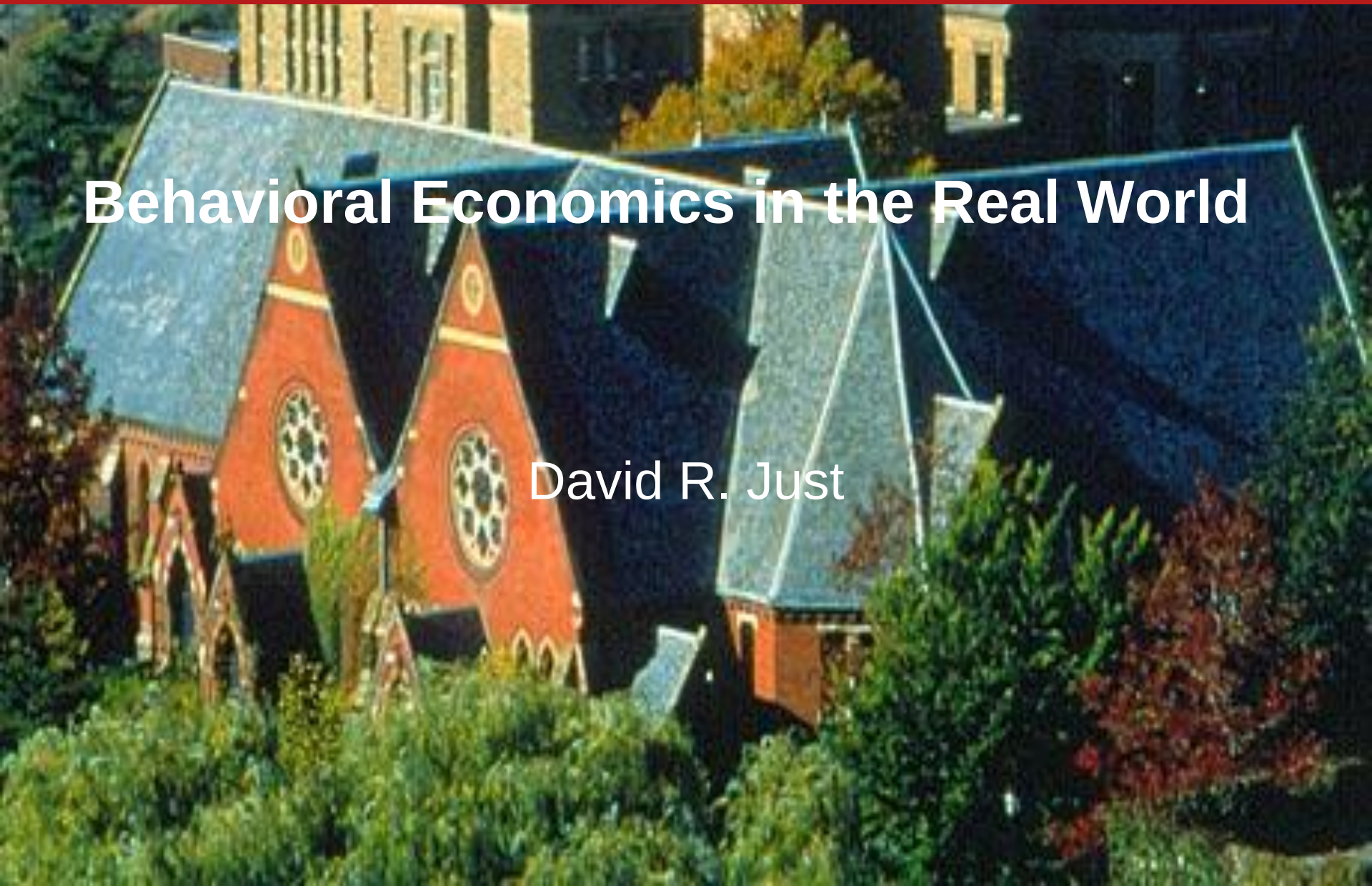
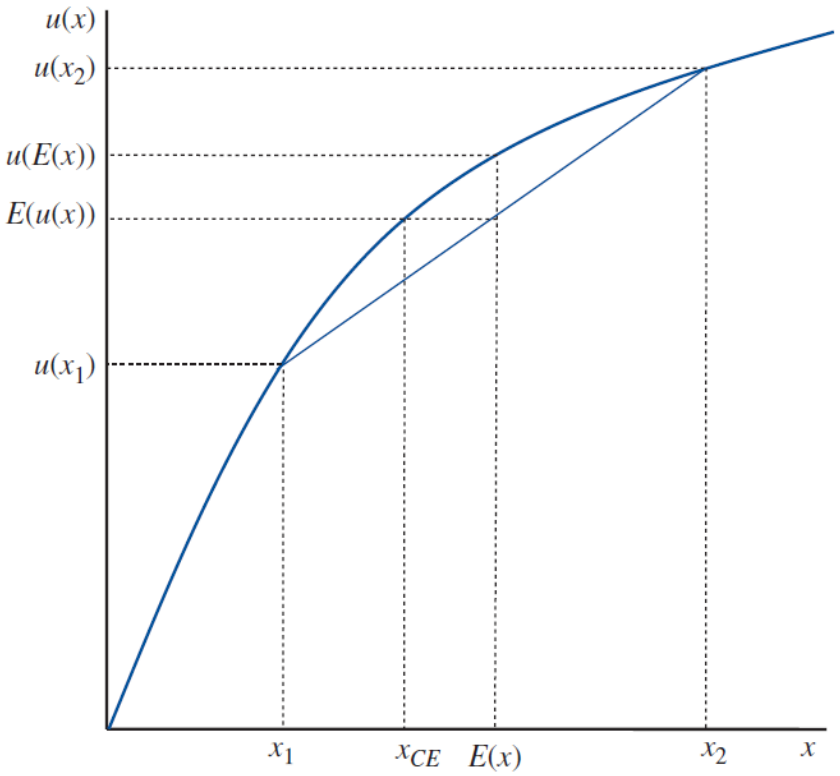
Cornell University



