



**Sylvia R. Karasu M.D.**  
*The Gravity of Weight*

# The Handwriting on the Wall: Menu Labeling

Is posting nutritional information in restaurants "public health paternalism"?

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Rembrandt's "Belshazzar's Feast," circa 1635-1638, National Gallery in London, Room 24, based on the Biblical story in the Book of Daniel.

Source: Wikipedia Commons/Public Domain

Preparing for a great palace feast, King Belshazzar, an ungodly man, commanded his underlings to fetch the golden vessels that his father Nebuchadnezzar had confiscated from the temple in Jerusalem. He and a thousand of his lords, so the *Book of Daniel* tells us, drank from these holy goblets and praised "the gods of silver, gold, brass, iron, wood and stone." Suddenly, there appeared "fingers of a man's hand" that inscribed the famous four words on the palace wall.

Alarmed and much shaken, Belshazzar assembled his soothsayers and astrologers, none of whom could interpret the strange words. The Queen, though, suggested they send for righteous Daniel, who interpreted this "handwriting on the wall" as a sign from God: "God hath numbered the days of your kingdom and brought it to an end; you have been weighed on

the balances and found wanting; thy kingdom is divided..." That night Belshazzar was killed. (*Oxford Annotated Bible, Daniel, 5:1-30*) This story has been appropriated by musicians (e.g. George Frideric Handel's oratorio), artists (e.g. paintings by Rembrandt and John Martin), and poets (e.g. Lord Byron and Heine); the famous words are even the title of a short story by John Cheever. (*The New Yorker, 4/27/63*)

While hardly as menacing or alarming as those Biblical words, menu labeling—the clear and conspicuous posting of nutritional information in restaurants—may require some of its own interpretation as well.

Menu labeling has had different meanings. Most commonly, it refers to information on calories specifically, but it can refer to other kinds of nutritional information (e.g. fat, sugar, salt content.) Sometimes, it refers to the so-called "traffic light system," whereby there is not merely information but an *evaluative judgment* presented (e.g. "green" for healthy; "red" for unhealthy.) (Fernandes et al, *Nutrition Reviews*, 2016) And it even can include the amount of exercise (e.g. walking) required to expend the calories eaten. Further, there is the suggestion that calorie counts alone are not as effective unless consumers are given some guidelines about how many calories they should be consuming in a day or at one meal. (Shiv and Fedorikhin, *Journal of Consumer Research*, 1999.) This, of course, adds to the complexity because caloric needs for a particular individual are quite varied.



Claude Monet's painting, "La Grenouillère," 1869, H.O. Havermeyer Collection, Bequest of Mrs. H.O. Havermeyer, 1929. This restaurant is not exactly what menu posting laws had in mind.

Source: Metropolitan Museum of Art, use for scholarly purposes (no copyright)

Mandatory labeling of packaged food began in the early 1990s, with the implementation of the *Nutrition Labeling and Education Act*. The plan to offer information on calories in restaurants grew out of the concern that obesity rates have continued to increase throughout our country over the past thirty years, and people have frequented restaurants (and particularly fast food establishments) much more commonly than years ago. Stunkard and colleagues, in the late 1970s, for example, noted that people ate most of their meals at home. (Coll et al, *Archives of General Psychiatry*, 1979.) More recently, Urban et al (*JAMA*, 2011) reported that 35% of our *daily intake* in the U.S. now comes from food purchased outside of the home. VanEpps et al (*Current Obesity Reports*, 2016) reported

that half of all food dollars are spent on "away from home foods." This Act, though, did not lead to a decrease in obesity. (Bernell, *Food & Drug Law Journal*, 2010.)

Over the years, as well, portion sizes have grown considerably: in 1955, a McDonald's hamburger came in one 1.6-ounce size; more recently, people can choose from several sizes, including an 8-ounce burger. (Young and Nestle, *Journal of Public Health Policy*, 2007.) Bassett et al (*American Journal of Public Health*, 2008) surveyed over 7300 customers from 11 fast food chains and found that people purchased a mean of 827 calories a meal, with 34% purchasing over 1000 calories, and 15% over 1250 calories.



Vintage decorative menu, part of Cooper Hewitt Collection, NYC, gift of unknown donor.  
Source: Cooper Hewitt Museum (Smithsonian Design Museum))

Furthermore, people are notoriously inaccurate in assessing calorie counts, called by the NYC Department of Health, "the calorie information gap." (Farley et al, *Health Affairs*, 2009.) A now classic survey, for example, of professional *nutrition experts* found even they significantly underestimated calorie and fat content of common foods; when it came to a Porterhouse steak and onion rings, for example, the respondents were more than 600 calories off. (Bankstrand et al, 1997, [www.portionteller.com/pdf/cspistudy97.pdf](http://www.portionteller.com/pdf/cspistudy97.pdf).) More recently, Burton et al (*American Journal of Public Health*, 2006) likewise found consumers significantly underestimated calories and fat in food as well.

New York City was the first to propose laws for posting of calories in restaurants, but the New York State Restaurant Association filed suit against the city, claiming, among other things, that the law violated the First Amendment (e.g. calorie posting was seen as a form of "compelled speech," and restaurants should have a right not to have to say something.)

