Shifting from individuals to populations to change eating behaviors.

"Beyond appetite: New perspectives on eating behavior"
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Some Personal Experiences

The Micro-Macro Problem

- Our desire to achieve macro outcomes, ones that involve changes among large numbers of people, or in society as a whole, are driven by the micro actions of individuals.
- Changes at different levels of organization are emergent, not simply an adding up of the components.

"Social change programs need to consider more than one scale of reality at a time."

Diffusion of Eating Behaviors

Characteristics of Segments

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Early Adopters</th>
<th>Early Majority</th>
<th>Late Majority</th>
<th>Laggards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>Adventurous</td>
<td>Conventional</td>
<td>Conventional</td>
<td>Conventional</td>
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<tr>
<td>Innovation Value</td>
<td>High, novel</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
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<tr>
<td>Risk Tolerance</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Social Networks</td>
<td>Well-connected</td>
<td>Connected</td>
<td>Connected</td>
<td>Connected</td>
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<tr>
<td>Cultural Factors</td>
<td>Open to new</td>
<td>Moderate</td>
<td>Conservative</td>
<td>Conservative</td>
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<tr>
<td>Social Pressure</td>
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<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Social Influence</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
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<td>Social Norms</td>
<td>Deviate from</td>
<td>Deviate from</td>
<td>Deviate from</td>
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<tr>
<td>Social Desirability</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Social Esteem</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

Attributes of Eating Behaviors

- How is this better than what I currently do?
- How is it relevant to the way I go about my everyday life?
- Is it simple enough for me to do?
- Can I try it first?
- Can I watch others and see what happens to them when they do it?
Social Networks and Obesity

Creating Webs for Change

Social Networks Frame the Opportunities and Constraints for Change

Adolescent Obesity and Social Networks

Social Marketing

The Innovation Chasm


Social Networks and Obesity


Social Networks Frame the Opportunities and Constraints for Change

Social Networks

- Opinion leaders
- Groups
- Adding or removing members
- Bridging groups
- Rewiring groups
- Network weaving

Adolescent Obesity and Social Networks

- Intervene with the family system, rather than with the individual.
- Tailor family-based interventions to the structure of the family.
- Design support mechanisms for parents and adult family members on the basis of their social ties within the community.
- Use peer networks to encourage increased physical activity.


Social Marketing

Want to change the world? 
That's marketing.
Components of Nutrition Marketing and Communication Programs

- Use of consumer research (or not)
- Defined priority groups (target audiences) or general population
- School/child care settings
- Information/education-based
- Focused on specific behaviors or choices
- Social activities (parent engagement, groups)
- Contests
- Changes in cafeterias
- Other environmental changes (restaurants, groceries)
- Promotional materials
- Mass communication campaigns
- Message design and testing
- Message reach & frequency
- Incentives
- Identify competitive factors (barriers, other behaviors)
- Community activation (boards, local staff, coalitions)

Level of Exposure Predicted 4th Grade Students’ Self-Reported Nutrition Behaviors

| Table 5: Level of Exposure Model—Mean Scores for Students’ Self-Reported Nutrition Behavior, by Number of Channels of Participation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Channel 1 | Channel 2 | Channel 3 | Channel 4 | Channel 5 | Total |
| P1 | P2 | P3 | P4 | P5 |
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 |
| 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 |
| 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 |
| 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 |
| 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 |
| 96 | 97 | 98 | 99 | 100 |

Successful Program Features

- Select and concentrate on priority groups
- Conduct market research to understand how to make desired eating and activity behaviors relevant to their lives
- Identify the value each priority group finds in adopting healthier behaviors
- Understand and address the incentives and costs of change—financial, opportunity, psychological, social, etc.
- Design products, services, and behaviors that fit people’s reality
- Position the new behavior as more compelling, relevant, and potentially more valuable to people when they practice it, in comparison to the alternatives
- Test program strategies and elements before implementation

Ideal Program Features I

- Not rely only on mass communication campaigns
- Increase access to information, places, food choices, and services that reinforce desired behaviors
- Locate a service, distribute a product, and create opportunities for members of one priority group to engage in healthier behaviors
- Utilize community-based programs and citizen engagement to facilitate collaborations and ensure healthier environments and policies
- Convene policymakers who include incentives and disincentives for specific dietary and physical activity behaviors
- Explore how social networks and social media can influence norms about, and diffusion of, healthier choices and lifestyles

Ideal Program Features II

- Consumer-oriented
- Segments population
- Behavior-focused
- Theory-based
- Insight-driven
- Manages costs & benefits
- Adjusts to competition
- Methods mix

Observation of benchmark criteria used in interventions targeting childhood obesity

- Consumer-oriented
- Segments population
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Other Options

- “Relatively few residents in the intervention neighborhood in our study adopted the new supermarket as their main food store. This indicates that simply providing new food retail stores is insufficient to encourage the adoption of the new stores as residents’ main food stores. Complementary initiatives to encourage the adoption of the new stores are therefore required.” (Cummins, Flint & Matthews, 2014).
- “Concurrent availability of and access to key services and products are crucial to persuade individuals motivated by media messages to act on them.” (Wakefield, Loken, & Hornik, 2010).
- “We conclude from this review that applied health sciences research would have a much enhanced probability of influencing policy, professional practice, and public responses if it turned the question around from how can we make practice more science based to how can we make science more practice-based?” (Green, Ottoson, Garcia & Hiatt, 2009).

Resources