Behavioral Economics in the Real World

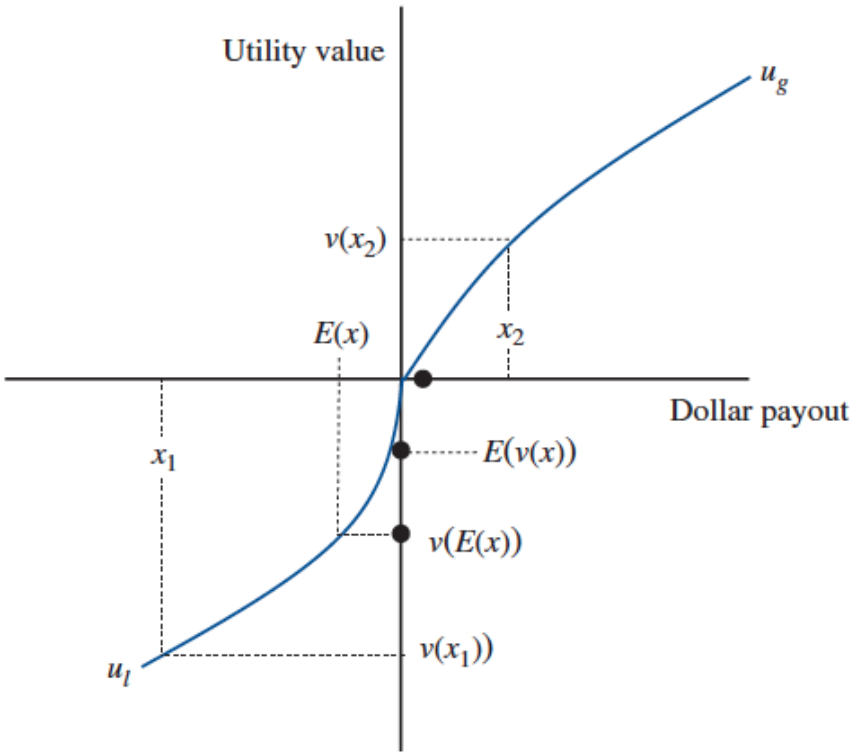
David R. Just

How we fell in love with economics



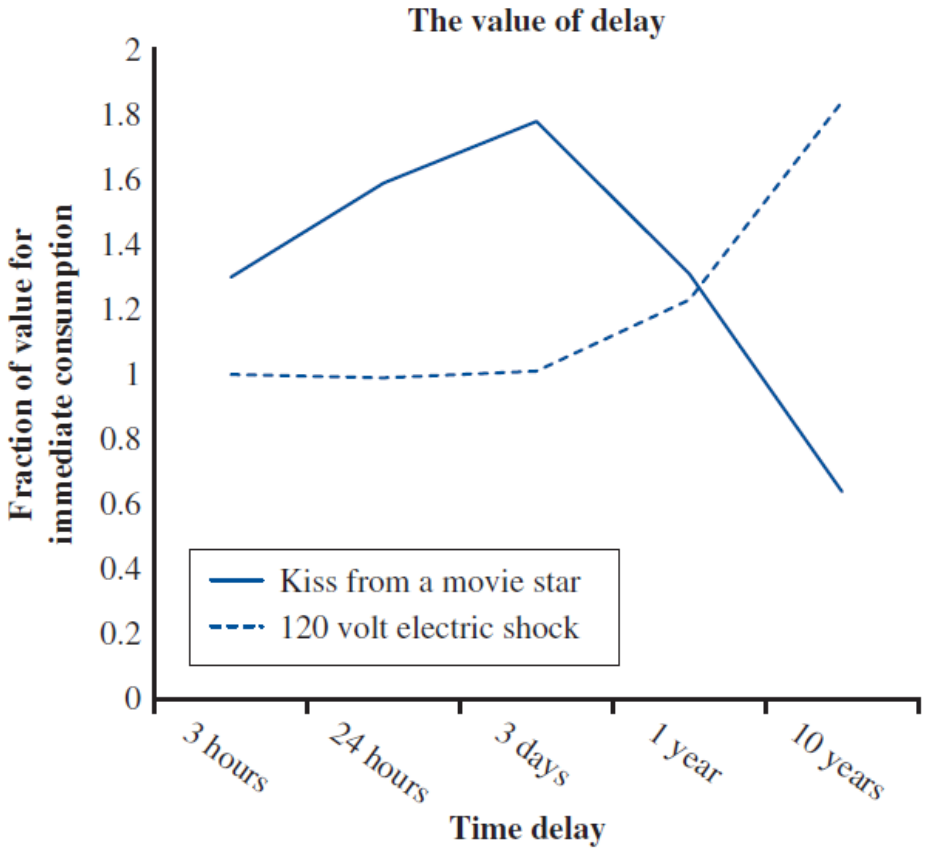
- Samuelson's philosophy
  - Explained long festering conundrums
  - Simple beauty and organization
  - Makes sense

How economists fell in love with behavioral economics



- Kahneman and Tversky's prospect theory
  - Explained long festering conundrums
  - Maintained a lot of the simple beauty of mainstream economic models
  - Added realism and regularity

Rational-ish



We do something like optimize

- We don't have all the information we need
- Once we recognize patterns, we use them
- We are subject to emotional bias

