

Mindless Eating: Some Hidden Persuaders that Make Kids Lose and Gain Weight

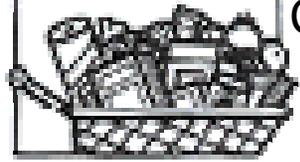
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Environmental Solutions to Obesity in America's Youth
June 1, 2005



We Examine What, Why, and How Much People Eat

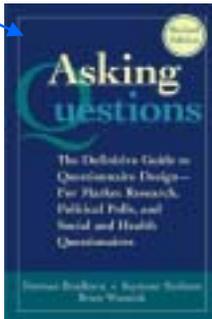
Who?

- ▶ Cross-Disciplinary Grad Students
- ▶ Post-docs (Internationals & Spanners)
- ▶ “Hidden” camera observation lab
- ▶ 2 restaurants
- ▶ Consumer mail panel (n=3400)
- ▶ 3 cooperating grocery stores



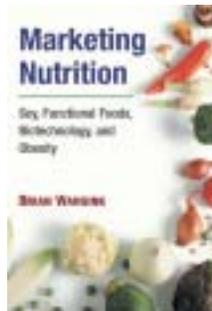
How?

- ▶ Lab (psych) experiments
- ▶ Consumer panels
- ▶ Field studies
- ▶ In-depth interviews
- ▶ Data-base mining
- ▶ Motion-activated in-kitchen cameras



Mission?

- ▶ Research for healthy, mindful eating
 - Decrease incidence of obesity
 - Eat healthier foods
- ▶ Disseminate in top journals & outreach



Sponsors?

- ▶ Illinois Attorney General
- ▶ Charitable Trusts

A Starting Point-->Kids Gain Weight Because They Move Less and Eat More Than We Did

- Kids exercise less (Hill & Peters 1998)
 - No State-required gym class in 49 states
 - Cable TV, internet, Playstations
- Kids eat more calories (NPD 2005)
 - They eat caloric foods
 - They eat larger portions



What's the Solution?

- Some blame fast food
- Some blame big food companies
- Some blame the government

- Most people overlook an easier, first battle that needs to be fought . . .



The Food Fight Begins at Home

Our homes are filled with hidden eating traps

I'll answer 3 questions that show how we unknowingly booby-trap our own homes-- catching kids and ourselves.



I'll then describe some easy first steps to "de-booby-trap" our home and make it a less "fat-prone" environment.

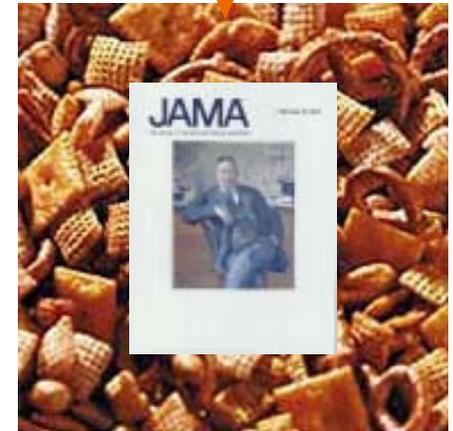
Question #1 . . .

“Larger bowls can’t possibly influence how much an intelligent, informed person eats, can they?”

Larger Bowls Can't Possibly Influence Intelligent Informed People, Can They?

● Super Bowl Study

- Grad students forewarned: Big bowls = big appetites
- 6 weeks later . . .
- 40 of them are invited to a Super Bowl Party
 - 20 given gallon bowls of Chex Mix
 - 20 given 1/2 gallon bowls
- Served themselves (and secretly weighed)
- Asked to estimate how much they took



