CHANGING APPETITES & CHANGING MINDS

Measuring the Impact of Food, Inc.

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MEDIA IMPACT PROJECT
The Media Impact Project is a hub for collecting, developing and sharing approaches for measuring the impact of media. Based at the USC Annenberg Norman Lear Center, we seek to better understand the role that media plays in changing knowledge, attitudes and behavior among individuals and communities, large and small, around the world. The Media Impact Project brings together a unique team of researchers including social and behavioral scientists, journalists, analytics experts and other specialists to collaborate to test and create new ways to measure the impact of media. Content creators, distributors and media funders can ultimately apply these techniques to improve their work and strengthen engagement. The Lear Center’s Media Impact Project is funded by a grant from the Bill & Melinda Gates Foundation, with additional funding from the John S. and James L. Knight Foundation and the Open Society Foundation. For more information, please visit www.mediaimpactproject.org.

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The Norman Lear Center is a nonpartisan research and public policy center that studies the social, political, economic and cultural impact of entertainment on the world. The Lear Center translates its findings into action through testimony, journalism, strategic research and innovative public outreach campaigns. On campus, from its base in the USC Annenberg School for Communication and Journalism, the Lear Center builds bridges between schools and disciplines whose faculty study aspects of entertainment, media and culture. Beyond campus, it helps bridge the gap between the entertainment industry and academia, and between them and the public. Through scholarship and research; through its conferences, public events and publications; through its role in the formulation of the academic field of entertainment studies; and in its attempts to illuminate and repair the world, the Norman Lear Center works to be at the forefront of discussion and practice in the field. For more information, visit www.learcenter.org.

PARTICIPANT MEDIA
Participant Media (wwwparticipantmedia.com) is a leading media company dedicated to entertainment that inspires and compels social change. Founded in 2004 by Jeff Skoll, Participant combines the power of a good story well told with opportunities for viewers to get involved. Participant’s more than 70 films include Spotlight, Contagion, Lincoln, The Help, He Named Me Malala, The Look of Silence, CITIZENFOUR, Food, Inc., and An Inconvenient Truth. Participant has also launched more than a dozen original series, including “Please Like Me,” “Hit Record On TV with Joseph Gordon-Levitt,” and “Fortitude,” for its television network, Pivot (www.pivot.tv). Participant’s digital hub, TakePart (www.TakePart.com), serves millions of socially conscious consumers each month with daily articles, videos and opportunities to take action. Follow Participant Media on Twitter at @Participant and on Facebook.
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CAN MOVIES REALLY CHANGE PEOPLE?

For media researchers, it is really hard to figure out the impact of a TV show, a song, a film, a game. There is a general feeling that representations have an impact on our lives, but it seems like an impossible thing to measure. In this research study we sought to understand which variables influence someone’s likelihood of watching a particular film or television show and whether there was any impact on viewers’ knowledge, attitudes and behavior that could be attributed to that media exposure.

Participant Media approached the Norman Lear Center to help them answer these questions about their film, Food, Inc. Participant Media is a production company whose goal is to make films that change society and they have made dozens of critically acclaimed films, both documentaries and fictional feature films, that deal with serious social issues in entertaining and engaging ways. Participant Media wanted the Lear Center’s help figuring out whether their films were having the impact they had hoped for.

Lear Center researchers began to answer these questions by developing an online survey methodology that could evaluate the impact of Participant Media’s films and their social action campaigns on the general public. The Center looked at three of Participant Media’s films — Food, Inc., Waiting for ‘Superman’ and Contagion — and this report is part of a series of impact evaluations of those films.

Our research questions included:

- What do people learn about issues depicted in a film?
- Did a film encourage someone to take action?
- Which elements of Participant Media’s social action campaigns are most likely to encourage people to take action?
- Is there a relationship between emotional engagement with a film and taking action?
- Can we associate enjoyment or appreciation of a film with taking action?
- Is there a relationship between people’s inclination to take action and their beliefs about the potential impact that a film can have on individuals, the media, public opinion and public policy?
- What do survey respondents believe Participant Media should do to motivate people to take social action?

Each of these three reports provides highlights from our findings. Please contact the Norman Lear Center at enter@usc.edu to inquire about additional results.
WHY STUDY FOOD, INC?

Food, Inc. is an Oscar-nominated documentary film by Robert Kenner that was released in the United States in 2009. In the film, Kenner explores the food industry’s highly-mechanized and profit-driven approach to agribusiness in the United States. The film reveals the long-term impact that these business practices have on the American consumer and highlights how government regulatory agencies, such as the United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA), have encouraged and sustained these practices through their policies.

