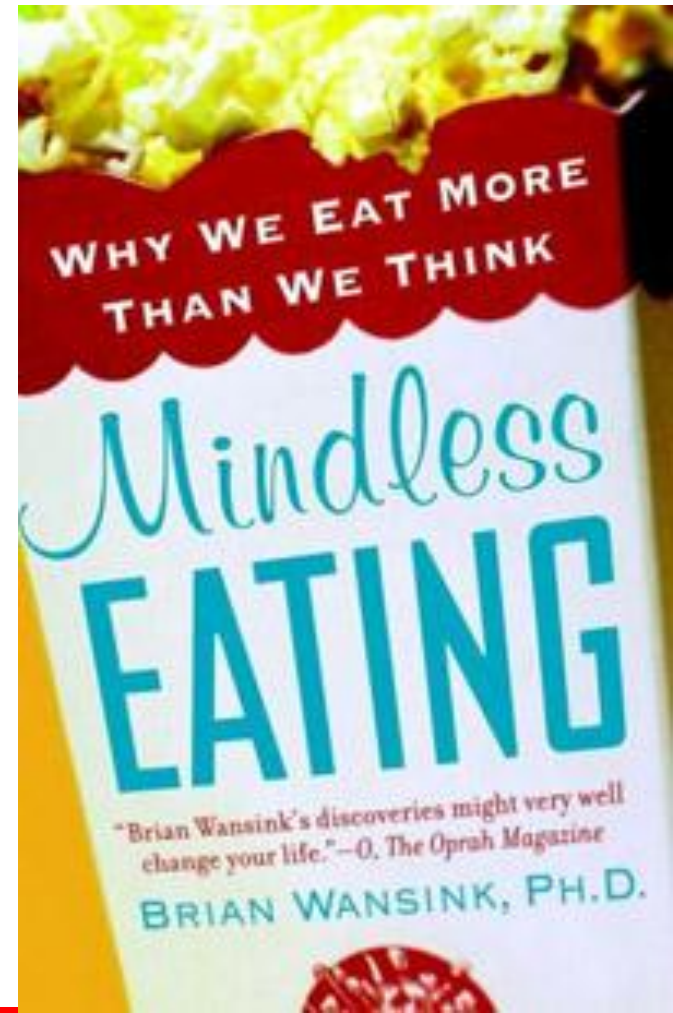


Modifying the Built Environment: From Mindless Eating to Mindlessly Eating Better

Brian Wansink, PhD

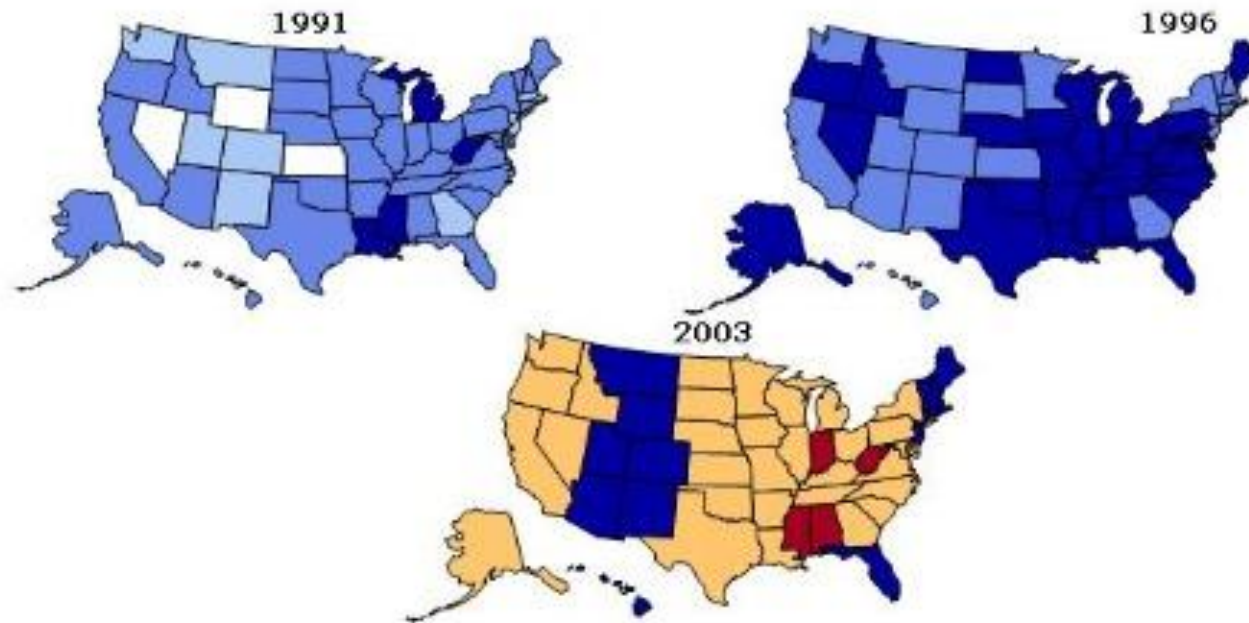
John S. Dyson Professor of Marketing
Director Cornell Food & Brand Lab
Charles S. Dyson School of Applied
Economics & Management,
Cornell University, Ithaca NY