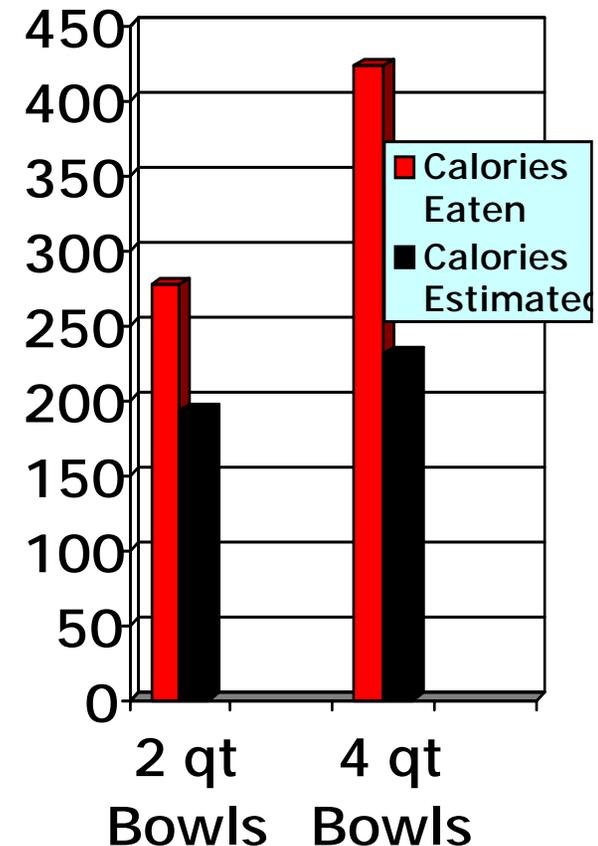
Even Intelligent “Informed” People Are Not Aware They Eat More from Super Bowls

Results

- Those serving from bigger bowls served and ate **55%** more
- The danger -- None of them believe they had eaten more because of the bowl



- How widespread is this? For instance, would this even work with food we didn't like?



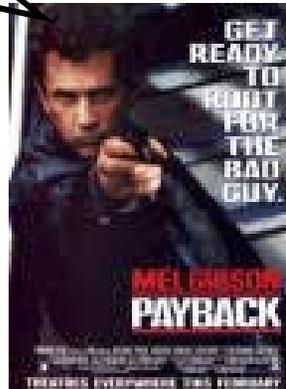
Would Big Bowls Lead Us to Eat More Even If We Didn't Like the Food?

The Field Study (Chicago, IL)

- 168 Moviegoers to Mel Gibson's "Payback"
- Free (preweighed) popcorn ("Illinois History Month")
 - ▶ Large or X-Large Popcorn (pre-weighed)
 - ▶ Fresh or **14-day-old** Popcorn
- After the movie . . .
 - ▶ Asked how much they thought they ate
 - ▶ Weighed the remaining popcorn



Enjoy your popcorn



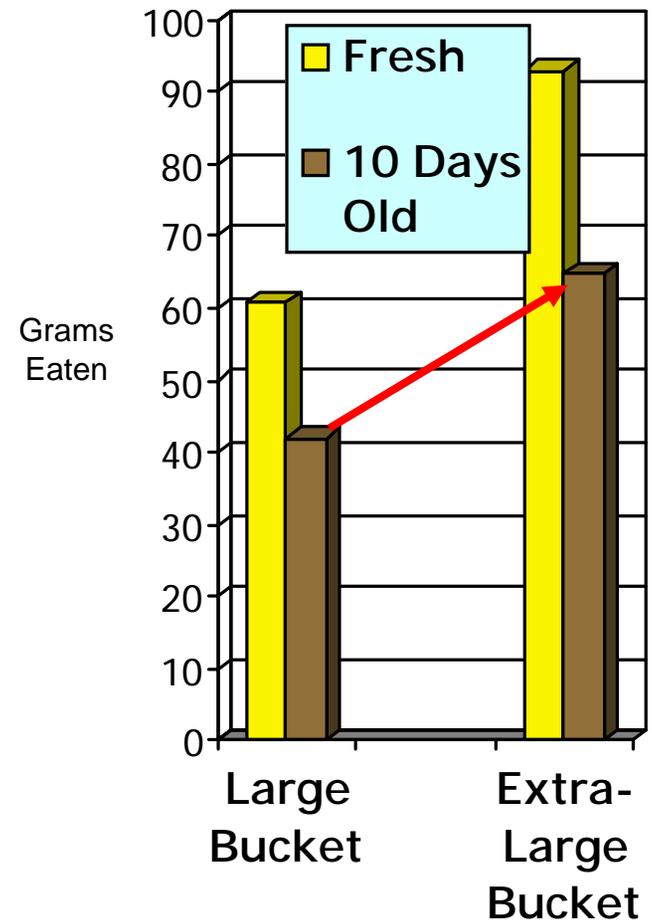


Taste is Important, But Size Matters -- a Lot

- ▶ People ate 45% more fresh popcorn from the extra-large containers than large ones

But . . .