The challenge of behavioral economics

- How do people screw up and why?
- In contrast to microeconomics, behavioral models can seem like a hodgepodge.
- What is systematic and how can it be used by decision-makers, policymakers, businesses
- Food choice makes a great example

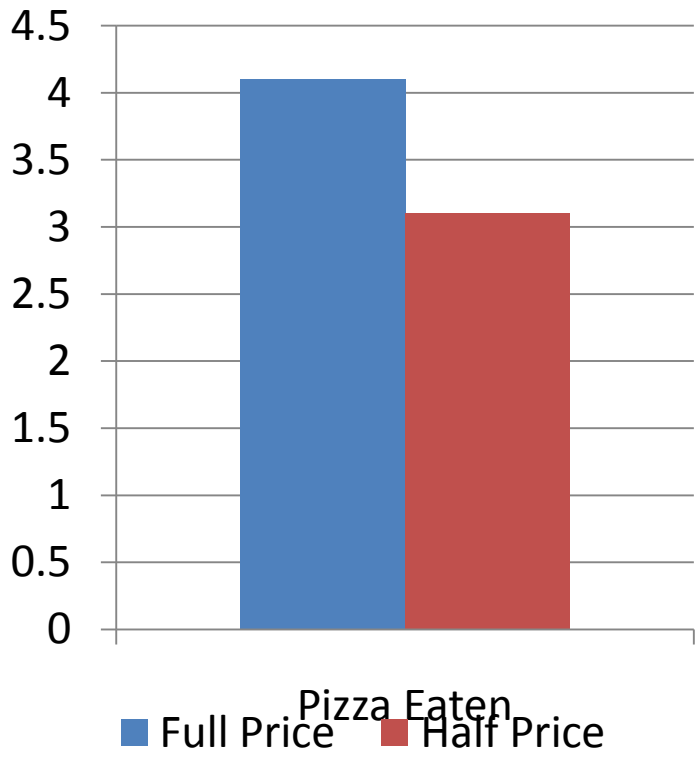
Marginal Thinking

- What is the standard story?
  - Maximize utility of consumption subject to a budget constraint

    $\max_{x_1,x_2} U(x_1, x_2)$ subject to $p_1 x_1 + p_2 x_2 \leq w$

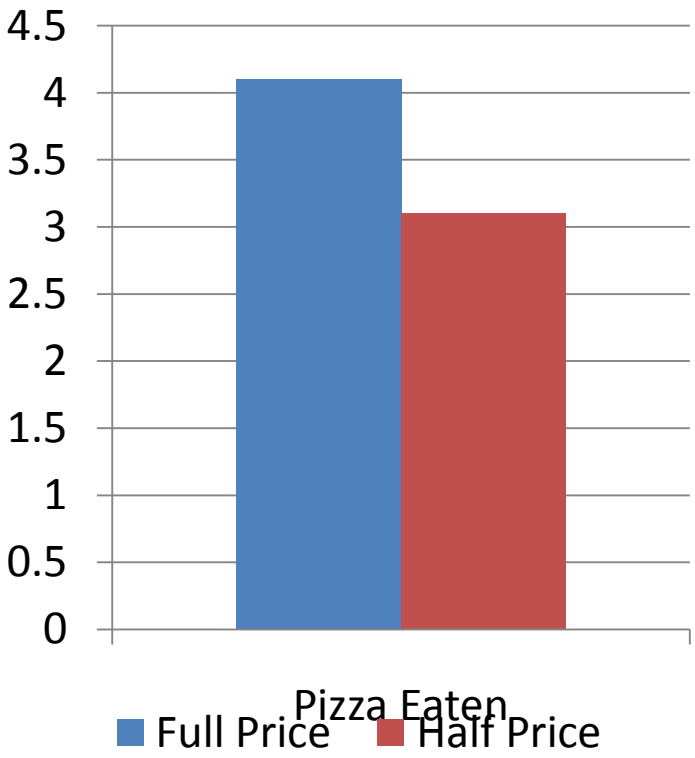
  - Suppose you had to pay $1 per slice
    - Eat until the next slice provides less than $1 worth of enjoyment
    - Diminishing marginal utility consumption guarantees you will stop
  - Suppose the pizza was free?
    - Eat until the next slice would yield negative utility

All-You-Can-Eat



- Rational: eat until the next bite of food provides no more enjoyment
- Individuals entering an AYCE pizza buffet were asked to participate
  - Half were given a coupon for a free drink
  - Half were given a coupon for a free drink *and* 50% off their meal

All-You-Can-Eat



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Don't like it? Eat 0.5 slices more

The Concorde Paradox

- A Supersonic Jet
  - 1962 British and French government venture
  - Originally budgeted for $448 million
  - By 1964 $900 million
  - By completion more than $2.7 billion
  - By 1973 they knew it was a loser—what to do?
    - Only 100 passengers
    - Only ever sold 14 planes

