral factors influence their "immediate behavior more than they think is normatively justified, either beforehand or afterward (when they are not in an elevated state), or even sometimes at the moment of acting."[109]

Other scholars including Roy Baumeister have developed a theory of "ego depletion," which describes the idea that humans have limited stores of self-control or willpower.[110] One study found that glucose levels played a

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103. Jolls et al., *supra* note 69, at 1479.

104. George Loewenstein, *Emotions in Economic Theory and Economic Behavior*, 90 AM. ECON. REV. 426, 428 (2000).

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.* at 429.

110. Roy F. Baumeister et al., *The Strength Model of Self-Control*, 16 CURRENT DIRECTIONS PSCYCH. SCI. 351, 351 (2007).

role in self-control, in that acts of self-control reduced glucose levels, inhibiting performance in other self-control tasks, while drinking glucose-sweetened lemonade restored better self-control.[111] In another study, the act of resisting cookies and chocolate led participants to give up faster on a subsequent task than those who had not had to resist the sweets.[112] These are just a few examples of the ways in which studies have shown that self-control is a scarce resource that can be depleted. At the extreme, some scholars have argued that drug addicts are susceptible to a total breakdown in willpower, in which the "impulsive system" takes over the "reflective system," both when it comes to drugs and in other decision-making contexts.[113]

Thus, BLE scholarship supports the conclusion that hunger (a visceral factor) has a disproportionate effect on decision making, and we systematically underestimate the magnitude of its effect on our future decisions. We may plan to stick with a salad or other low-calorie offering on a future occasion, but once we arrive at the restaurant we are in a "hot state," heavily influenced by hunger, and we choose an option that is more appealing in the moment. The influence of hunger may be even greater when people have to exert self-control in other aspects of their lives, thus depleting their reserves and diminishing their ability to resist tempting food choices.

C. Sophisticated and Naïve Consumers

Before this Note proceeds to a critique of § 4205 and a series of recommendations, it is important to note the relevance and importance of heterogeneity within populations. In this context, heterogeneity means that some consumers may scrupulously examine calorie counts as a result of menu-labeling and consistently make better choices as a result. Others will most likely ignore the calorie counts altogether. Many will lie somewhere between the extremes. Broadly speaking for simplification purposes, there is a sophisticated group of consumers and a naïve group. The sophisticated group might be overweight or obese, but consumers in that group are also attentive to health and calories. They may desire outside help in sticking to better choices day in and day out. These are the type of consumers who use Weight Watchers and other weight-loss services. On the other hand, naïve consumers are those who are unaware (or unconcerned) that there is any problem to address. Part of any solution that aims to change the behavior of

111. *Id.* at 352.

112. *Id.*

113. *See* Andrew H. Costinett, *"In a Puff of Smoke": Drug Crime and the Perils of Subjective Entrapment*, 48 AM. CRIM. L. REV. 1757, 1772–73 (2011) ("Substance abuse has been tied to disorders affecting the ability of the reflective system to govern the impulsive system. . . . This volitional impairment goes beyond the continuing drug use itself.").

naïve consumers must be convincing them that there is an important problem they should address.

In the realm of disclosures, the division between sophisticated and naïve consumers can lead to a sort of paradox: disclosure may "help[] most those who need help least and help[] least those who need help most."[114] As Ben-Shahar and Schneider have explained: "Information is most useful to well-educated and well-off people who have the resources and sophistication to locate, interpret, and use the revealed information."[115] This dynamic has been established in studies of consumer credit knowledge.[116] Others have identified an effect called the "double curse of incompetence."[117] Often, the skills necessary to recognize incompetence are the same or similar to those required to be competent in the first place.[118] Extrapolating to menu-labeling, this means that those who were already more concerned about calories in the first place are more likely to benefit from calorie disclosures.