- ▶ They even ate **34%** more when it was **stale popcorn**
- ▶ The danger? They don't realize they do it -- "*Not me*"



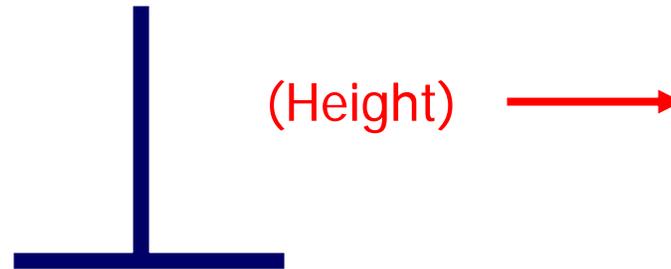
Question #2 . . .

“Does the shape of glasses make kids drink more than otherwise would?”



Does the Shape of Glasses Make Kids Over

- ▶ Piaget's Conservation of Volume said . . .
 - Kids think tall vessels hold more than equal-sized wide ones
 - They fixate on 1 dominate dimension



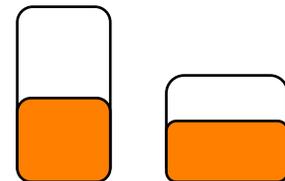
▶ This should influence consumption

- If tall glasses are thought to hold more . . .
 - ▶ Kids should over-pour in to short wide glasses
 - ▶ But they should *believe* they under-poured

Will Teen “Fitness” Campers Over-pour into Short, Wide Glasses?



- ▶ 133 teens at breakfast at a “Nutrition & Fitness Camp” in NH
 - Half given Tall, Narrow 22 oz glasses; half given Short, Wide ones
 - After exiting the line . . .
 - ▶ Asked how much they thought they poured
 - ▶ Usage volume was weighed

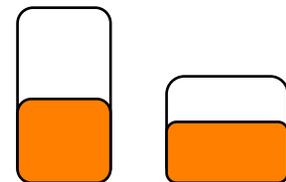
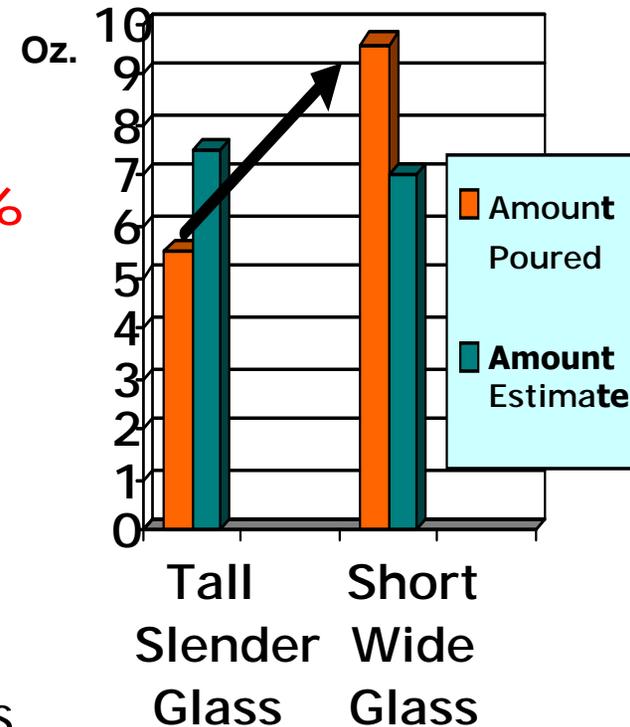


Teen Campers Overpoured when Given Short Wide Glasses



Results

- These vigilant “weight watchers” poured **88%** more into short wide glasses, but *believed* they poured less.
- Hmm . . . does this still happen with experts and a specific target volume (say 1.5 oz)?