Going to the Theater

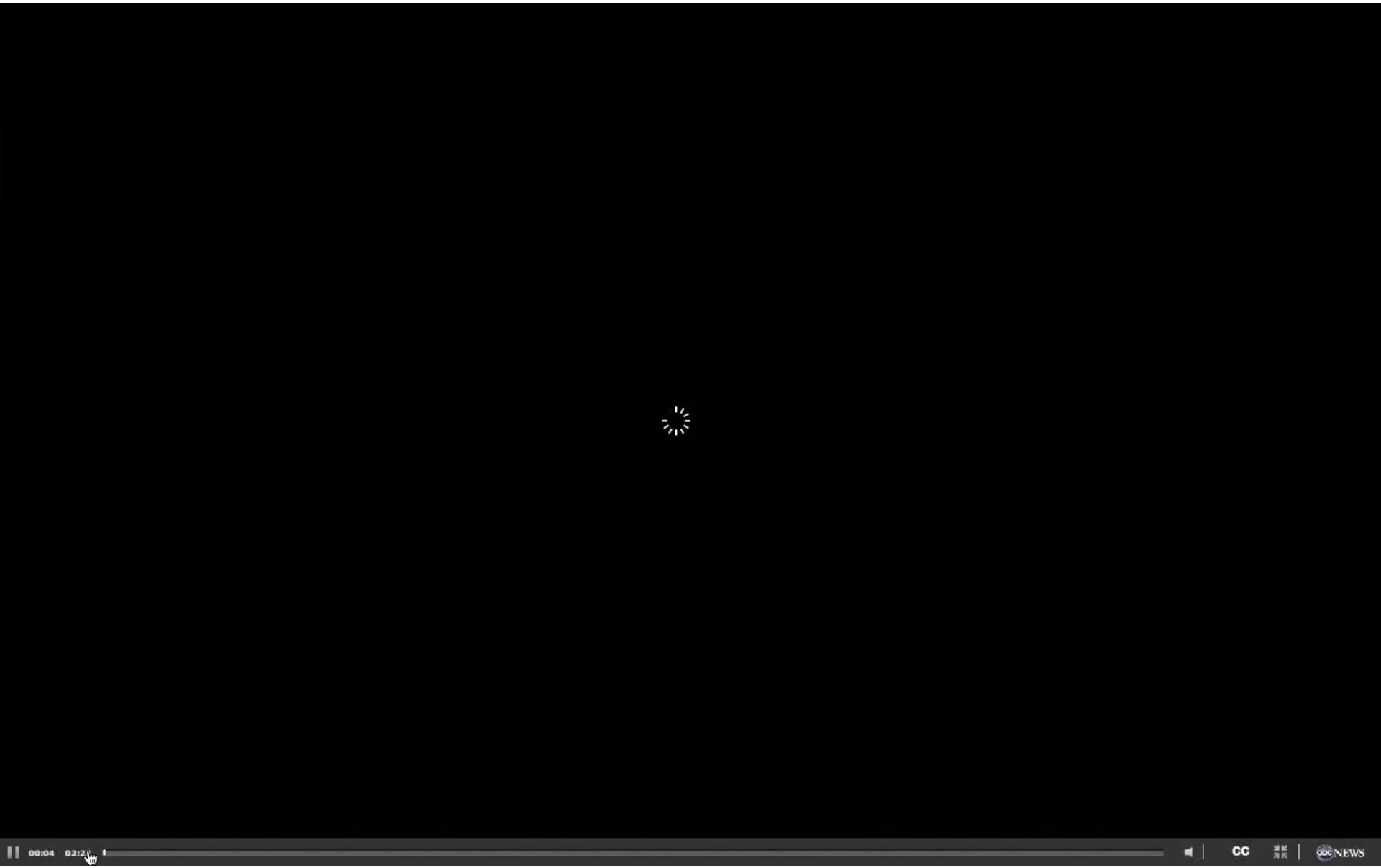
- Season tickets at the Ohio University Theater
  - $15 for 10 shows
  - Some charged $13 or $8
  - The full price group attended more often
  - All groups were just as likely to miss in the last half of the season
- Does transaction utility diminish over time?

What it means to firms

- When considering a project
  - Use rigorous analysis
  - Avoid backward looking considerations
  - Be willing to give up on a loser – the earlier the better
- For selling to consumers
  - Recognize consumers motivation
  - Find ways to make it sound like a good deal
  - Use it to your advantage
    - Amusement parks charge a lot so you stay longer

What is normal anyway?

- Soda can – 12 oz
- Starbucks – “Tall” 12 oz
- McDonald’s soda – “child” 12 oz
- McDonald’s coffee – “small” 12 oz
- Consumers presented with two sizes of items
  - Regular and Double
  - Half and Regular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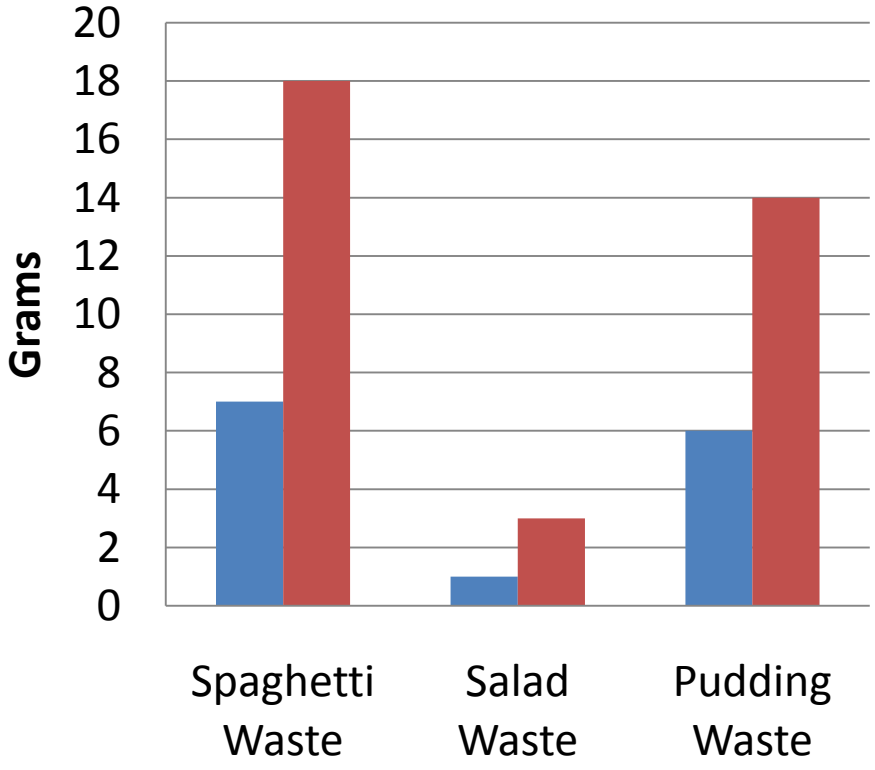