David B. Allison, PhD., now Dean of the School of Public Health at Indiana University at Bloomington, was the expert witness for the Restaurant Association. In a logically argued and carefully worded affidavit (2007), Allison questioned whether posting calorie counts in one setting would *necessarily* lead to changes in calorie intake in other settings. He maintained there was not sufficient evidence that calorie postings would necessarily reduce obesity in individuals or in the general population and might be ineffective or even possibly have unforeseen consequences. (For a summary of Allison's affidavit, see either Banker, *Food & Drug Law Journal*, 2010 or Bernell, 2010.) Ultimately, the judge, while acknowledging Dr. Allison's argument that there was not adequate evidence one way or the other, nevertheless ruled in favor of NYC and upheld the law that any restaurant with 15 or more establishments had to post calories. The law, incidentally, excluded condiments, daily specials, or custom orders. (Banker, 2010)



Subsequently, other states followed NYC and ultimately led to the passage of a federal law as part of the *Affordable Care Act* that any restaurant with 20 or more facilities had to post their calories. (fully effective by May 2018.) Now, over ten years later, with several systematic reviews published (Downs et al, *American Journal of Public Health*, 2013; VanEpps et al, 2016; Bleich et al, *Obesity*, 2017) (including data before and after the law has taken effect in certain cities), results are decidedly mixed on the effect of calorie postings, with some research finding no effect at all.

Most of the studies are observational and cannot prove causation. When studies did find a reduction in calories in response to postings, people *purchased* (assessed by receipts) only minor decreases in their numbers of calories (e.g. 38 calories; 22 calories, etc.) per order. Cafeteria settings may be more responsive, possibly because people eat there more regularly and don't think of that setting as a treat or because

Renoir's "A Waitress at Duval's Restaurant," ca. 1875. Bequest of Stephen C. Clark, 1960, at the Metropolitan Museum of Art, NYC. Source: Metropolitan Museum of New York, no copyright



John Martin's painting "Belshazzar's Feast," 1820, Yale Center for British Art (not on view.) Source: Wikipedia Commons/Public Domain

they attract a more educated, health-conscious population (e.g. hospital or university setting.) (Bleich et al, 2017) To date, there are 11 studies involving the influence of menu labeling on children and adolescents; those conducted in the "real world" as opposed to an artificial lab situation, are less supportive of an effect and overall, many are of weak quality. (Sacco et al, *Perspectives in Public Health*, 2017)

Menu labeling is an example of a "nudge," first elaborated by Thaler and Sunstein in their book of that name. (2008) It is an approach that (often for their own good) "steers people in a particular direction, but also allows them to go their own way." (Sunstein, *Behavioural Public Policy*, 2017) For some, nudges are considered an example of paternalism, especially when there is a sense that people need influencing to make the right decision. Sometimes, though, nudges are not effective: they can be counterproductive if people have strong contrary preferences or if they are confusing or present too much information. "Attention is a scarce resource," says Sunstein (2017.) Nudges may also have only a short-term effect, as for example with repeated exposure, the information can become more "like background noise." And they can produce a "rebound effect" whereby people will compensate for the behavior originally produced by the nudge. All of these issues are potentially relevant to menu posting.



Vintage Thanksgiving menu postcard. Most people would prefer not to know calorie counts for meals on special occasions or holidays. From Old Design Shop. Pinterest. Source: Pinterest, free digital image

What, though, constitutes scientific evidence and how much should we require in obesity studies, especially when considering public health policies? Allison and colleagues (Richardson et al, *International Journal of Obesity*, 2017) raise these provocative questions. They remind us that there is a distinction between evidence to reach a decision about public policy and evidence to reach a scientific conclusion. A scientist, says Allison (*International Journal of Obesity*, 2011) is concerned with truth while the "well-meaning public health advocate" asks, "...given what we know today, is it prudent to implement one plan in the hopes that it will create a certain response?" Along those lines, he is concerned with "public health paternalism" that "may focus more on changing the unhealthy eating habits of the less powerful social classes." (Allison, 2011.)

Sandro Galea, in his new book *Healthier: Fifty Thoughts on the Foundations of Population Health* (2018), cautions about the unintended consequences of oversimplifying complex systems in public health. He believes that action "does not need to follow causal certainty;" we can and sometimes should act "even when we don't know all the answers" as long as we recognize the uncertainties and are willing to adjust our course "when some of our ignorance falls away." (pp. 206-7)

**Bottom line:** Just like Belshazzar, menu labeling has been, as it were, "weighed...and found wanting." Some people (myself included) find menu labeling helpful for regulating their caloric intake; others, especially over time, may ignore the information as background noise and still others may resent these paternalistic nudges and in opposition, increase their intake.

Most studies are of weak or only of moderate quality, and none have sufficiently demonstrated that calorie labeling actually leads to reduced overweight and obesity on a population level, nor even to reduced intake from one meal to another, nor even distinguishes calories purchased from calories consumed. (Allison, 2011) Further, studies usually don't discuss the process by which calorie counts are obtained or even how accurate



James Gilray's "Hand-Writing on the Wall," 1803, at the United States Library of Congress Prints and Photographs Division. Painting of Napoleon who looks in horror at the Biblical words in the sky.

Source: Wikipedia Commons/Public Domain

they are. Several studies have found significant differences between reported calories and those subsequently tested, often due to portion size discrepancies. (Urban et al, 2011; Feldman et al, *Appetite*, 2015) Nor do studies differentiate thin customers from obese ones by measured BMI. There is a suggestion that menu labeling has led some food establishments to offer lower calorie options and healthier choices, (one of the original goals of posting), but this has not yet become widespread. Further, a focus on calories exclusively, without considering other aspects of nutrition, may be misleading. (Lucan and DiNicolantonio, *Public Health Nutrition*, 2015) Essentially, then, menu labeling is one public health strategy but "it is wrong to expect too much from menu labels alone." (Carter, *Public Health Ethics*, 2015)

*Note:* For my previous blog on a related subject, see *Supersizing and the Tyranny of the Soda Police*, <https://www.psychologytoday.com/blog/the-gravity-weight/201206/supersizi...>

## About the Author



**Sylvia R. Karasu, M.D.**, is a clinical professor of psychiatry at Weill Cornell Medical College and the senior author of *The Gravity of Weight*.

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