How Good Are We, Really, At Creating Change?

Creating Impact From Knowledge

Knowledge Produced To Serve Society → ?? → Society Being Served
The Frustration

Research = small audiences
Research misses key audiences
Poor links of scholarship & policy

How We Construe Impact

Citation Indices
h-index
i10-index
Journal Impact Factor
Slow Movement in a Fast World

- Slow ✓
- Poorly communicated ✓
- Unresponsive ✓
- Programmatic only ✓
- Conflicted ✓
- Indecipherable jargon ✓

Linking Scholarship To Public Policy

How We Addressed
A Fundamental Challenge

Hopeful (Wishful) Thinking

Research

- Pretty Good
- Poor
- Poor

Scientists
Social Change
Policy Change
Making Our Work Matter

Research → ??? → Social Change → Policy Change

Can We Create a Virtuous Cycle of Solutions?

Research → Legislators → Regulators → Courts → Press → Public → NGOs → Industry → Social Change → Policy Change
Identify Change Agents

Develop Strategic Questions

Research

Communications

Science

Change Agents

Science

Change Agents

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Strategic science with policy impact

Brownell & Roberto

Lancet, 2015
Case 1

Industry and Menu Labeling
An observational study of consumer use of fast-food restaurant drive-through lanes: implications for menu labelling policy

Christina A Roberts*, Elena Hoffnagle, Marie A Bragg and Kelly D Brownell
Department of Psychology, The Rudd Center for Food Policy and Obesity, Yale University, PO Box 208300, New Haven, CT 06520-8300, USA

Public Health Nutrition, 2010

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Case 2
Children’s Food Marketing
### The Best Dozen

- Bunnies
- EnviroKids Organic Puffins
- Cheerios
- Kix
- Life
- Hannah Montana
- Clifford Crunch
- Mighty Bites
- Honey Sunshine
- Organic Wild Puffs
- Mini Wheats

**None**

### The Worst Dozen

<table>
<thead>
<tr>
<th>Cereal</th>
<th>TV Advertising</th>
<th>Adver-gaming</th>
<th>Other Youth Websites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reese’s Puffs</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Corn Pops</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lucky Charms</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Golden Grahams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamon Toast Crunch</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cap’n Crunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count Chocula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trix</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Froot Loops</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Smorz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruity/Cocoa Pebbles</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cocoa Puffs</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
Predicted Defense

“Food does not become nutrition until it is eaten.”

“Children like the taste of ready-to-eat cereals and are therefore more likely to eat breakfast.”

Celeste Clark, Ph.D., Kellogg Company
Susan J. Crockett, Ph.D., R.D., General Mills
— J Amer Dietetic Assn, 2008

Effects of Serving High-Sugar Cereals on Children’s Breakfast-Eating Behavior

WANT TO WIN A TIE-DYE? There are positive health benefits for children who consume ready-to-eat cereals for breakfast; however, some companies market their high-sugar products specifically to children, which raises concern that these cereals may contribute to unhealthy levels of added sugar in children’s diets.

WANT YOUR BRAIN HEALTHIER? Results demonstrate the potential negative effects of serving high-sugar cereals to children and how these effects may vary based on the time of day and meal consumption during breakfast. In addition, high added sugars that home toxins and may lead to sugar cereals as an alternative.

Pediatrics, 2011

General Mills reducing sugar in kids’ cereal

By Sarah Stidham, AP Food Industry Writer

General Mills reducing sugar in kids’ cereal

USA TODAY
Case 3
High Consumption of SSBs

Ounces of Prevention — The Public Policy Case for Taxes on Sugared Beverages
Kelly O. Brownell, Ph.D., and Thomer S. Friedman, M.D., M.P.H.

Sugar, rum, and tobacco are commodities which are nowhere necessities of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.
HEALTH POLICY REPORT

The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages

Kelly D. Brownell, Ph.D., Thomas Farley, M.D., M.P.H., Walter C. Willett, M.D., Dr.P.H., Barry W. Popkin, Ph.D., Frank J. Chab Subra, Ph.D., Joseph W. Thompson, M.D., M.P.H., and David S. Ludwig, M.D., Ph.D.

The consumption of sugar-sweetened beverages has been linked to risks for obesity, diabetes, and heart disease. Therefore, a compelling case can be made for the need for reduced consumption of these beverages. The evidence for positive associations between the intake of sugar-sweetened beverages and body weight—associations that were stronger in longitudinal studies than in cross-sectional studies and in studies that were not funded by the beverage industry—indicates the potential for public health benefits.


The Impact of Food Prices on Consumption: A Systematic Review of Research on the Price Elasticity of Demand for Food

I. S. Anderson, N. J. Long, R. D. and Kelly D. Brownell, PhD

A higher glycemic score is associated with higher food prices. The demand for food is responsive to price changes. This association is robust to various methodologies used to estimate elasticity.


Preventive Medicine

Estimating the potential of taxes on sugar-sweetened beverages to reduce consumption and generate revenue

Tatina Andreyeva, Ph.D., Frank J. Chaloupka, Ph.D., and Kelly D. Brownell, Ph.D.