BMI Trends from the CDC

Obesity Trends* Among U.S. Adults BRFSS, 1991, 1996, 2003

(*BMI ≥ 30 , or about 30 lbs overweight for 5'4" person)



The Year 2025: My Projected BMI Map for the US

The Year 2025: A Projected BMI Map for the US



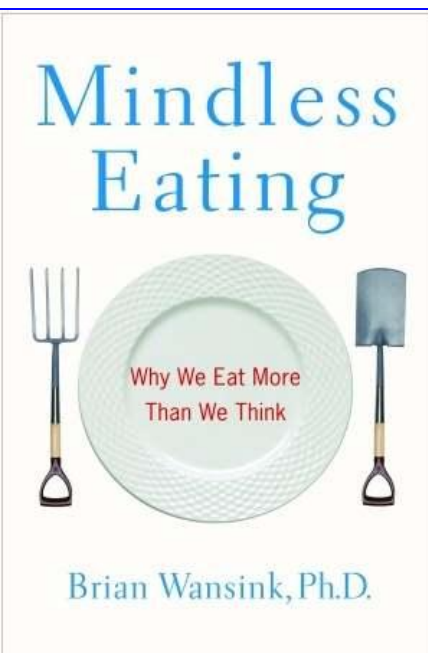
LEGEND:

-  Too Fat
-  Too Skinny

The Food Fight Begins at Home

Our homes are filled with hidden eating traps

I' ll show 4 MYTHS (Chapters 2-3) that lead us to unknowingly booby-trap our own homes.



I' ll discuss new research on what works best and a program we' ve developed that uses it

I' ll end with “What can you do when you get home tonight?”

To Discover and Uncover Our Food Traps and to Change Them

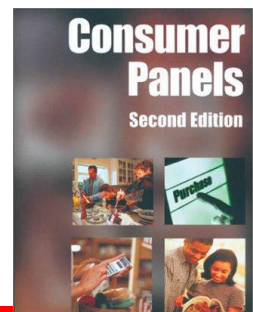
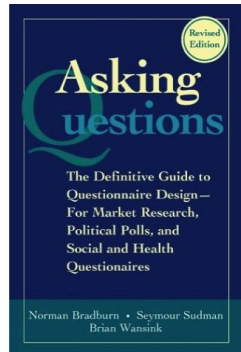
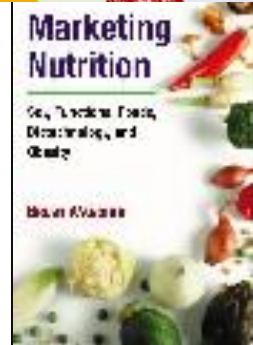
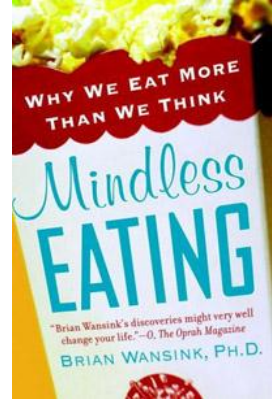
Who?

- Post-Docs
- Sabbatical/Visiting professors
- Interdisciplinary Grad students
- Undergrads (max of 2 per field)
- Summer Interns & exchange students



How?

- Lab (psych) experiments
- Field studies
- Surveys
- Consumer panels
- Data-base mining
- “Hidden” In-kitchen cameras



Part II.

Use Eating Myths that Make Us Fat

Eating Myth #1

“Surely something as basic as the size of a bowl wouldn’t influence how much an informed intelligent person eats.”

