Behavioral Science Insights for Public Health

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### Nutrition Facts

8 servings per container

**Serving size** 2/3 cup (55g)

<table>
<thead>
<tr>
<th>Amount per serving</th>
<th>Calories</th>
<th>230</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Daily Value*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Fat</td>
<td>8g</td>
<td>10%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>1g</td>
<td>5%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium</td>
<td>160mg</td>
<td>7%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>37g</td>
<td>13%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>4g</td>
<td>14%</td>
</tr>
<tr>
<td>Total Sugars</td>
<td>12g</td>
<td></td>
</tr>
<tr>
<td>Includes 10g Added Sugars</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>3g</td>
<td></td>
</tr>
</tbody>
</table>

| Vitamin D          | 2mcg     | 10% |
| Calcium            | 260mg    | 20% |
| Iron               | 8mg      | 45% |
| Potassium          | 235mg    | 6%  |

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.
TODAY'S TALK

- Behavioral economics & psychology
- Choice architecture
- Simplifying communication
- Social Norms
- Defaults
Choice Architecture & Simplifying Communication

Over 6000 employees/visitors
Register data for 9 months
Traffic Lights + Choice Architecture

“Consume often”
“Consume less often”
“There’s a better choice in green or yellow”

Thorndike et al., AJPH, 2012
Choice Architecture
Sales of all cafeteria items during baseline and labeling

% of total cafeteria sales

Red items: 24.9, 22.6
Yellow items: 32.9, 33.3
Green items: 42.2, 44.1
Choice Architecture

Water = 14% of all cold beverage sales
Google moved M&Ms to opaque containers

3.1 million fewer M&Ms eaten by 2000 employees over 7 weeks
Memorable & Actionable Guidelines

Riis & Ratner, 2015
Social Norms

- How others act in a given situation
- Other people signal what do to & what is appropriate
U.K. Organ Donation Study

1,085,000 visitors to vehicle tax/license website June - July 2013

Messages to join organ donor registry

8 Randomize to webpages

UK Behavioral Insights Team
Thank you.

Please join the NHS Organ Donor Register.

Join or find out more.
Social Norms

Thank you.
Please join the NHS Organ Donor Register.

Every day thousands of people who see this page decide to register.

Join or find out more.
Norm & Picture - Salience

Thank you.
Please join the NHS Organ Donor Register.

Every day thousands of people who see this page decide to register.

Join or find out more.
Norm & Logo - Salience

Thank you.
Please join the NHS Organ Donor Register.

Every day thousands of people who see this page decide to register.

Join or find out more.
organdonation.nhs.uk
Three people die every day because there are not enough organ donors.
Reciprocity

Thank you.

Please join the NHS Organ Donor Register.

If you needed an organ transplant would you have one? If so please help others.

Join or find out more.
Thank you.
Please join the NHS Organ Donor Register.

You could save or transform up to 9 lives as an organ donor.

Join or find out more.
Thank you.
Please join the NHS Organ Donor Register.

If you support organ donation please turn your support into action.

Join or find out more.
Results
DO NOTHING.

Status Quo Bias:
People prone to sticking with defaults
Organ Donation Default

% Choosing to Donate Their Organs

- Denmark: 4%
- Netherlands: 28%
- England: 17%
- Germany: 12%

Johnson & Goldstein (2004)
Portion limit of 16 ounces on sugary drinks served in restaurants

The Nanny
You only thought you lived in the land of the free.

Bye Bye Venti
Nanny Bloomberg has taken his strange obsession with what you eat one step further. He now wants to make it illegal to serve "sugary drinks" bigger than 16 oz. What's next? Limits on the width of a pizza slice, size of a hamburger or amount of cream cheese on your bagel?

New Yorkers need a Mayor, not a Nanny.
Find out more at ConsumerFreedom.com

Contact the Consumers - Freedom
4 Lab Experiments

90 min session, $25
Order drink at beginning
Given 40 cents for drink
Iced Tea or Lemonade

John, Donnelly, Roberto, in press, Psy Science
Bundling Beverages

623 participants → 362 order a drink

- Medium Size: 20 cents
- Large Size: 30 cents

Regular Portions

Bundled Portions
Calories Consumed (N=362)

F (1,358) = 1.67, p = .20
Summary

- Bundling did not backfire
- Might even help curb consumption
Free Refills Manipulation

470 participants → 297 order a drink

Medium Size
20 cents

Large Size
30 cents

Regular Portions

Portion Cap
+ Free Refills
Waiter vs. Self-Served
Calories Consumed (N=297)

F (1,293) = 22.48 p < .0005
Waiter vs. Self-Served
Calories Consumed (N=557 → 341)

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Calories Consumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Portions</td>
<td>133</td>
</tr>
<tr>
<td>Free Refills Waiter-Served</td>
<td>211</td>
</tr>
<tr>
<td>Free Refills Self-Served</td>
<td>177</td>
</tr>
</tbody>
</table>
Calories Consumed (N=284 Given Drinks)

- Regular 10 oz Portion: 51 calories
- Free Refills 8 oz Waiter-Served: 94 calories
- Free Refills 8 oz Self-Served: 67 calories
Summary

- Bundling did not backfire

- Free refills can backfire, but less so when self-served

- Need to study other portion limit contexts
Do not become too seduced