The potential of taxes on sugar-sweetened beverages to reduce consumption and generate revenue is estimated using a model of demand and supply. The model is calibrated to fit the data on the price elasticity of demand and the revenue generated.

Andreyeva et al. Preventive Medicine, 2011
**Soda Taxes Passed in US**

- Berkeley
- Oakland
- San Francisco
- Albany, CA
- Boulder
- Seattle
- Philadelphia
- Boulder
- Navajo Nation

**Revenues for Pennsylvania**

<table>
<thead>
<tr>
<th>Sugary Drink Type</th>
<th>Gallons Sold</th>
<th>Annual Tax Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbonated Soft Drinks</td>
<td>266,428,160</td>
<td>$341,028,045</td>
</tr>
<tr>
<td>Fruit Drinks</td>
<td>61,623,578</td>
<td>$78,878,180</td>
</tr>
<tr>
<td>Sports Drinks</td>
<td>29,622,156</td>
<td>$37,916,360</td>
</tr>
<tr>
<td>Ready-to-Drink Tea</td>
<td>48,440,466</td>
<td>$62,003,797</td>
</tr>
<tr>
<td>Energy Drinks</td>
<td>11,374,705</td>
<td>$14,559,622</td>
</tr>
<tr>
<td>Enhanced Water</td>
<td>4,751,939</td>
<td>$6,082,482</td>
</tr>
<tr>
<td>Ready-to-Drink Coffee</td>
<td>6,874,471</td>
<td>$8,798,922</td>
</tr>
<tr>
<td>Sugary Drink TOTAL</td>
<td>429,115,475</td>
<td>$549,267,988</td>
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</table>

**REVENUE CALCULATOR FOR SUGARY DRINK TAXES**

New, Advanced Online Tool Offers Revenue Estimates for Sugary Drink Taxes
Taxes Passed Outside US

<table>
<thead>
<tr>
<th>Country</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>Mexico</td>
</tr>
<tr>
<td>Belgium</td>
<td>Norway</td>
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<tr>
<td>Brunei</td>
<td>Palau</td>
</tr>
<tr>
<td>Chile</td>
<td>Philippines</td>
</tr>
<tr>
<td>Dominica</td>
<td>Portugal</td>
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<tr>
<td>Fiji</td>
<td>Samoa</td>
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<td>Finland</td>
<td>Saudi Arabia</td>
</tr>
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<td>France</td>
<td>South Africa</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>Spain (Catalonia)</td>
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<tr>
<td>Hungary</td>
<td>St. Helena</td>
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<tr>
<td>India</td>
<td>Thailand</td>
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<tr>
<td>Kiribati</td>
<td>Tonga</td>
</tr>
<tr>
<td>Mauritius</td>
<td>Vanatu</td>
</tr>
</tbody>
</table>

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![Diagram](image)

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Case 4

Misleading Labeling

![Image]
Key Dates

Critical NY Times article Sept 4, 2009
Conn. Atty General Investigation Oct 14, 2009
FDA Call Oct 20, 2009
Smart Choices Closed Down Oct 23, 2009

Should Researchers Be Doing This?
A Stunning Public Health Victory

Multiple Effects of Malnutrition

<table>
<thead>
<tr>
<th>Overall</th>
<th>Body Systems</th>
<th>Health Impacts</th>
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<tbody>
<tr>
<td>weight loss</td>
<td>gastrointestinal</td>
<td>pellagra</td>
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<tr>
<td>muscle mass depletion</td>
<td>blood cells</td>
<td>rickets</td>
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<tr>
<td>weakness &amp; apathy</td>
<td>skin</td>
<td>berberi</td>
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<tr>
<td>depression</td>
<td>nervous system</td>
<td>scurvy</td>
</tr>
<tr>
<td>inability to work</td>
<td>immune function</td>
<td>death</td>
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<table>
<thead>
<tr>
<th>Symptoms</th>
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<tr>
<td>malabsorption</td>
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<td>indigestion</td>
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<td>skin lesions</td>
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<td>anemia</td>
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<tr>
<td>neurologic issues</td>
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<td></td>
</tr>
<tr>
<td>immune compromise</td>
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</table>

One Micronutrient Deficiency

**Vitamin A deficiency** - weakens immune systems of children, increasing vulnerability to disease. Vitamin A deficiency increases the risk of dying from diarrhea, measles and malaria by 20-24%. Highly elevated risk for blindness.

http://www.wfp.org/aboutwfp/introduction/hunger_what.asp?sectionfiltered=1&sub_sectionfiltered=1
Alfred Sommer
School of Public Health
Johns Hopkins

1970s - documented that vitamin A deficiency linked to:
- measles
- diarrhea
- blindness

Conducted small trials of supplementation

Sommer Then Connected Science with Policy

- 23-34% drop in deaths from illnesses like measles & diarrhea
- Saved as many as 1,000,000 deaths/yr
- Prevented 400,000 cases of blindness/yr
- Annual cost - $0.50/child/yr (age 6 mo – 5 yr)
- Every dollar invested returns $100
Some Current Strategic Issues

- Preempting preemption
- Industry running candidates for office
- Food policy as political platforms