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Sensory Or Nutrition Menu Labeling? a Field Experiment in Aligning Public Health and Restaurant Business Goals

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A field experiment in a restaurant proposes an alternative to “calorie labeling menus” in order to promote healthier eating: “sensory labeling menus” (that prompt consumers to focus on the sensory enjoyment of eating) can also decrease total calorie intake, while increasing customer value.

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EXTENDED ABSTRACT

Americans now spend more on foods prepared away from home than on foods prepared at home (ERS 2016), and meals are considerably larger in restaurants than at home (Lachat et al. 2012). This has led health authorities to mandate calorie labeling on restaurant menus, hoping that it will lead patrons to make healthier choices.

However, the evidence on the effects of menu labeling on demand is mixed. In a recent meta-analysis (Long et al. 2015), calorie labeling alone was found to lead to a small (18 kcal) but statistically significant reduction in the calories ordered or purchased per meal. In addition, the restaurant industry has fought aggressively against menu labeling, officially because of their compliance costs, but presumably also for fear that it hurts customer value (Nestle 2011; Tavernise 2015).

Because of the necessity for the food industry to balance health requirements and customer satisfaction (Nestle 2011; Tavernise 2015), some researchers have explored pleasure-based approaches to promote healthier eating. In particular, Cornil and Chandon (2016) argued that focusing on the sensory experience of eating could lead consumers to choose, prefer, and pay more for smaller food portions because it reminds them that the overall hedonic appreciation of a dish peaks with moderate food portions. However, it is unknown whether such approach can be effective with paying restaurant customers over the course of an entire meal, especially when the marginal cost of food is low or nil.

In order to address this question, we designed a field experiment in a restaurant comparing the effects of a “sensory labeling menu” (with vivid sensory descriptions of the foods), a “nutrition labeling menu” (with information on calories and fat), and a control menu on eating behaviors and on the perceived value of the meal. We find that sensory menus can reduce food intake while increasing customer value, whereas nutrition labeling decreases both food intake and customer value. Our research also contributes to the understanding of restaurant customer value by studying mediating factors (food intake, eating pace, sensory expectations) and moderating factors (companionship) that cannot easily be measured in laboratory settings.

The study took place at the restaurant of a culinary school in France; patrons were invited to an all-you-can-order “small plate” meal where they could order as many portions of starter, main course, and dessert as they wanted, at a fixed price of 15 euros. The prix fixe feature was chosen to provide the most conservative test of the effects, since consumers had no incentive to save money by eating less. The dishes were identical for all customers (gnocchi salad, mini-Shepherd pies, lemon tartlets) and the menus were manipulated between-subject. We tested three menus over nine different lunch services, counterbalancing the time of the service across three different mid-week days. The “control menu” had simple descriptions of the food items. The “nutrition labeling menu” used the same descriptions but added information about both calorie and fat content. The “sensory labeling menu” used vivid sensory descriptions and an invitation to use the five senses to appreciate the meal. After the customers had finished consulting the menu, the waiter presented a sample plate displaying one “portion” of each dish and let the patrons indicate the number of portions they desired for each dish. The patrons were brought each dish successively (with their desired number of portions). Before they started eating, the patrons were asked on an

electronic tablet how much sensory pleasure they anticipated. At the end of the meal we inferred the amount of food consumed from the leftovers. We measured post-meal hunger as well as customer value by asking the customers to estimate what would be a “fair price” for the meal they had. Several high-definition hidden cameras were filming the patrons throughout the lunch; we measured how much time each person spent eating, and computed an index of “slow eating” by dividing the time spent eating by the number of consumed calories.

After exclusion of 8 customers who did not follow the instructions or did not answer the questions, 98 customers were included in the analyses (Mean age=54; 53% Female).

Compared with the control condition, customers in the “nutrition labeling menu” condition ordered and ate less food, ate at a slower rate, and derived less customer value from their meal. Mediation analyses showed that the nutrition menu decreased customer value because it made consumers eat less.

Compared with the control condition, customers in the “sensory labeling condition” also ordered and ate less food and ate at a slower rate. However, their sensory expectations improved, and they derived more customer value from their meal. Mediation analyses showed that the sensory menu increased customer value *despite* making consumers eat less, because it increased pleasure anticipation and decreased the pace of eating, suggesting that customers were “savoring” their meal.

Additional analyses also suggested that the effects of sensory menus and nutrition menus were stronger when more people ate together.

In conclusion, starting in May 2017, all US restaurants with at least 20 locations must comply with the 2010 Patient Protection and Affordable Care Act and provide calorie information on menus and nutrient information if there is a nutrition claim (e.g., fat content if the food is described as “low fat”). Our field experiment suggests that such policy may be effective in decreasing food intake, but that it may hurt customer value. We provide evidence that another solution is possible: “sensory labeling menus” should also decrease calorie intake while increasing customer value at the same time.

REFERENCES

- Cornil, Yann and Pierre Chandon (2016), “Pleasure as a Substitute for Size: How Multisensory Imagery Can Make People Happier with Smaller Food Portions,” *Journal of Marketing Research*, 53 (5), 847-64.
- ERS (2016), “Table 10--Food Away from Home as a Share of Food Expenditures,” <https://www.ers.usda.gov/data-products/food-expenditures/food-expenditures/#Food%20Expenditures>.
- Lachat, C., E. Nago, R. Verstraeten, D. Roberfroid, J. Van Camp, and P. Kolsteren (2012), “Eating out of Home and Its Association with Dietary Intake: A Systematic Review of the Evidence,” *Obesity Reviews*, 13 (4), 329-46.
- Long, Michael W., Deirdre K. Tobias, Angie L. Craddock, Holly Batchelder, and Steven L. Gortmaker (2015), “Systematic Review and Meta-Analysis of the Impact of Restaurant Menu Calorie Labeling,” *American Journal of Public Health*, 105 (5), e11-e24.

- Nestle, Marion (2011), "Michele Obama Gets Darden's to Promise Healthier Meals," <http://www.foodpolitics.com/2011/09/michele-obama-gets-dardens-to-promise-healthier-meals/>.
- Tavernise, Sabrina (2015), "Deadline for Calorie-Count Labeling on Menus Is Extended," *New York Times* (July, 10), A20.