The Super-Bowl Principle

- MBA students & 90 minutes of education
- 6 weeks later
 - Super Bowl Sunday
 - Jillian's Sports Bar
 - Room 1. Three 4-liter bowls
 - Room 2. Six 2-liter bowls
- Results



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 **5-day-old** Popcorn
- After the movie . . .
 - Asked how much they thought they ate
 - Weighed the remaining popcorn



Wansink, Brian and Junyong Kim (2005), "Bad Popcorn in Big Buckets: Portion Size Can Influence Intake as Much as Taste," Journal of Nutrition Education and Behavior, 37, 112-120..

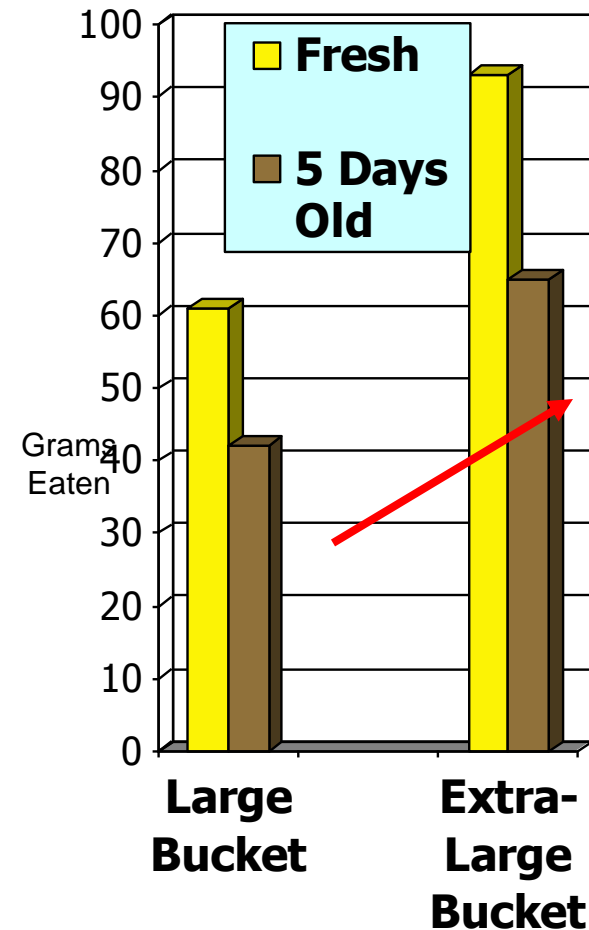


Taste is Important, But Size Matters -- a Lot

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

But . . .