Food, Inc. was an ideal film for an impact evaluation because its content encouraged viewers to make simple behavior changes in their everyday lives, such as drinking soda less often, eating at home instead of eating out, eating less meat, buying organic or sustainable foods grown with little to no pesticide use, shopping at local farmers markets and reading food labels. It also encouraged viewers to try to effect broader social change by telling schools to stop selling junk food, telling lawmakers that food safety is important, demanding job protection for farm workers and food processors by ensuring fair wages and other protections, and to discuss these issues with family and friends. Along with the film, Participant Media launched a social change campaign called “Hungry for Change,” a food-specific outreach effort organized through Participant Media’s digital media arm, TakePart. The TakePart model was designed to enhance the impact of the film by creating a channel for continued conversation about socially relevant news and information, both online and off.
Two questions guided our study of this film:

- Which variables influenced someone’s likelihood of watching *Food, Inc.*?
- What was the impact of *Food, Inc.* on knowledge and behavior?

Funding for this study, which was independently designed, conducted and released by the Norman Lear Center, was provided by Participant Media, who also co-financed the making of *Food, Inc.*

**HOW CAN IMPACT ON VIEWERS BE MEASURED?**

Although the film was very successful for Participant Media, very few people around the country actually saw it. Therefore answering questions about the impact of the film on a nationally representative sample of viewers would be very expensive to do and probably ill-advised. The main problem is that people who decide to see a social-issue documentary are highly “self-selected” — that is, the vast majority of the film’s viewers are probably biased toward the perspective of the film, and probably more likely than an average non-viewer to take the actions recommended in the film. In short, niche films attract niche audiences and so trying to construct national representative samples is neither cost-effective nor helpful if the goal is to understand what kind of impact a documentary has had on its viewers.

The Lear Center developed an innovative survey instrument that could assess the impact of *Food, Inc.* on its viewers while taking into account these issues of self-selection bias. We used propensity score matching (PSM) to help determine whether the different results that we see between viewers and non-viewers are associated with watching *Food, Inc.*, rather than pre-existing differences between these two groups. We believe PSM results are more accurate in an assessment of media impact than traditional, non-PSM results, which are reports of percentages of responses. More details on our approach and an explanation of how we used propensity score matching can be found in our Methodology section.

This research began with a link to a survey about Participant Media films that was posted on various Participant Media sites and an email newsletter. We did not mention the survey was specifically for *Food, Inc.* because our goal was to attract respondents who had not seen the film as well as those who had. The survey contained many traditional questions: demographic questions, questions about political affiliations and attitudes toward the issues depicted in the film. However, we also asked survey respondents how likely it was that they would take specific actions recommended in the film — whether they had seen the film or not.

This report describes the findings of this survey. It is our hope that these results will be useful for filmmakers, funders, activists and media researchers who are eager to more accurately measure the impact of any type of media content on viewers, listeners, readers, participants or players.
KEY FINDINGS

PROFILING FOOD, INC. VIEWERS

This section provides a snapshot of all the Food, Inc. viewers who responded to our survey. Not everyone answered every question and so the number of respondents ranges from 8,480 to 21,790.

Demographics

- The majority of Food, Inc. viewers were female (73%), Caucasian (74%) and did not have children (62%).
- Most viewers completed at least some college: 32% completed some college; 33% were college graduates and 16% attended graduate school.
- Viewer employment was concentrated in health (30%) and education (29%).
- Viewer income varied across categories with the largest group of viewers reporting a yearly income of $75k or more (26%).
- Food, Inc. viewers were highly concentrated in California, New York, Texas and Florida. Since they were not evenly distributed around the U.S., it would have been very difficult and expensive to find a random national sample for the survey.
- The survey was administered through existing Participant Media sites, social media channels and an email list, which made it unnecessary to pay for access to a survey panel.
What is your approximate household income?*

- Less than $25,000: 17%
- $25,000 — $49,999: 20%
- $50,000 — $74,999: 17%
- $75,000 or more: 26%
- Declined to answer: 19%

What is your highest level of education completed?*

- 6%: some high school or less
- 8%: completed high school
- 32%: some college/trade school
- 33%: college graduate
- 16%: graduate school
- 4%: declined to answer

*Due to rounding, total does not equal 100%.

**This was a check-all-that-apply question and these were all the options.
Media Exposure & Preferences

- The majority of viewers saw the film through online streaming (64%) or watched on DVD/Blu-ray (25%).
- *Food, Inc.* viewers had some previous exposure to other Participant Media films — 30% watched *Fast Food Nation* and 34% watched *An Inconvenient Truth*.
- *Food, Inc.* viewers frequently watched social issue documentaries and feature films:
  - 27% watch social issue documentaries ‘very often,’ compared to 19% of non-viewers.
  - 38% watch social issue scripted films ‘very often,’ compared to 28% of non-viewers.
- Viewers were exposed to the film’s outreach primarily through Participant Media’s Hungry for Change website (62%), as well as through film previews (30%) and Facebook (28%).
- Viewers believe that a film can have an impact — either ‘moderate’ or ‘large’ — on individual attitudes, individual behavior and public opinion:
  - 95% of viewers said a film can impact individual attitudes, compared to 88% of non-viewers.
  - 89% of viewers said a film can impact individual behavior, compared to 76% of non-viewers.
  - 79% of viewers said a film can impact public opinion, compared to only 38% of non-viewers.
- Over 78% of viewers reported engaging in conversations about food safety in the last year. This suggests that the majority of viewers were not passively absorbing information but were actively producing it in dialogue with their peers.