This paradox has an important socioeconomic dimension, one that is largely outside the scope of this Note but is worth mentioning nonetheless. For the poor, losing weight may not be as looming a concern as saving money and avoiding hunger on a day-to-day basis. People who are overweight and obese are disproportionately poor.[119] The poor may look to maximize their calories per dollar and may use calorie information toward that end.[120] Thus it is important to realize that lack of awareness of a problem is not always the cause of inattentiveness to the issue. Rather, weight and health may simply not be the most looming problem in a person's mind at a given moment. Further still, because of the difficulty of their daily financial decisions, the poor are more likely to experience depleted willpower.[121] Whatever the specific mechanism, the Starbucks study discussed above lends support to the idea that menu-labeling is less effective for low-income populations. That study found that the decrease in calories per transaction after menu-labeling went into effect was higher for stores in zip codes with higher income and education levels.[122] In light of the

114. Ben-Shahar & Schneider, *supra* note 76, at 740.

115. *Id.*

116. *Id.*

117. Dunning et al., *supra* note 101, at 73.

118. *Id.*

119. Loewenstein et al., *supra* note 68, at 31.

120. *Id.*

121. *See* Dean Spears, *Economic Decision-Making in Poverty Depletes Behavioral Control*, 11 B.E. J. ECON. ANALYSIS & POL. 1, 32 (2011) (using empirical studies to conclude that "[e]conomic decision-making diminished behavioral control when participants were poorer" and that "poverty appears to cause depleted performance, rather than the other way around").

122. Bollinger et al., *supra* note 89, at 15.

proportion of overweight and obese who are also poor, understanding these dynamics is critical to effective obesity-reduction efforts.

V. Proposed Improvements to Nutrition Labeling Laws

This Part builds on the behavioral research described above by using it to critique § 4205 and setting out a few proposals that might increase its effectiveness. Some of these proposals amount only to rearranging menus and would be relatively simple to implement, while others are more resource-consuming and invasive, requiring, for example, detailed personalized disclosures based on transaction data. All of the proposals are based on behavioral effects and biases that have been shown in numerous studies, including those discussed in the previous Part.

A. Limit Information Disclosed ("Keep It Simple!")

The first, and simplest, proposal is to keep calorie disclosures simple. To the credit of § 4205 and its drafters, the law already does an adequate job of this. By limiting required menu disclosures to calories alone,[123] the law reduces the likelihood that consumers will experience overload effects. While there may be more than six or seven items (the number generally able to be stored in short-term memory) on the menu, consumers might limit their preferences to a smaller number of items, read the calories for each item, and make a decision accordingly. If the proposed MEAL Act had been enacted, overload effects most likely would have been more problematic, as the law would have required disclosure of more extensive information than calories alone.[124] The menu-labeling scheme that was enacted in § 4205 strikes a good compromise because it mandates the availability of more detailed nutrition information for consumers who desire it,[125] but it does not crowd menus with disclosures such that it endangers the effectiveness of the entire effort on account of overload effects.

B. Anchoring and Context: Menu Organization Tweaks

To promote more reliance on calorie information, a more effective menu-labeling provision might mandate a pattern of organization for chain restaurant menus. Under this proposal, menus would list a sample recommended caloric intake for each *meal*, rather than as a daily total, and it might organize the menu items in order from least to most caloric.[126] The

123. Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, § 4205(b), 124 Stat. 119, 573–76 (codified at 21 U.S.C. § 343(q)(5)(H)(i)–(ii) (2012)).

124. *See supra* subpart III(A).

125. § 4205(b), 124 Stat. at 573–76.

126. This Note leaves to the side thorny policy questions concerning the normatively desirable level of invasiveness into private companies in this context and focuses exclusively on the most effective policies from a behavioral point of view.

goals of these changes would be to promote better decision making through comparison, provide context for calorie-level choices, and combat overly optimistic predictions of future consumption.

As written, § 4205 mandates disclosure of daily recommended calorie intake.[127] This information might be useful, but it would be even more useful if it were divided into a sample allocation of calories per meal. The utility of a more specific recommendation stems from behavioral effects known as anchoring and bracketing.

Anchoring occurs when a person starts with a certain number or estimate in mind, then adjusts a prediction or preference from that number.[128] Anchors have been shown to heavily influence people's predictions, preferences, and other estimations.[129] Thaler and Sunstein have pointed out that anchors can serve as nudges in certain contexts.[130] In the menu-labeling context, providing an anchor for calories to be consumed in a given meal might influence consumers to stick within the ballpark of that calorie level. Listing recommended calorie intake for dinner or lunch as, for example, 500 calories might nudge consumers toward entrees that generally stay close to that number. This effect would result from per meal recommended calorie intake and not from daily recommended calorie intake. In the current § 4205 scenario, a recommendation of 2,000 calories per day will not have the same salutary effect, due in part to overly optimistic predictions. A consumer might justify consuming 700 calories at lunch by predicting (likely erroneously) that he will consume only 300 calories at dinner.