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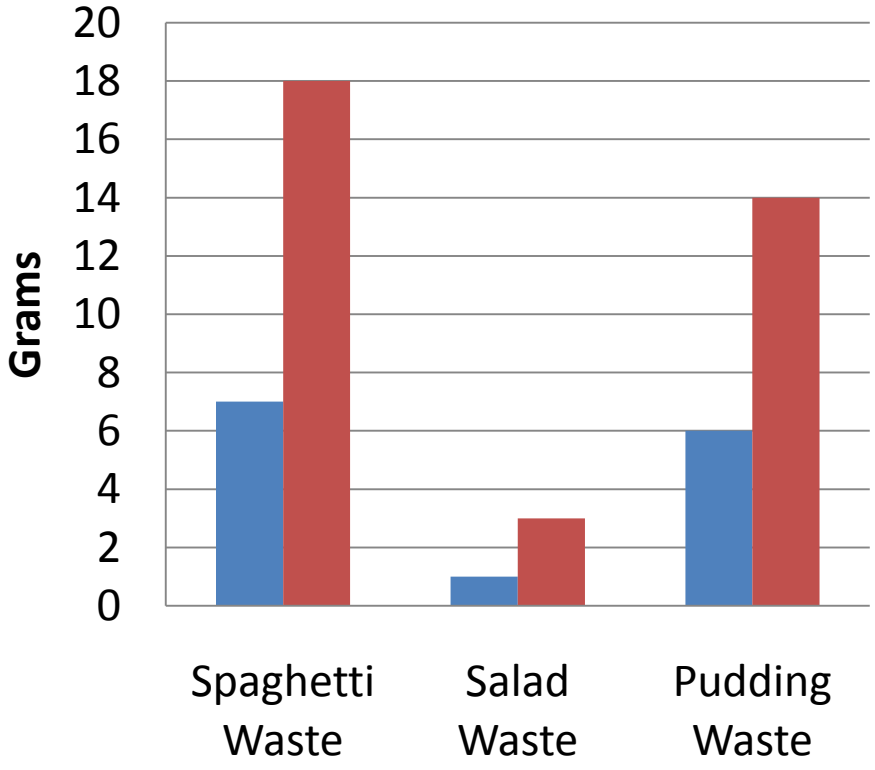
- 140 more calories just by naming it smaller



Behavioral economics

- What ***factors*** affect our choices?
  - Price
  - Appearance
  - Convenience
  - Information
  - State of mind
  - Status quo
  - Habit
  - Expectations

Why?: Economics and Psychology

- Individuals make hundreds of thousands of decisions a day
  - Making deliberate decisions for each would be impossible
  - We fall back on rules of thumb and habit
  - What would happen if we did rationally consider each decision?
  - How could cognitively strategies engage the unthinking?

Choice Architecture

- ***Designing the environment or social situation*** to ***lead, not force*** an individual to make a particular choice
  - "nudging"
- Uses ***psychology*** to influence
  - ex.: advertising
- Creates satisfaction about a decision, "owning it"
- **Often, *consumers don't even know* they are being influenced!**

Why?: Economics and Psychology

- One reason cognitive policies fail is endogeneity
  - Those who overeat when visiting a fast food restaurant do so because they like to
  - They will be more resistant to information, or other policies
- Reactance
  - Rebelling against a threat to freedom
  - Fat tax versus a thin subsidy
  - Limits on ketchup
  - Don’t press this button

Give ‘em a Choice!

This?

- People report being more satisfied with an option if they have chosen it than if it is forced on them, even when the default option is the what they would have chosen anyway!
- When given a choice between carrots and celery 89% of kids both took and ate carrots vs. 69% when carrots alone were offered.

Or This?

What We Know About Decisions

- Two types:
  - **Cold State** – Rational
  - **Hot State** – Impulsive
- **Stress** and **distraction** lead to HOT STATE decisions
  - It takes *effort* to make a deliberative choice