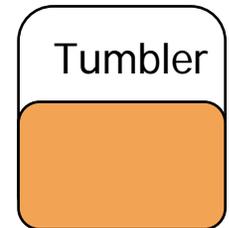


Surely This Little Visual Illusion Doesn't Influence Adults . . .

48 Philadelphia Bartenders -- Pro Pourers

- Given tall, slender (highball) glasses or short, wide (tumbler) glasses

Given full bottles and asked to pour
"1 shot" drinks of gin, rum, vodka, & whiskey





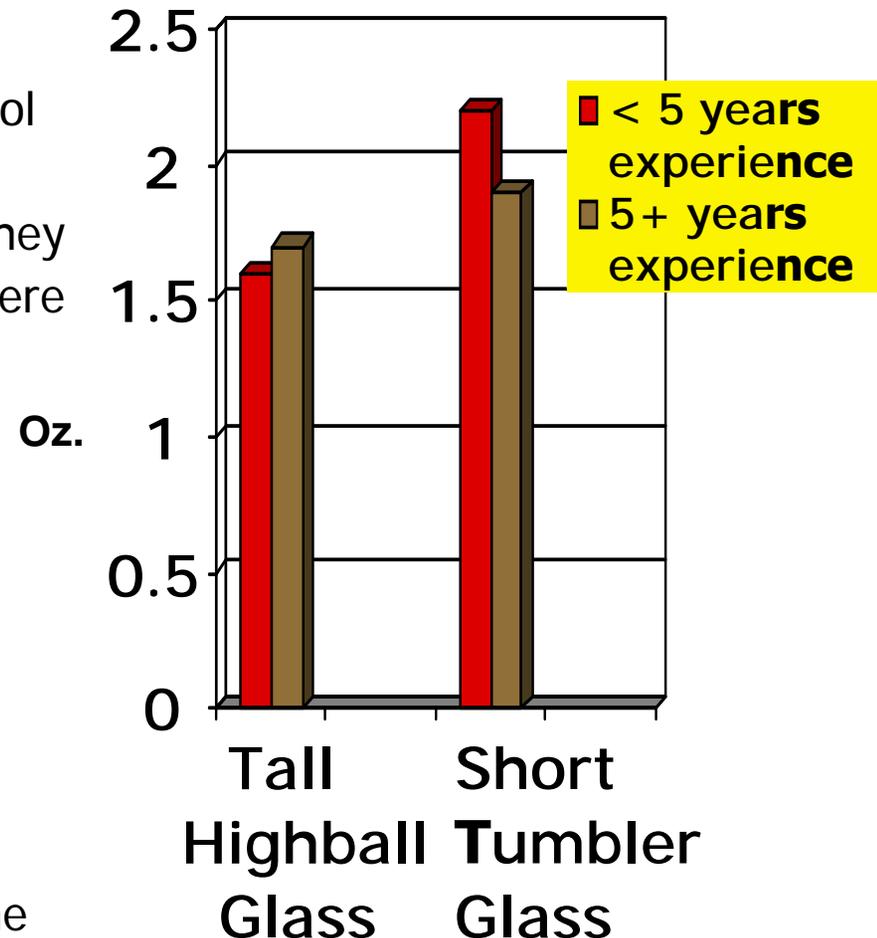
Even Experienced Pros Overpour into Short, Wide Glasses

▶ Results

- Bartenders poured 28% more alcohol
- Even these Pros are unaware that they overpoured into wide glasses. Is there any hope for us?



- Yes . . . use tall glasses and toss the wide ones



Question #3 . . .

