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# Food Marketers on a Diet



By [Pierre Chandon](#) , INSEAD, with [Chris Howells](#), INSEAD Knowledge

## **How the food business could improve its health by getting its customers in better shape.**

From supermarket aisles to restaurants, supersized packages and portions seem to be everywhere. This is causing obesity and is worrying health authorities around the world. Disturbingly, however, the status quo seems to suit everybody. Buying in bulk along the supply chain reduces unit costs, making bigger portions more profitable. Restaurants are driven by the fear that fickle customers will defect to rivals with more food on offer. Consumers are getting perceived value and are quite literally eating it up.

“Normal has become a function of what is offered,” says [Pierre Chandon](#), INSEAD Professor of Marketing, but “as consumers, we underestimate the magnitude of the increases in food portion size,” he adds.

This phenomenon is stirring a movement that might bring this gravy train to a halt. [The British Heart Foundation \(BHF\) published research](#) just last month that showed portion sizes have grown by as much as 98 percent for some products in the last 20 years. The BHF also called on the U.K. government to conduct a full review of portion sizes and provide guidance for industry to “enable standardisation” while calling on food companies to “stop increasing portion sizes of single units of food”.

Food marketers might soon be stuck between a rock and a hard place, under pressure from policymakers to reduce portion sizes, while at the same time faced with consumer backlash if they slim down their offerings.

But at the cutting edge of this trend, Chandon and his current and past doctoral students, Yann Cornil (finishing his PhD at INSEAD) and Nailya Ordabayeva (now a professor at the Rotterdam School of Management, Erasmus University) have discovered how food companies and policymakers can help consumers to better estimate portion sizes. There may also be ways that marketers can reduce portions and stay on consumers' menus.

### **Sizing Up the Portions**

Throughout three studies, researchers showed school children and adults, a range of different portion sizes, some labels being manipulated to demonstrate the effects of desire and of perceived unhealthiness. Take the test below to find out if you can judge portion sizes more accurately than the kids!



5 units



?



?

*In the first test, 84 school children were shown five different sized portions of chocolate and five differently sized portions of carrots, which in both cases were progressively bigger. They were told that the smallest portion had 5 units of each and were asked to guess the size of the remaining portions. This was weighed against children's estimation of how much they desired chocolate and carrots, and how angry their parents might be if they found out that they ate the entire third portion of the food. Attitude ambivalence occurred when children both desired the food, and feared their parents' anger. None of the children was ambivalent about carrots, but a fair proportion of children were highly ambivalent about chocolate.*

*The results showed that the estimates of the chocolate by children with high ambivalence was 36 percent larger than for those with low ambivalence.*

Click [here](#) to reveal the actual answers and the results of the other two tests.

## **Acuity of vice**

It all comes down to conflict; the conflict within oneself of desire for the food item and the perceived detrimental health effects of it. "If you highlight the trade-off between pleasure and worries about health, it helps people better estimate and realise how big the portions are," says Chandon.

Chandon's research, co-authored with Cornil, Ordabayeva, Ulrike Kaiser and Bernd Weber, [The Acuity of Vice: Attitude Ambivalence Improves Visual Sensitivity to Increasing Portion Sizes](#), builds on existing studies into the fundamental psychology of size perception. Desire always makes things look bigger. Previous research has shown that children from modest backgrounds overestimate the sizes of coins. Threatening or harmful images can also enhance people's size perceptions, such as a snake or a pointed gun.

But until now, this research has overlooked the fact that the same two factors (desire and perceived harm) may conjointly influence perceptions of food.

Through three studies, Chandon, Cornil and Ordabayeva studied the effects of "attitude ambivalence" (the simultaneous desire and perception of unhealthiness) on the ability to accurately judge portion sizes. The results demonstrated not only that ambivalence increased portion perception

accuracy, but that those with an even greater conflict between the desire and the perceived unhealthiness, such as dieters, had an even greater ability to judge portion sizes correctly (see sidebar).

## **Managing size impressions**

This tells us that, when we know that pleasurable foods can have negative health consequences, we are quite good at estimating portion sizes. In other words, framing the foods as vices will better enable consumers to judge what they're eating. Conversely, making junk food look healthier, say by highlighting that it is rich in "Omega 3", makes us worse size estimators.

There are other areas, too, that need attention to address the supersize culture.

"Food marketers are spending money and effort on reformulating products to make them healthier, by reducing trans fats, or gluten, or whatever the new diet fad dictates, but another area they could work on could be the size of the portions. They are just too big. Marketers need to think more strategically about sizes. We talk of the 4 Ps of marketing: Price, Product, Promotion and Place. I would add one more: Packaging. If companies spent as much time on packaging as they do on price, they'd be in better shape," said Chandon.