Hot/Cold Study

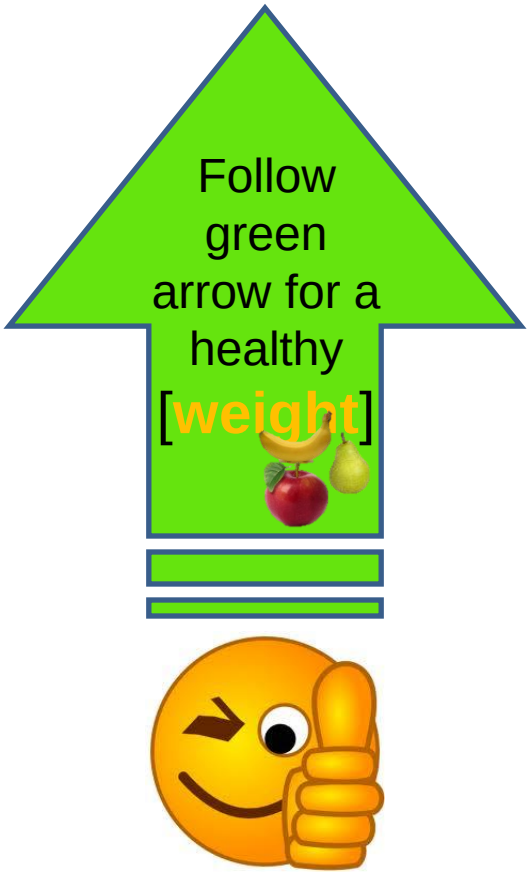
Behavioral Interrupt

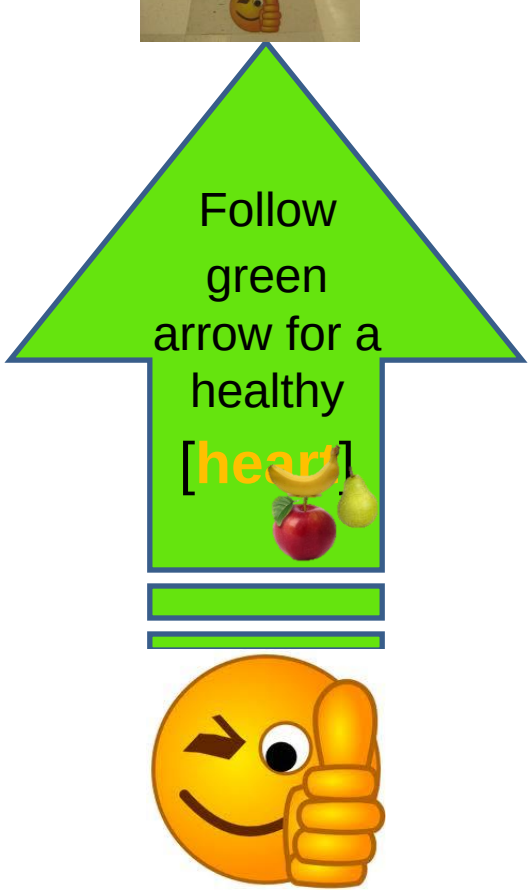
- Upstate NY schools with pre-ordering of lunch items through SmartBoards
- Students who did ***NOT*** pre-order (Hot State):
  - 11.8% less likely to take a fruit
  - 8.9% more like to take a snack food
  - 25% more likely to take a starchy side

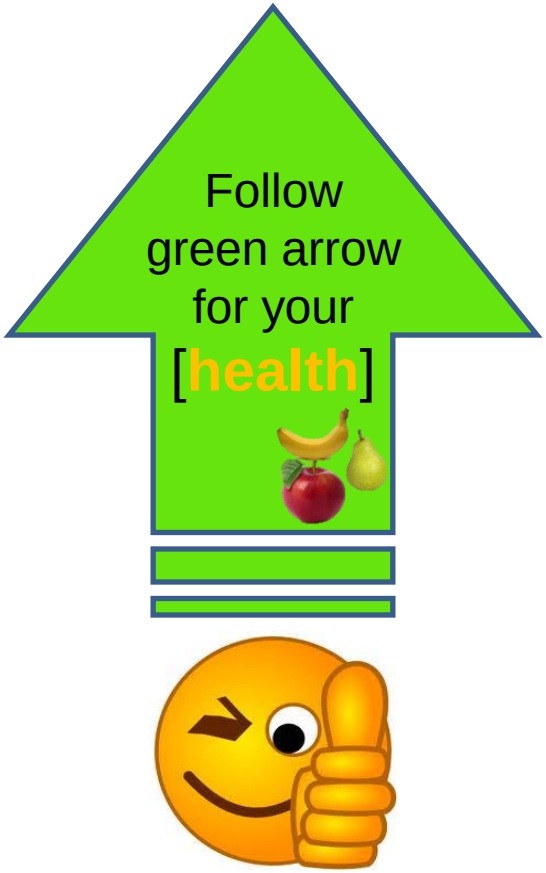
How Do We Know What to Buy?

285 variety of cookies, 75 iced teas, 230 soups, 175 salad dressings, 40 toothpastes, etc..