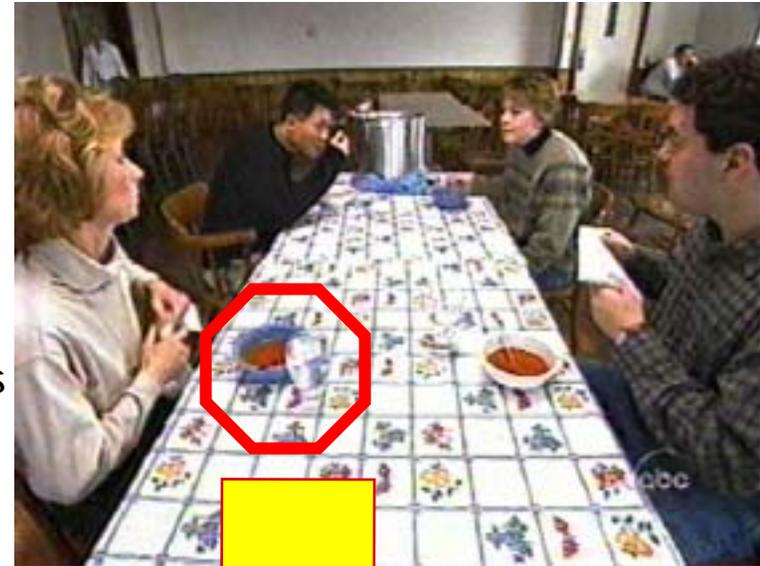
“OK, so kids serve more from big bowls and plates and wide glasses.

“At least they know when they are full and they can stop before they overeat, right?”

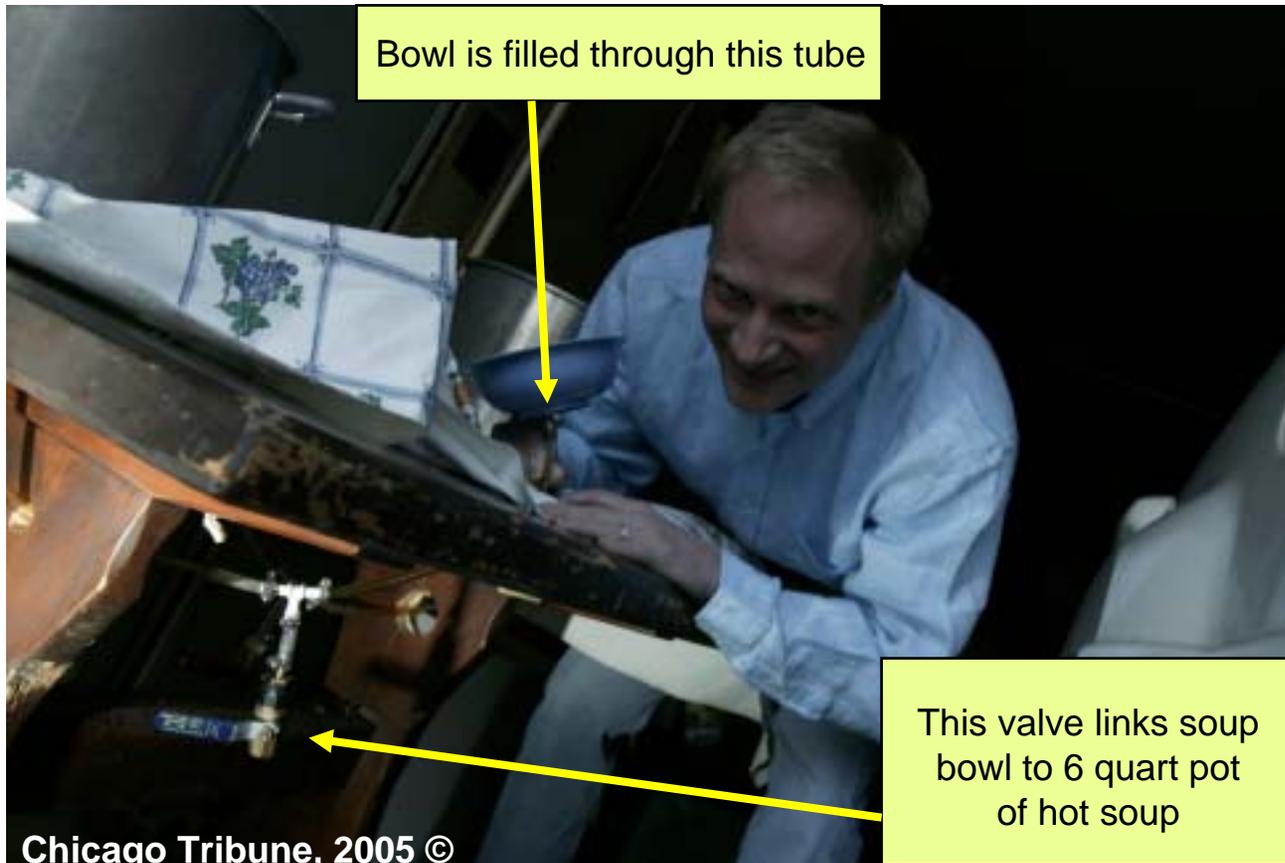
Would a Teenager Keep Eating if Their Bowl Never Emptied?