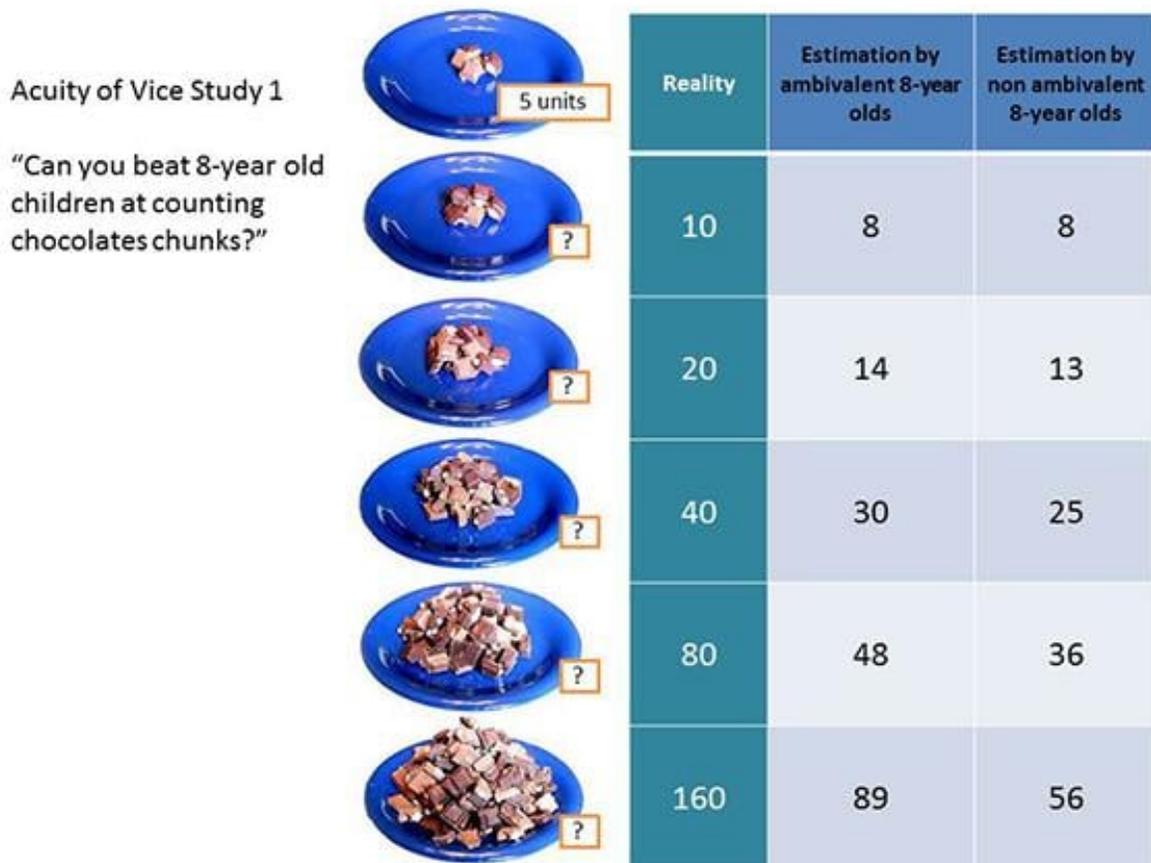
It is this "neglected P" of marketing, as he calls it, that holds the biggest potential for getting food marketing in shape.

## **The model answer**

In a separate study published earlier this year ([Predicting and Managing Consumers' Package Size Impressions](#)), Chandon and co-author, Ordabayeva developed a model for marketers to enable them to reduce portions by adjusting dimensions of packaging without consumers realising it and feeling ripped off. Called the AddChange heuristic model, it can accurately predict consumers' perception of supersizing or downsizing when one, two or all three dimensions are altered.

It also shows how consumers notice a packaging size reduction accurately when only one dimension is altered, such as the height, but they completely fail to notice a 24 percent downsizing when the product is elongated.

Chandon adds that “If you keep the same shape and increase proportionately, people underestimate the change. But creative shapes can hide product downsizing. This is a win-win area for marketing and policy. If you reduce size of portions by cutting one dimension, consumers are good at spotting it. They hate it. They think it’s unfair. Downsize by all three dimensions, or reduce the size by elongating, you can cut 24 percent of volume without people realising it. This can nudge consumers to take smaller portions, without making size reduction too obvious.”



The second study illustrated the same effects, but on adult students. Four portions of gummy candies were displayed. The participants were told the size of the first portion and were then asked to estimate the rest. But there were also two different conditions leading to starkly different findings by manipulating the perceptions of the desirability and healthiness of the candies. In an “unhealthy” condition, the candies were labeled as “gummy candies”, while in the healthy condition, they were labeled as “nutrition

chews with Omega 3 and vitamins.” There was also a high and low desire manipulation where participants were either given a candy to taste before making the size estimates or not.

By simultaneously boosting the desire to eat the food by giving a sample and enhancing its unhealthiness perception using labeling, portion size estimates grew by 19 percent.

The researchers then tested their theory on 116 adults at a sports centre, operating on a hypothesis that “restrained eaters” or those with strict diets would be especially conflicted towards food due to two different goals: enjoying tasty food and pursuing a healthy diet. Dieters should therefore be even better placed to estimate increased portion sizes of unhealthy foods. This proved to be the case, with size estimates 53 percent higher among those highly ambivalent, i.e. the dieters.

#### **Find article at**

<https://knowledge.insead.edu/marketing/food-marketers-diet>

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#### **About the author(s)**

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