Per meal recommended calorie intake also plays into the bracketing effect. The concept of bracketing describes various mental accounting patterns found in past studies. Behavioral research has found that people often divide decisions over time into smaller temporal units.[131] They bracket decisions narrowly.[132] For example, a study of horse race betting shows that many bettors keep a "mental account" of betting for each day, "shift[ing] bets towards long shots in the last race in an attempt to 'break even' on the day . . . ."[133] In another example, inexperienced taxi-cab drivers set daily mental targets, quitting for the day when they reached the daily target.[134] Using per meal recommended calorie intake could take advantage of narrow bracketing. If consumers are encouraged to bracket by each individual meal,

127. § 4205(b), 124 Stat. at 573–76.

128. THALER & SUNSTEIN, *supra* note 74, at 23.

129. *Id.* at 23–24.

130. *Id.* at 24.

131. Camerer et al., *Labor Supply of New York City Cabdrivers: One Day at a Time*, 112 Q.J. ECON. 407, 410 (1997).

132. *Id.*

133. *Id.*

134. *Id.* at 407.

they are less likely to consider their overly optimistic predictions that they will compensate for present overconsumption on future occasions. A singular focus on the present meal decreases the chances of overconsumption on that particular occasion.

Another organizational tweak that can help consumers better process calorie information is to enable comparisons by listing entrees in order from least to most caloric. Evidence shows that consumers of information use it differently if it is arranged in an order that makes it easier to process.[135] For instance, a study of the impact of U.S. News college rankings showed that when schools ranked 25th–50th were ranked numerically instead of alphabetically, applications rose in proportion with the school's rank.[136] No such effect existed when schools were ranked alphabetically, even though numerical rank was included in the listings.[137] Another study found that consumers saved more money through unit-price comparisons when the unit prices were listed in a sorted list rather than only next to each individual item in the display.[138] Sorting menu items in order of calorie content would reduce the mental effort associated with determining which entrees had the least calories, which could lead to an increased benefit from menu-labeling regulation.

C. Advice

In their behavioral analysis of mandated disclosure as a broad category, Ben-Shahar and Schneider recommend moving from "information toward advice" as a way of improving disclosures.[139] Particularly where the goal of disclosure is to persuade through information, giving explicit advice is the next logical step, and might reduce decision fatigue. Making the nudge more obvious could increase the likelihood that people will seize on advice as a simple heuristic for decision making, thus reducing expenditures of mental energy.

There are some indications that this proposal should be explored cautiously in the menu-labeling context. Two studies revealed potential pitfalls of categorical ratings on menus. Menu items were grouped by calorie

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135. *See, e.g.*, Loewenstein et al., *supra* note 68, at 22–23 (noting that people "are generally able to make more coherent and rational decisions when they have comparative information that allows them to assess relevant tradeoffs," which "suggests that disclosures that provide comparisons, or information in standardized formats that facilitate comparisons, may have the greatest impact and benefit").

136. Michael Luca & Jonathan Smith, *Salience in Quality Disclosure: Evidence from the U.S. News College Rankings*, 22 J. ECON. & MGMT. STRATEGY 58, 58 (2013).

137. *Id.*

138. James R. Bettman et al., *Constructive Consumer Choice Processes*, 25 J. CONSUMER RES. 187, 202 (1998).

139. Ben-Shahar & Schneider, *supra* note 76, at 746.

content into green, yellow, and red light categories.[140] Instead of reducing overall calorie consumption through use of a simple heuristic, two mechanisms led the categories to backfire. First, thinking of green as the sign to "go," participants "availed themselves more freely of green light items."[141] Second, when people chose from the yellow or red light categories, they tended to choose higher calorie options from that category, "seemingly with the logic that 'if I'm going to consume a red light item anyway, I might as well get the most fulfilling one I can.'"[142] Thus, trying to move disclosures more toward advice can backfire if not executed thoughtfully. One option to pursue might be simply highlighting recommended entrée items, instead of using categories, in hopes that the pitfalls encountered in the green/yellow/red light studies could be avoided.