- ▶ “Clean Plate Club” -- Some people use empty bowls & plates as a cue that they're done eating
 - If bowl isn't empty, they keep eating
 - What if it never empties?
- ▶ We Designed a Bottomless Bowls
 - Brought in sixty 18-19 year olds for a free lunch
 - Half got normal bowls; half got bottomless bowls
 - 22 ounce, pressure fed under the table, slowly refills
 - What does this look like?



What's Lurking Under the Lunch Table?



Bowl is filled through this tube

This valve links soup
bowl to 6 quart pot
of hot soup

Chicago Tribune, 2005 ©

3) Would Teenagers Keep Eating if Their Bowls Never Emptied?



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- ▶ We wanted to know . . .
 - How much would they eat?
 - How much would they THINK they ate?

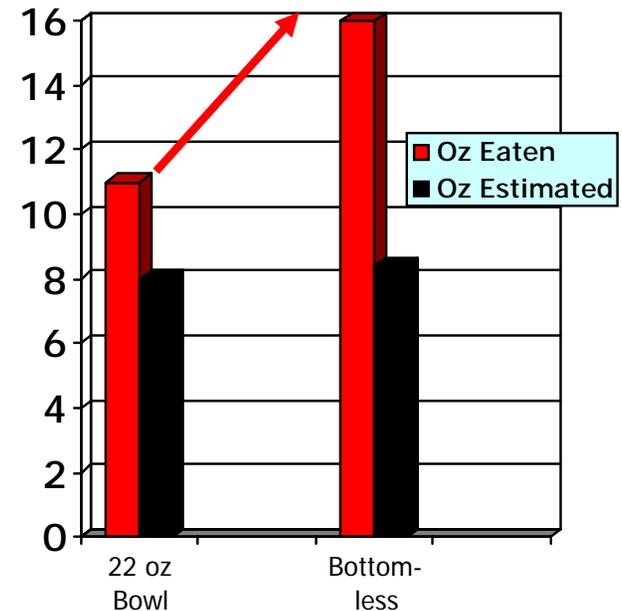


Bottomless Soup Bowls Lead to Bottomless Appetites

▶ Results:

- People kept eating; Ate 73% more until stopping
- Yet, they didn't think they ate more.

▶ Bottom Line . . . *("In summary")*



If Kids Cluelessly Dish It; They Will Cluelessly Eat It.



- ▶ Kids generally eat whatever they serve themselves
- ▶ If they overserve, they'll unknowingly overeat

▶ How can we stop this?