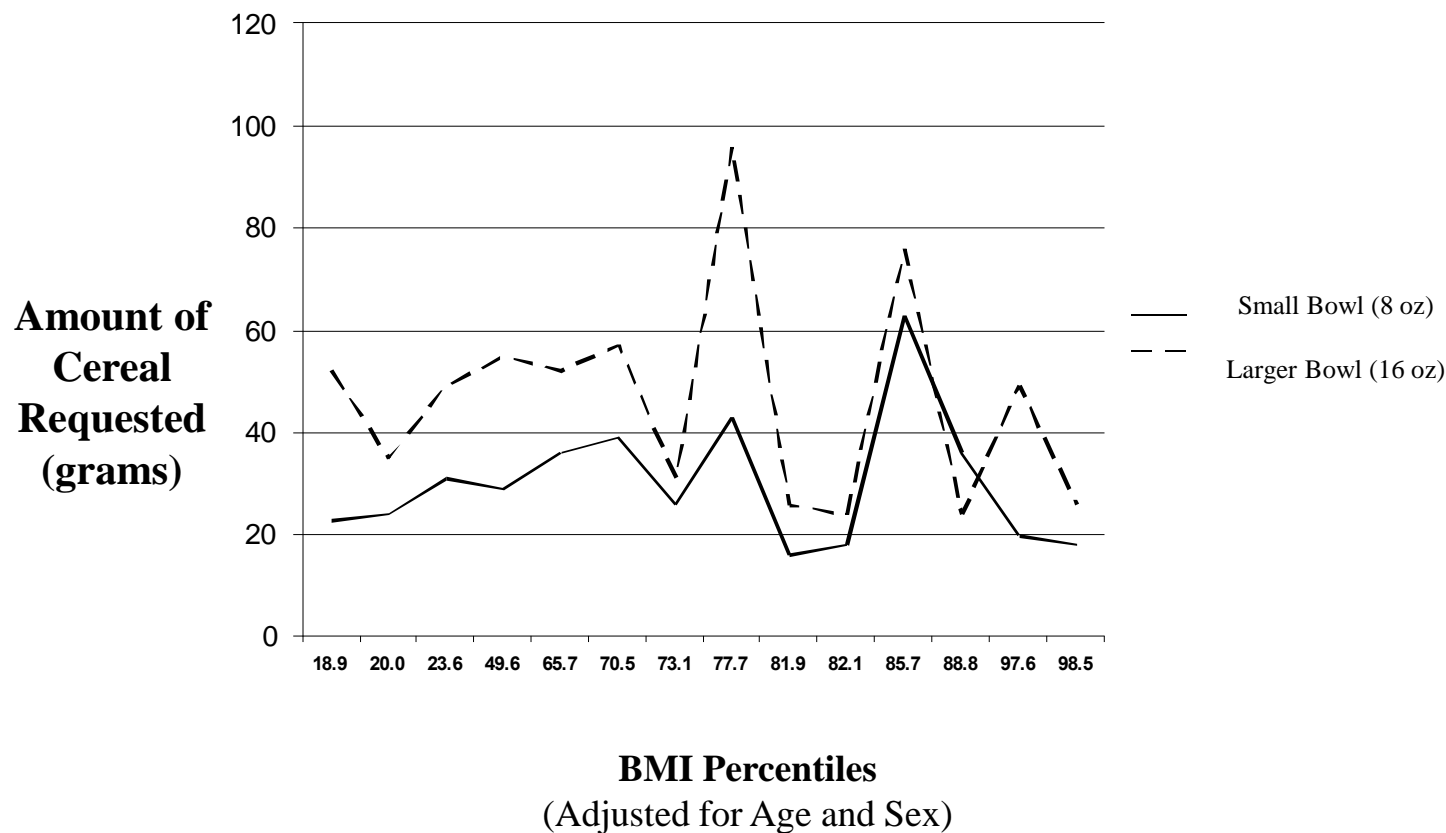
- They even when the popcorn was **stale**, they ate **34%** more from the extra-large buckets
- The danger? They don't realize they do it -
- *"Not me"*



When Does This Begin?



Big Bowls Led Kids of All Weights to Serve More



Eating Myth #2

“OK, so people 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”

The Bottomless Soup Bowl

Would You Keep Eating
if Your Bowl Never Emptied?

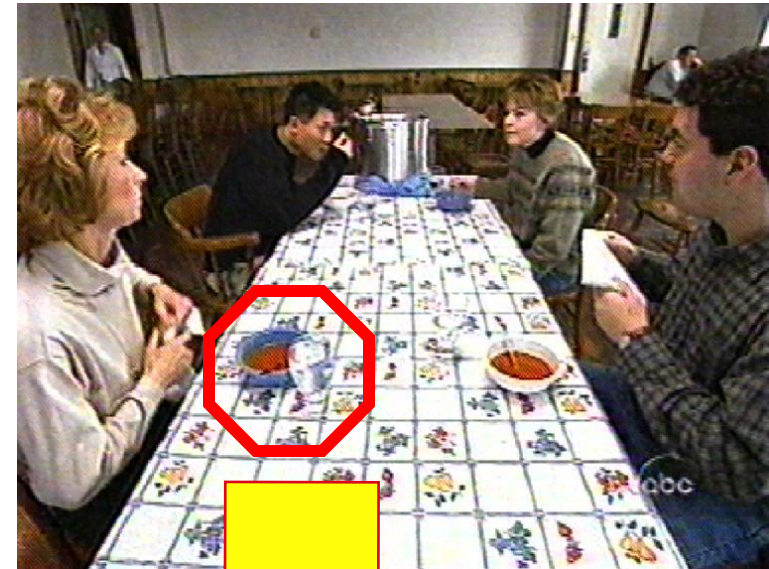


➤ “Clean Plate Club” -- Some people use empty bowls & plates as a cue they’ re done eating

- If bowl isn’ t empty, they keep eating
- What if it never empties?

