eRationality &
Voting for
Maximized Social Welfare
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The Challenge of the Modern World

- People areboundedly rational.
- Increasinglywe are bombarded with more information and more decisions to make.
- We make decisionsbased on what we know, but inevitably are limited by the situation and our ability.
- We use the unique characteristics of our environments (such as online ones) to make our decisions.
How the eRationality Group hopes to help

- Understand, simplify and facilitate decision making.
- Help people achieve beyond what they previously could.
- Use technology as a tool to reach these goals.
Our Vision of the Role of Technology

Technology can help by:

- Making routine decisions for people
- Screening or reducing choice sets
- Reformulating options
- Framing options in new or better ways
- Presenting new or different information
Voting

- Human Behavior & Decision Making
  - Low voter turn-out
  - Too many issues, too much to research
  - An individual vote “doesn’t count”
  - More than 2 candidates → No majority winner
  - Dissatisfaction with outcome
Change Voting Process

- **Goal:** Change the process of voting to increase the satisfaction of all participants (increase the social welfare)
- **Desired changes**
  - Your vote reflects your opinion on issues
  - You spend time voting on issues you care about
  - You see the impact of your vote
Vote!

Which meal would you prefer for dinner? (Pick ONE)

a. Filet Mignon
b. Chicken Marsala
c. Pan-seared Salmon
d. Vegetarian Lasagna
Results!

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>beef</td>
</tr>
<tr>
<td>10%</td>
<td>chicken</td>
</tr>
<tr>
<td>30%</td>
<td>fish</td>
</tr>
<tr>
<td>20%</td>
<td>vegetarian</td>
</tr>
</tbody>
</table>

Is beef the best decision for the group?
The best decision may be chicken, the result that got the least number of votes.
New Voting Mechanisms

- Allocate multiple votes to issues
- Assign different voting values per issue
- Vote on combinations of outcomes
- At the polls, improved decision framing:
  - Know the tallied votes
  - Know how the issues will affect you
  - Research issues at the polling station
Our Approach

- Create system for voting, allowing for multiple voting mechanism configurations
- Use for decision making within groups (ex: MIT Media Lab)
- Evaluate participation, effectiveness, & satisfaction
eRational Meals

Pro vs. Con

<table>
<thead>
<tr>
<th></th>
<th>Pro</th>
<th>Con</th>
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</thead>
<tbody>
<tr>
<td>Sandwiches</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>Burritos</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>Quesadillas</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Panini sandwiches</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>Falafel and Tofu wraps</td>
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<td>0</td>
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<tr>
<td>Sushi</td>
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<td>0</td>
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<tr>
<td>Salads</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bertucci's</td>
<td>0</td>
<td>-1</td>
</tr>
</tbody>
</table>

-1 0 0 0 0 0 0 0 0 0 -5
More eRational Meals…

1000 Point Allocation

- Sandwiches
- Burritos
- Quesadillas
- Panini
- Falafel
- Sushi
- Salads
- Bertucci’s

FOR
AGAINST
SUM
Digital Life

- Weekly lunch, 50 students, 5 restaurants
- Controlled studies: 2 groups with 2 different mechanisms
- Follow-up survey on satisfaction
For More Information

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