- Use smaller bowls, but allow refills
- Serve lunch on salad plates
- Replace wider glasses with taller ones
- Repack large packages into smaller bowls or baggies
- Use smaller serving spoons when eating family style
- Keep serving bowls in the kitchen and off the table
- Preplate food so you know how much you've eaten



Rachel Leb ©

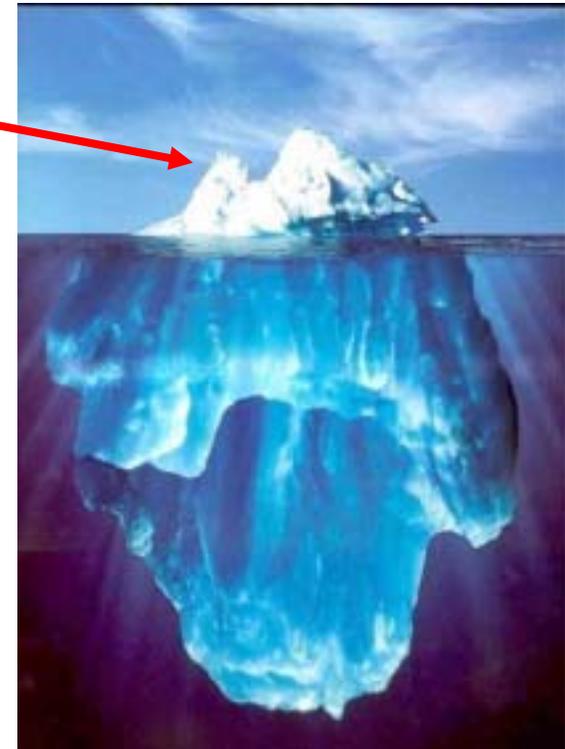
When Changing the World, We Should Start at Home



- ▶ To change habits, take small, easy steps
- ▶ Bowls, plates, glasses, and utensils are an easy place to start, but . . .

They are still the tip of the iceberg.

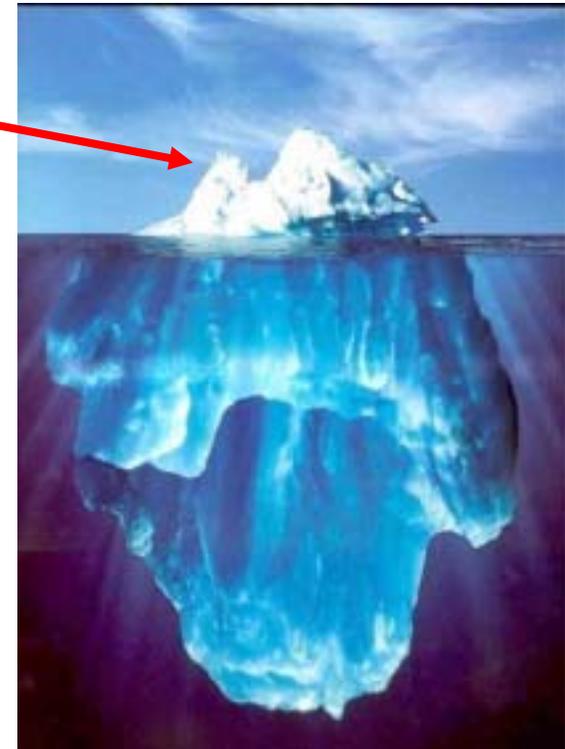
- There are many, many more hidden persuaders at home



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 - They are still the tip of the iceberg.
 - There are many, many more hidden persuaders at home



One Key:

Start small, easy, and doable.
Success breeds success.

For More Info . . .



www.FoodPsychology.com

Education Resources: Lesson plans, in -class exercises, posters, cartoons

Science Fair Grants on Food & Consumer Topics: Book royalty proceeds

Thank You



www.FoodPsychology.com

How Can We Re-Engineer Our Environment to Work *For Us*?

1. Beware of the Size and Shape of Containers

- ▶ Study 1. Hungry for Stale Movie Popcorn? --> Use smaller bowls, even if "not hungry" -->
- ▶ Study 2. Do Shapes Bias Consumption? Skinny people use skinny glasses
- ▶ Study 3. The Philadelphia Bartender Study --> $1 + 1 = 2.6$
- ▶ Study 4. The Refillable Soup Containers --> Preplate food --> can't keep track after gone

2. Why Labels Change the Taste of Foods?

- ▶ Study 1. Descriptive Labels in the Cafeteria --> Use labels & other cues to enjoy food more
- ▶ Study 2. As Fine as North Dakota Wine --> Enjoy it more, but eat less