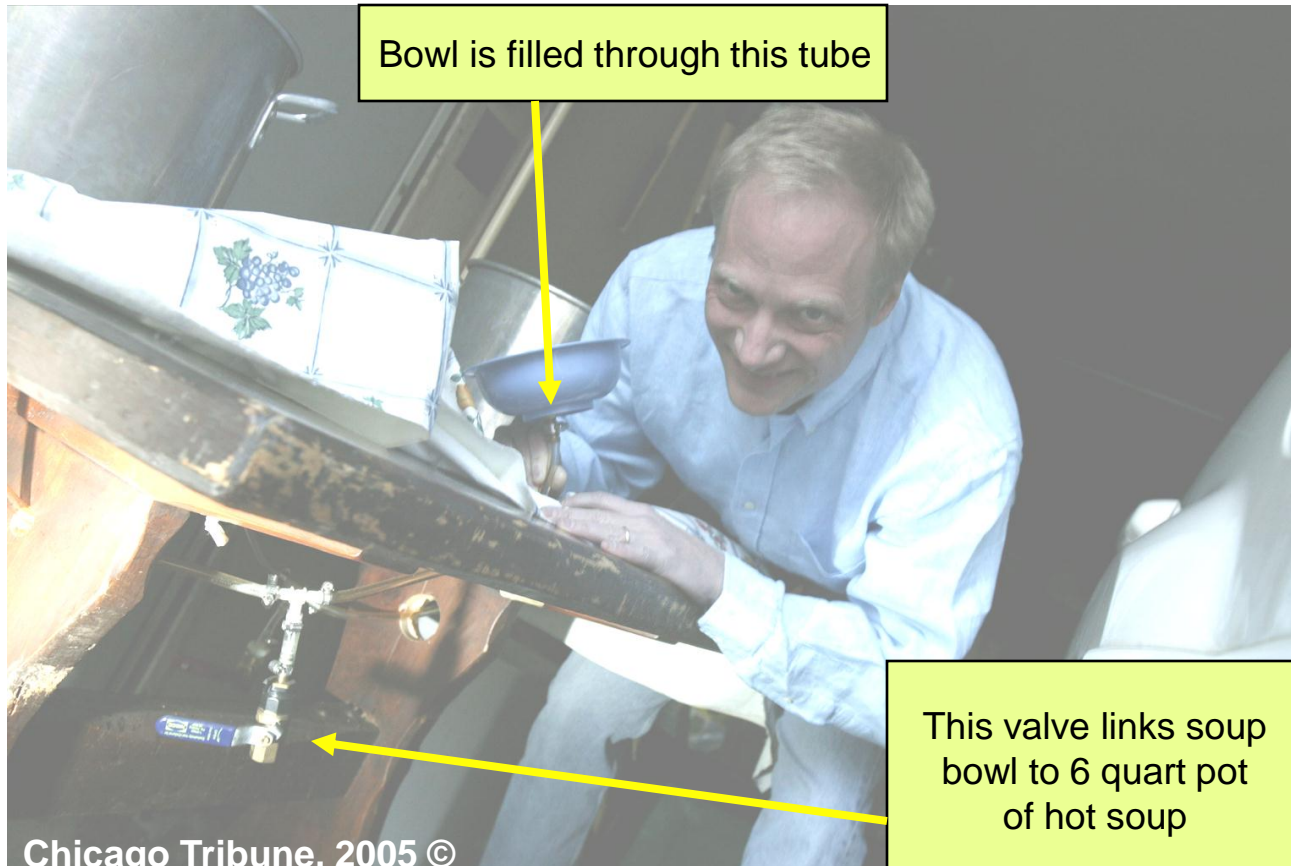
➤ We Designed a Bottomless Bowl

- Brought in sixty adults for a free lunch
- Half got 22 oz normal bowls;
- half got 22 oz bottomless bowls
- Pressure-fed under the table, slowly refills
- What does this look like?



The Bottomless Soup Bowl

Would You Keep Eating
if Your Bowl Never Emptied?



Bowl is filled through this tube

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

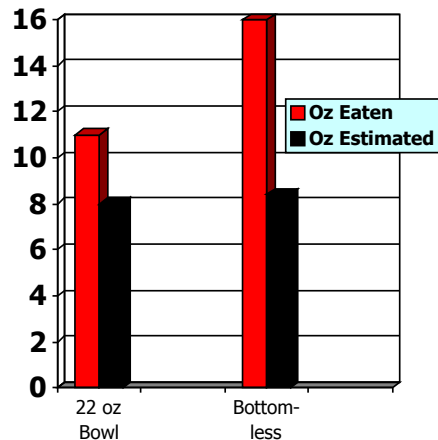
Chicago Tribune, 2005 ©

Wansink, Brian, James E. Painter, and Jill North (2005), "Bottomless Bowls: Why Visual Cues of Portion Size May Influence Intake," *Obesity Research*, 13:1 (January), 93-100.