D. Personalized Disclosures

Personalized disclosures have been proposed for counterbalancing behavioral biases in a variety of fields. Though more onerous to implement than some of the solutions explored above, they can be highly effective at combatting overly optimistic predictions and hyperbolic discounting, along with self-serving biases that lead to underestimation of calorie intake. Bar-Gill recommended personalized disclosure as a possible solution to consumer misuse of credit.[143] By targeting the underestimation bias, he argued, personalized warnings of projected debt and its consequences might be more effective than generalized disclosure of interest rates.[144] In another context, one study showed that personalized feedback about health risks reduced individuals' overly optimistic estimations of their risk.[145] The Obama Administration has seized upon this idea in other policy areas, creating the "Smart Disclosure" initiative, which is "designed to encourage providers to disclose downloadable, machine-readable information, in part so that intermediaries can help consumers of (for example) energy and health care learn about their own behavior, and, as a result, make more informed choices."[146]

These suggestions might be adapted to the restaurant industry by requiring restaurants to list the calorie information for the purchased items on every receipt. Or, taken a step further, personalized disclosures could be linked to credit card accounts, listing more comprehensive personalized

140. Loewenstein et al., *supra* note 68, at 22.
141. *Id.*
142. *Id.*
143. Bar-Gill, *supra* note 83, at 1378.
144. *Id.*
145. Dunning et al., *supra* note 101, at 81.
146. Loewenstein et al., *supra* note 68, at 28.

calorie data. Personalized disclosures of this sort would combat underestimation by clearly reporting the calories of the food actually ordered, and would combat overoptimism and hyperbolic discounting by providing a record of past behavior inconsistent with overly optimistic predictions of future consumption.

The potential solutions discussed above could all incrementally improve the effectiveness of menu-labeling by minimizing some of the behavioral biases that pose obstacles. However, the list of solutions as compared to the behavioral biases at play reveals the inherent limits in menu-labeling as a policy. For example, no type of menu-labeling can adequately counteract bounded willpower. The hungry (hot) self is heavily influenced by the visceral factor of hunger, which puts well-reasoned considerations of long-term costs at a stark disadvantage in the consumer's decision-making process. Especially because the population is heterogeneous and different policies might be more effective on different people, deployment of a variety of public-policy instruments remains crucial in the fight against the obesity epidemic.

VI. Other Behaviorally Based Solutions (and Their Limits)

This Part briefly surveys three types of existing and potential solutions apart from menu-labeling with the aim of identifying a few types of policies that could work in concert with menu-labeling to combat obesity.

A. Precommitment Mechanisms

Precommitment mechanisms are a promising instrument for overcoming bounded willpower, particularly among sophisticated consumers who actively want help making better food-related decisions. Generally speaking, precommitment mechanisms allow individuals to restrain their own future behavior. Angela Littwin has proposed such a scheme to promote responsible use of credit.[147] As applied to eating out, an adapted version of Littwin's proposal would entail giving consumers a way to limit, in advance, their future expenditure (in calories or dollars) on food purchased at restaurants. The program might even permit prohibiting oneself from purchasing anything at all at certain locations. To be sure, this type of scheme involves many logistical difficulties, to include likely opposition from restaurants and potentially credit card companies (if they were expected to administer such programs), and would likely include loopholes, such as a consumer's ability to use cash to defeat her own chosen restraints. Nonetheless, precommitment mechanisms of this type could be a powerful tool in combating calorie overconsumption for individuals who want help in that effort.

147. Littwin, *supra* note 80, at 478–500.

Private companies have already begun to create other types of precommitment mechanisms. For instance, websites such as DietBet administer a program in which participants put money into a sort of "pot," betting on themselves to lose a certain amount of weight.[148] Whether the money is returned to the participant is contingent on his success in meeting his goal.[149] This model might be one that governments and other interested organizations could adapt in other antiobesity initiatives.

B. Incentive Programs

Many behavioral scholars have investigated the effects of incentive programs. Evidence of their effectiveness is mixed and depends greatly on their design. Among the more successful examples was one program that rewarded participants for going to the gym a certain number of times per week.[150] The habits formed during the reward period persisted even after the rewards were discontinued.[151] A year long study specific to weight-loss incentives found that financial incentives led to greater weight loss in incentivized participants than nonincentivized participants.[152] Incentive programs are thus also worth exploring to limit the spread of obesity. Whether they could, or should, be successfully implemented by the government is a separate issue, however.