10 Spanish and English Floor Stickers (6 ft long by 3 ft wide) Placed Throughout the Grocery Store.







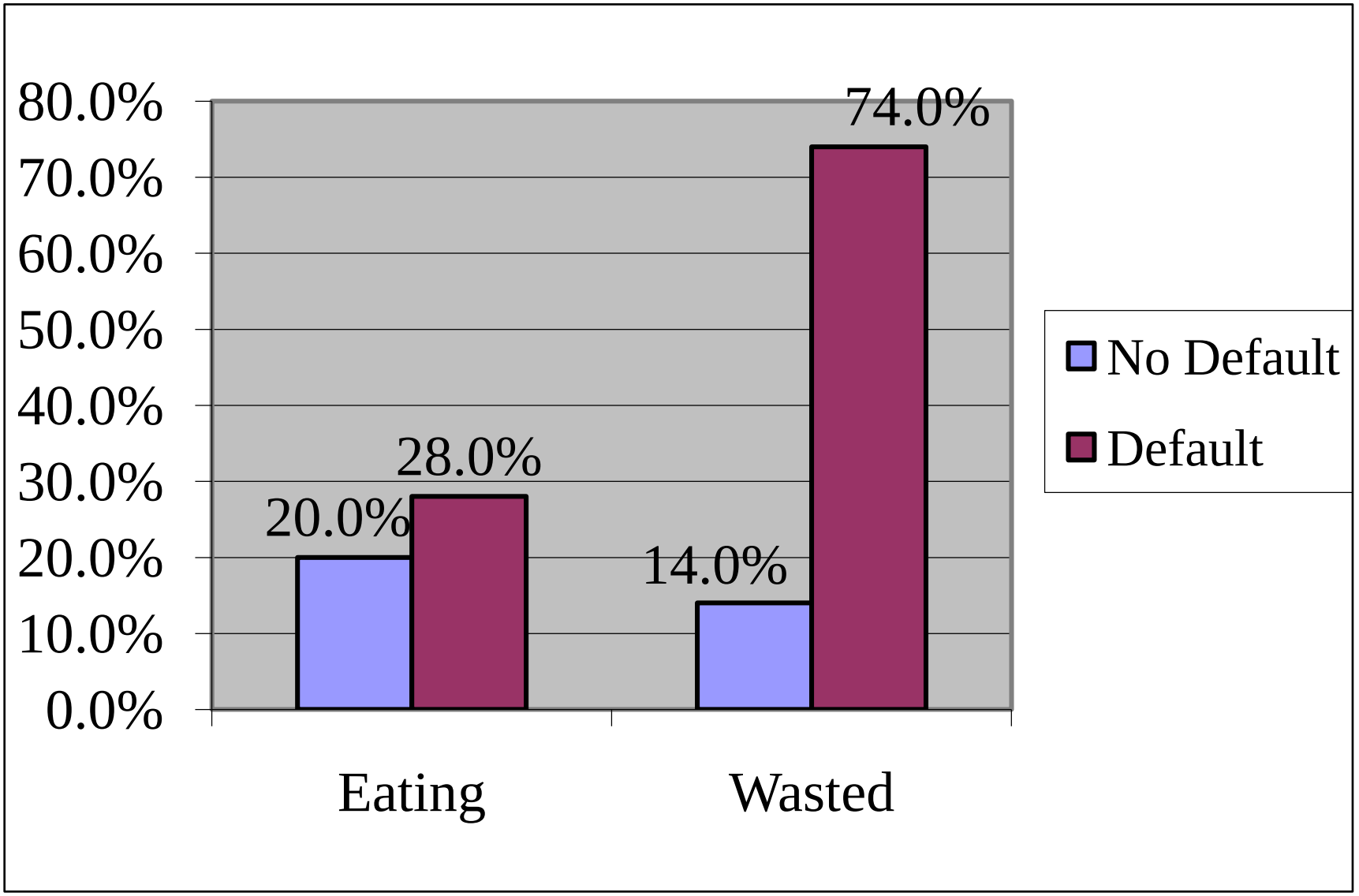
Can BE save us from ourselves?

We have jumped into BE policy with two feet

- Environment and resources
- Tax policy
- Health
- Child nutrition

The School Lunch Challenge

A Traditional Approach

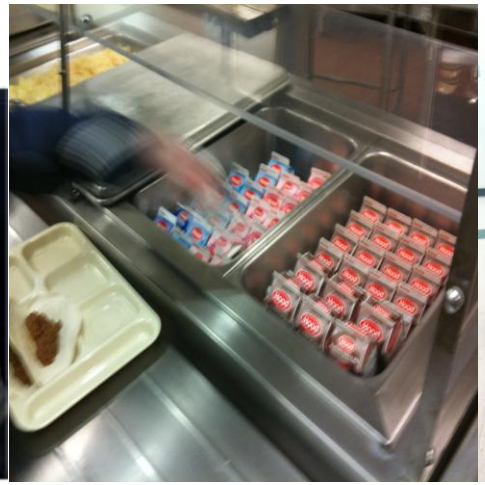


Results

- School records indicate that the average serving of fruits and vegetables costs $0.20
  - The default increases servings taken by 0.86 per child ($0.20 x 0.86 = $0.24)
  - But, 60% is thrown away!
- Providing a default to 10 children
  - Leads one additional child to eat a fruit or vegetable
  - Costs $1.72
  - 70% of the additional value ends up in the garbage

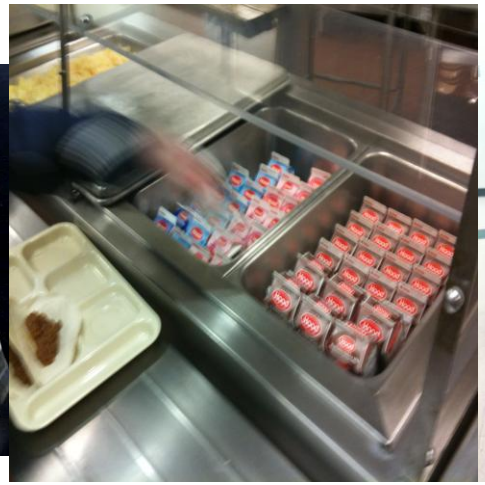
What Works

- Small inexpensive changes
  - Subtle nudges in the right direction
  - Reframing the decision of what to each
  - Changes that patrons will seldom even notice
    - If they think it's their choice it can form a habit