Bottomless Soup Bowls Lead to Bottomless Appetites

Results:

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



Lesson:

- Eye it, dish it, eat it
- Don't rely only on stomach to tell us when we're full -- it can "lie"



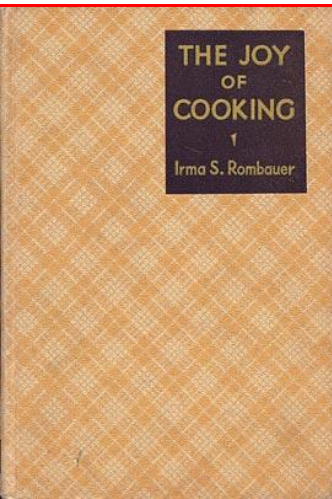
Wansink, Brian, James E. Painter, and Jill North (2005), "Bottomless Bowls: Why Visual Cues of Portion Size May Influence Intake," *Obesity Research*, 13 (January), 93-100.

Eating Myth #3

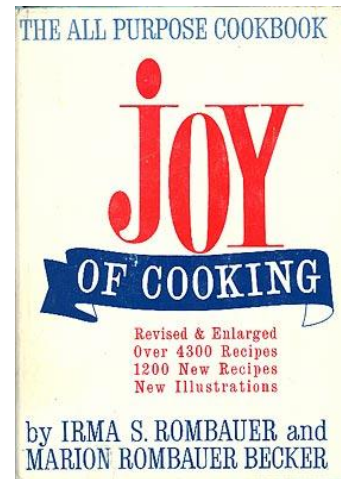
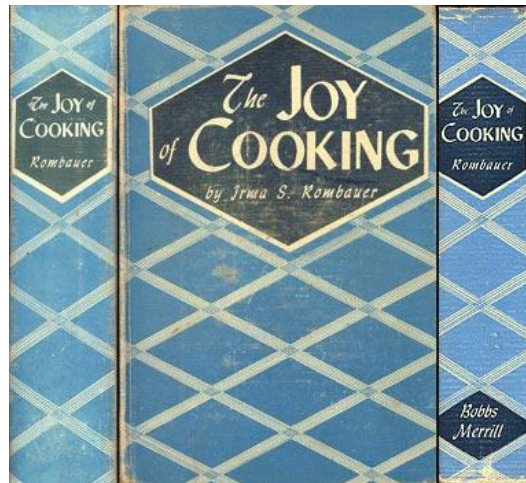
“Most of the obesity problem has to do with food eaten away from home.”

“The Joy of Cooking Too Much”

(Wansink & Payne 2009, *Annals of Internal Medicine*, forthcoming)



8 editions about every 10 years: 1937-2006



We analyzed calories & serving sizes for recipes over the years

BEST LOVED AND BRAND NEW



500 New Recipes
4000 of the Most Beloved JOY Classics Retested and Updated
4500 RECIPES FOR THE WAY WE COOK NOW

Irma S. Rombauer, Marion Rombauer Becker, and Ethan Becker



500 New Recipes
4000 of the Most Beloved JOY Classics Retested and Updated
4500 RECIPES FOR THE WAY WE COOK NOW
Irma S. Rombauer, Marion Rombauer Becker, and Ethan Becker

over
cup cultured sour cream
the pot closely and simmer for 1
or place the pot in a slow oven—
and bake the rabbit until tender, 1
or more.

ROAST RABBIT OR HARE

Put in oven to 450°.
Clean and clean:
A rabbit or hare
fit with any recipe suitable for fowl,
the sauteed chopped liver. Close the
pan and truss it. Brush the rabbit all
with:

Melted butter or cooking oil
Seasoned flour

Place on a rack on its side in a roasting
pan in the oven. ♦ Reduce the heat to
350°. Baste every 15 minutes with the
oil in the pan or, if necessary, with:
(Additional butter)
the rabbit when cooking time is
up. ♦ Turn over. Cook until tender, about
1 hour. Make:
Pan Gravy, page 322