C. Taxes

Unhealthy foods, particularly soda, have been targeted by campaigns to impose special taxes as an antiobesity measure. Proposed soda taxes have been unsuccessful in New York City, Hawaii,[153] and two cities in California,[154] while another is currently languishing in the Illinois state

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148. Pamela Weiler Grayson, *Dieting? Put Your Money Where Your Fat Is*, N.Y. TIMES, Feb. 4, 2009, http://www.nytimes.com/2009/02/05/health/nutrition/05fitness.html?pagewanted=all&_r=0, *archived at* http://perma.cc/X2GA-SBPT.

149. *Id.*

150. Uri Gneezy et al., *When and Why Incentives (Don't) Work to Modify Behavior*, 25 J. ECON. PERSPS. 191, 205–06 (2011).

151. *Id.*

152. Jennifer K. Nelson & Katherine Zeratsky, *Money Talks When It Comes to Weight Loss*, NUTRITION-WISE BLOG, MAYO CLINIC (Apr. 4, 2013), http://www.mayoclinic.org/healthy-living/nutrition-and-healthy-eating/expert-blog/weight-loss-incentive/bgp-20056248, *archived at* http://perma.cc/45KC-5BRC. Incentivized participants lost an average of 9.1 pounds, while nonincentivized participants lost an average of 2.6 pounds. *Id.*

153. Duane D. Stanford, *Anti-Obesity Soda Tax Fails as Lobbyists Spend Millions: Retail*, BLOOMBERG, Mar. 13, 2012, http://www.bloomberg.com/news/2012-03-13/anti-obesity-soda-tax-fails-as-lobbyists-spend-millions-retail.html, *archived at* http://perma.cc/97GS-YB9Q.

154. Joe Satran, *Soda Taxes Shot Down by Voters in Two California Towns*, HUFFINGTON POST (Nov. 7, 2012 2:27 AM), http://www.huffingtonpost.com/2012/11/07/soda-taxes_n_2088170.html, *archived at* http://perma.cc/2NZD-SJQE.

legislature.[155] One early 2014 summary noted that soda taxes had been proposed in thirty states since 2009.[156] None of these proposals were successful[157] until Berkeley, California became the first city to pass a soda tax in November 2014.[158]

Soda taxes and similar measures, including the New York City ban on large-sized sugary drinks, have faced serious uphill political battles and are generally unpopular. In addition, a large and powerful industry is highly motivated to fight against these campaigns. These types of measures are politically disadvantaged because they go beyond the "nudge" threshold. For all that purists may argue against the concept of libertarian paternalism, soda taxes and size regulations cannot even be defended as libertarian. There is no free choice left when taxes and bans are imposed. Regardless of the effectiveness of these types of policies, implementing them will come with high political costs.

VII. Conclusion

Behavioral law and economics as a field contains many useful insights for policy makers hoping to combat obesity through menu labeling. Particularly in an area so heavily influenced by bounded willpower and rationality, understanding the cognitive processes in this type of decision making is critical. Section 4205 is a good baseline for menu-labeling from a BLE perspective, but certain changes could drastically improve its effectiveness as a weapon against obesity. While the practical and political feasibility of the solutions proposed in this Note vary widely, from a BLE perspective there exists a wide variety of policy options to effectively nudge consumers toward healthier choices, should the political will exist to implement any of them in practice.

—*Kathryn W. Bailey*

155. *Proposed Illinois Tax on Soft Drinks May Fizzle*, CHI. SUN-TIMES, Apr. 28, 2014, http://politics.suntimes.com/article/springfield/proposed-illinois-tax-soft-drinks-may-fizzle/mon-04282014-844am, *archived at* http://perma.cc/5ENW-NR4B.

156. J.R. Reed & Hannah Schwartz, *Harp Proposes CT Soda Tax*, YALE DAILY NEWS, Feb. 13, 2014, http://yaledailynews.com/blog/2014/02/13/harp-proposes-ct-soda-tax/, *archived at* http://perma.cc/2S67-L5B4.

157. *Id.*

158. Sam Frizell, *Nation's First Soda Tax Passed in California City*, TIME, Nov. 5, 2014, http://time.com/3558281/soda-tax-berkeley/, *archived at* http://perma.cc/GX39-VWRA.