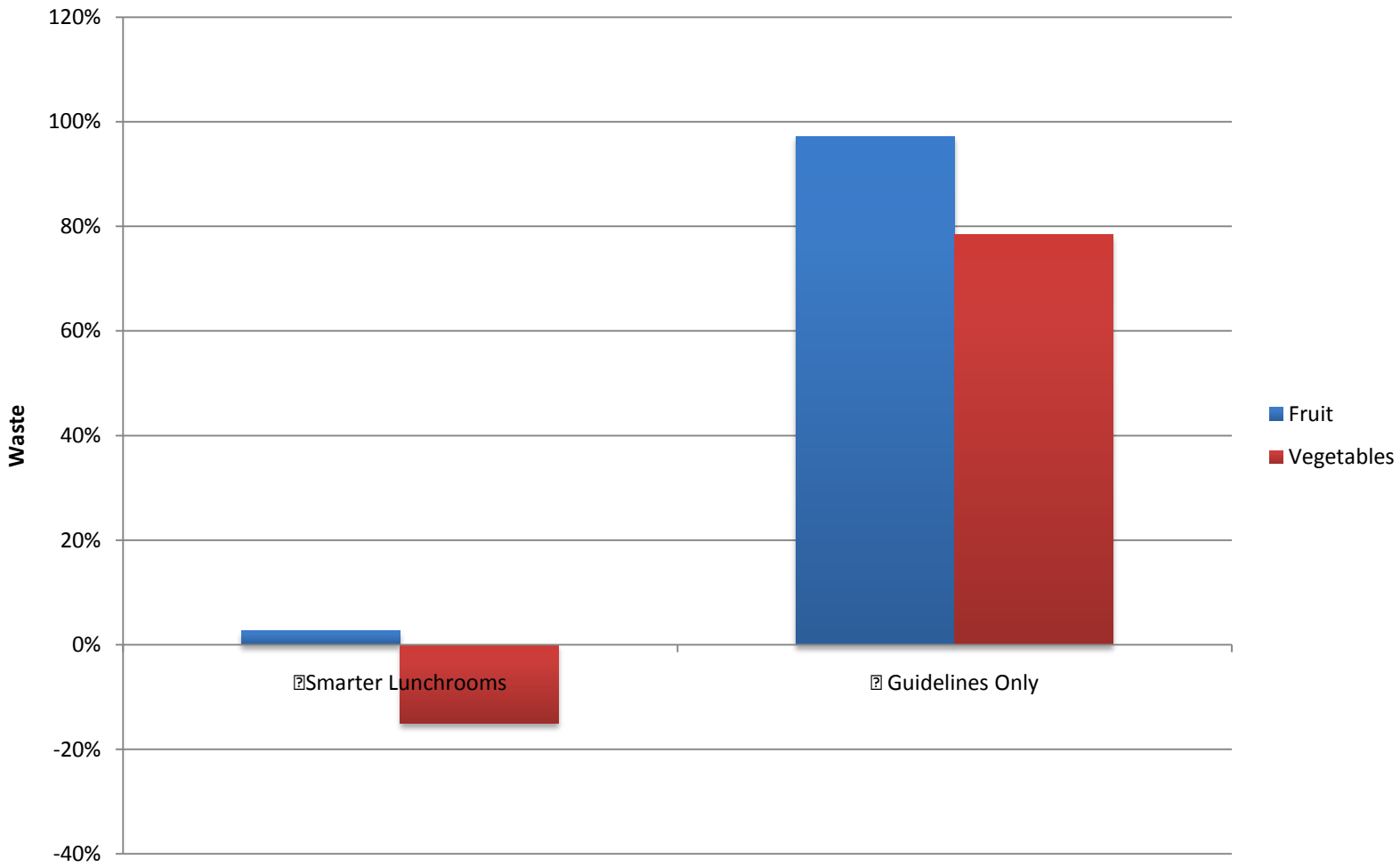


Smarter Lunchrooms™

- Smarter Lunchrooms™
  - Move the fruit
  - Name the healthier foods
  - Signs and verbal prompts
  - Place white milk so it is more visible than other options
- Less than $5 per school--one time fee

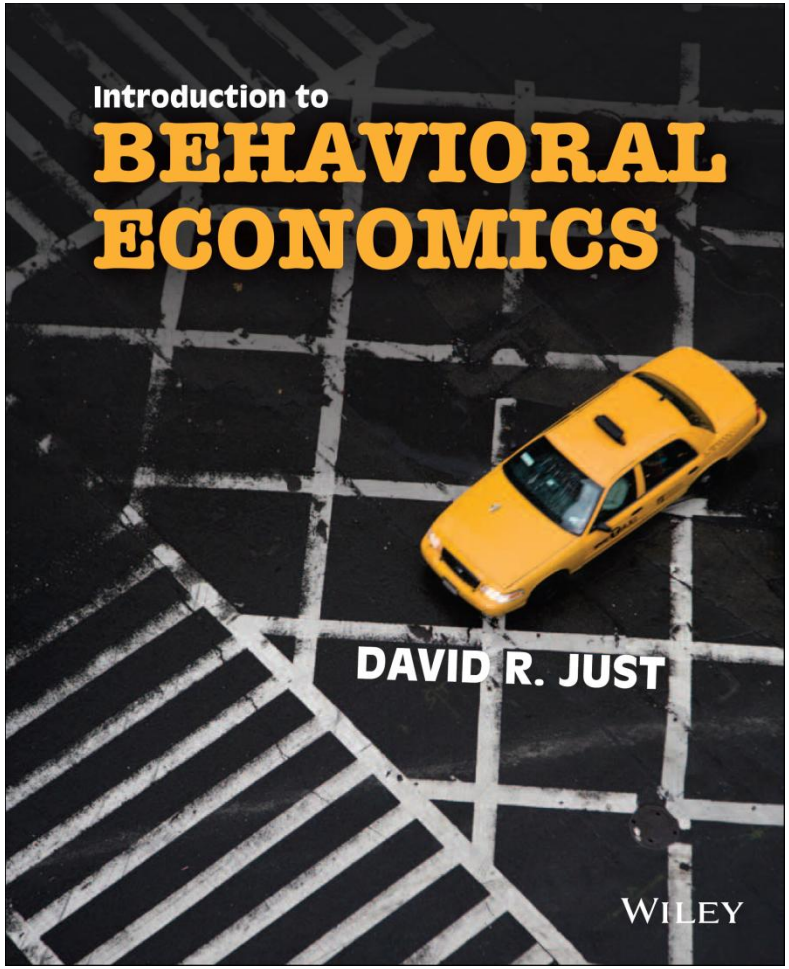


Waste


120%
100%
80%
60%
40%
20%
0%
-20%
-40%
Waste
Smarter Lunchrooms
Guidelines Only
Fruit
Vegetables

The Solution

The Promise of Behavioral Economics



- Policies that don't face "headwinds"
- Keep freedom intact
- More acceptable and more effective
- Potential for win-win solutions
- What are the limits?
- What are the long term impacts?