FRICASSEE OF RABBIT OR HARE

Clean and cut into pieces:
A rabbit
Cook with:
Seasoned flour

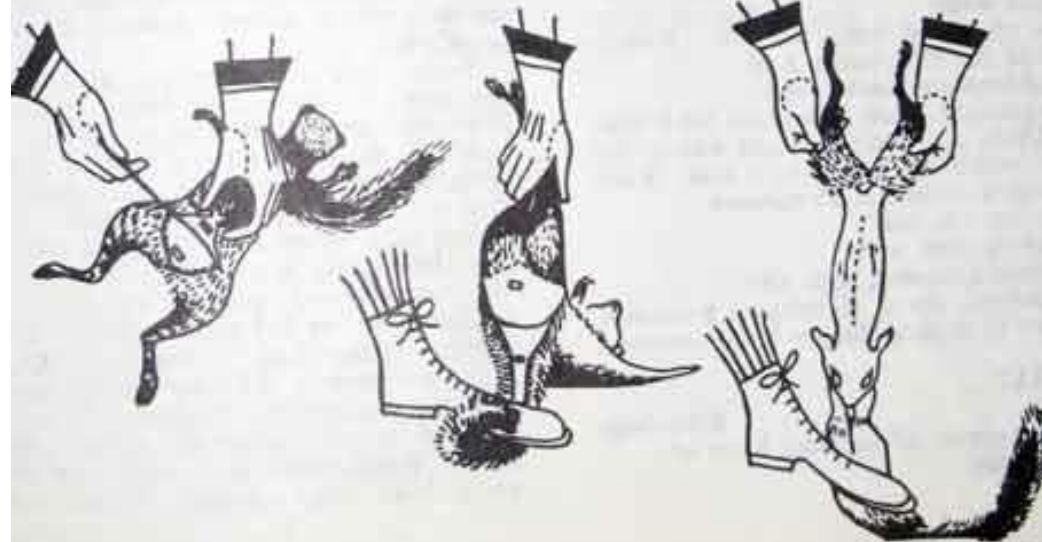
2 sprigs parsley

2 ribs celery with leaves
Cover the pot closely. Simmer the meat
until done, 1 hour or more, or put it in a
300° oven covered for about 2 hours—
but do not let it boil at any time. Ten
minutes before you remove the rabbit from
the pot, take out the seasoning bag and
add the mushrooms and shallots. Place the
rabbit on a hot serving dish. Remove the
sauce from the heat and thicken with:
Beurre Manié, page 321

ABOUT SQUIRREL

Gray squirrels are the preferred ones; red
squirrels are small and quite gamey in flavor.
There are, proverbially, many ways
to skin a squirrel, but some hunters claim
the following one is the quickest and
cleanest. It needs a sharp knife.

♦ To skin, cut the tail bone through
from beneath, but take care not to cut
through the skin of the tail. Hold the
squirrel as shown on the left and then cut the
skin the width of the back, as shown in
dotted lines. Turn the squirrel over on
its back and step on the base of the tail. Hold
the hind legs in one hand and pull steadily
and slowly, as shown in the center sketch,
until the skin has worked itself over the
front legs and head. While holding the
squirrel in the same position, pull the



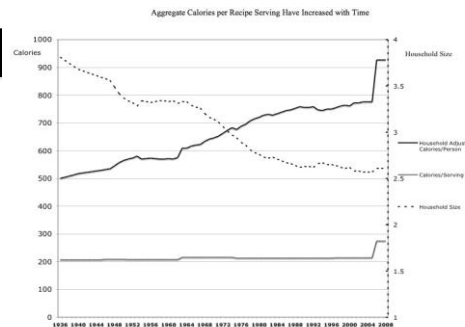
Some Recipes – like (this)
Squirrel – Didn't Survive
the Years

“The Joy of Cooking Too Much”

(Wansink & Payne 2009, *Annals of Internal Medicine*, forthcoming)

➤ Results

- All but 1 recipe increased in calories
- Average calories/serving size increased 63%
 - 2/3 is due to more calorie-dense ingredients
 - 1/3 is due to larger serving sizes
- Biggest jumps: 1946, 1962, 2006



➤ What to Do?

- Divide what you cook into 2 and freeze 1/2 before putting it on the table

BEST LOVED AND BRAND NEW



500 New Recipes
6000 of the Most Beloved JOY Classics Retained and Updated
4000 RECIPES FOR THE WAY WE COOK NOW

Irma S. Rombauer, Marion Rombauer Becker, and Ethan Becker

Part II.

Solutions for Homes and Communities

If we're such *Mindless Eaters*,
are there mindless solutions?

Momentous Problems & Household Solutions

Problems

➤ Our immediate environment causes us to overeat

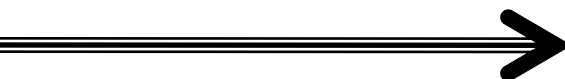
➤ Big plates

➤ Big bowls

➤ Wide glasses

➤ Eye-level foods

➤ Stockpiling & salience



Solutions

Change our immediate environment to eat less

Smaller plates (10 1/4)

Smaller bowls

Narrow glasses

Adjust eye-level foods

Rearrange cupboards.

Which “Small Changes” Work Best?

An Experimental Pilot Study

➤ Procedure

- Recruited 2000 volunteers via www.MindlessEating.org
 - Self-selected, 41.2 yrs old, 1.4 yrs college, 2.1 kids, 73% cc
- Randomly assigned to make 1 change (from lab studies)
 - 20 different changes -- 100 people per change
 - Changes were binary, and relevant to all populations (from *ME*)
 - e.g., replace wide glasses with thin, use the ½ plate rule, etc.
- Tracked progress for 3 months
 - Put an “x” on calendar, weekly reporting of compliance, monthly progress
- Pre-post: Weight, well-being, bio-markers, absenteeism

Results for . . .

Reported Monthly Weight Loss

1. -1.97 lbs/month – Use a salad plate (or a 10-inch plate) for your dinner plate
2. -1.58 lbs/month – Only eat in the kitchen or dining room
- ...
19. +0.62 lbs/month – Chew gum at times when you usually snack
20. +0.83 lbs/month – Eat oatmeal as a hot breakfast alternative

- **.73 correlation between compliance and reported weight loss**
- **More Mindless or convenient the changes = higher compliance**
- **Monthly weight loss was nonlinear over the 3 months**
- **For many, 3rd month (and beyond) losses were 53% higher than 1st**
- **Why would people start losing weight at a higher rate?**

Mindless Eating Solutions

- How much is enough?
 - 2500 people -- 4 out of 5 would be “happy” losing an average of *less than* 18 lbs
 - It’s not impossible . . .

- The Ripple Effect of one small change
 - 1. What’s my “best” change?
 - 2. How do I know if its working?
 - 3. How can I “keep the change”?



The Ripple Effect of a Small Change



- Denver, CO
- Tom & Cindy
- 45- & 32-lbs in year
- Used F&V rule
- --
- Then . . .



The Ripple Effect of a Small Change



- Grand Forks, ND
- USDA's HNRC on obesity
- Tom – 69 years
- 34 lbs in 7 months
- One change: “I eat cottage cheese after work”
- -
- Then . . .

The Power of Changing Your Environment

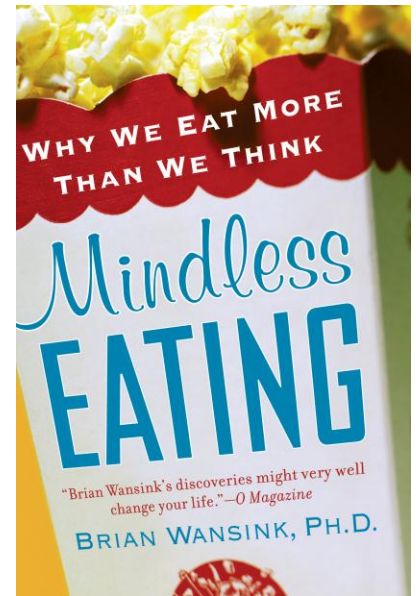
- It helps you eat better at home
- It can help your children eat better at school

It's easier to change your environment than to change your mind

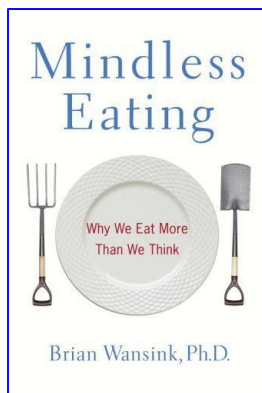
Recap

- Three Eating Myths
 - We're smarter than a bowl
 - We know when we're full
 - Obesity is what happens outside our home
- The Mindless Method Program
- The Ripple Effect of Small Changes

Thank You



“The Best Diet is The Diet You Don’ t Know You’ re On.”



Mindless Eating -- p. 1