79% of viewers said a film can impact public opinion, compared to only 38% of non-viewers.

In the last year, do you recall seeing or hearing anything about food safety issues in any of the following?

- **78%** Conversations with friends, family, colleagues
- **73%** The Internet
- **68%** Television
- **57%** Newspapers/Magazines
- **32%** Radio

Where did you watch *Food, Inc.*?

- **64%** Online (Netflix, iTunes)
- **25%** Regular Theater Screening
- **4%** TV
- **1%** DVD
- **1%** Special Theater Screening
- **1%** Classroom/House Party Screening

79% of viewers said a film can impact public opinion, compared to only 38% of non-viewers.
Do you think a film could have a moderate or large impact on any of the following?

- Individual Attitudes: 95%
- Individual Behavior: 89%
- Public Opinion: 79%
- Media Coverage: 69%
- Public Policy: 51%

Where did they take the survey?

- Food, Inc. Email List: 64%
- TakePart Website: 31%
- Food, Inc. Facebook Page: 5%

Which of the following films have you seen?

- FOOD, INC.: 100%
- AN INCONVENIENT TRUTH: 34%
- FAST FOOD NATION: 30%
- CHARLIE WILSON’S WAR: 19%
- THE KITE RUNNER: 17%
- THE SOLOIST: 16%
- THE CRAZIES: 15%
- THE INFORMANT: 14%
- THE COVE: 13%
- WAITING FOR ‘SUPERMAN’: 4%
We had assumed that viewers of a film like *Food, Inc.* would be politically engaged, but the results demonstrated that only a third were involved in social causes or were willing to call themselves “politically active.”

- 26% of viewers claimed no political affiliation, and 24% said they had never donated any money or time to a political cause.
- 33% said they were not politically active and another 30% were not sure.
- While 36% of viewers said that they were strong supporters of social and environmental causes, only 15% reported strong support for political or economic causes.

**POLITICS**

*Food, Inc.* Viewers: Political Identification

<table>
<thead>
<tr>
<th>Political Affiliation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic</td>
<td>30%</td>
</tr>
<tr>
<td>Republican</td>
<td>16%</td>
</tr>
<tr>
<td>Independent</td>
<td>13%</td>
</tr>
<tr>
<td>No political affiliation</td>
<td>26%</td>
</tr>
<tr>
<td>Libertarian</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
<tr>
<td>Green</td>
<td>6%</td>
</tr>
</tbody>
</table>

**CAUSES THEY SUPPORT**

- Social: 36%
- Environmental: 15%
- Economic: 15%
- Political: 19%

**“I consider myself a politically active person.”**

- Strongly agree: 7%
- Agree: 30%
- Neutral: 30%
- Disagree: 19%
- Strongly disagree: 14%
SOCIAL IMPACT:
USING CONTROL GROUPS TO MEASURE DIFFERENCES IN KNOWLEDGE & BEHAVIOR

Creating the Control Group

Given that people choose which films they will see based on their personal taste and interests, it is difficult for media researchers to determine a film’s impact without dealing with some degree of bias. In this study, propensity score matching (PSM) techniques were used to control for self-selection bias among survey respondents. PSM helped identify factors that predict the likelihood of a person seeing Food, Inc. The Lear Center’s research team performed a statistical analysis of survey responses from all the respondents who watched Food, Inc., and determined what personal characteristics increased their likelihood — or propensity — to see the film.

The Propensity Model

We discovered that viewers with a high propensity to watch Food, Inc. shared 17 characteristics:

Demographics:
1. No child
2. Not working in the media industry
3. Slightly more likely to work in education

Media Exposure:
Recalls seeing information about food safety on:
4. TV
5. News websites
6. Radio
7. Visited the Hungry for Change website

Ideology & Taste:
8. Democratic affiliation
9. Believes that sustainable agriculture is important
10. Supports organized efforts to improve food safety/sustainable agriculture
11. Frequently watches social issue feature films
12. Frequently watches social issue documentaries
Believes that a film can impact:
13. Individual attitudes
14. Individual behavior
15. Media coverage
16. Watched An Inconvenient Truth
17. Watched Fast Food Nation

We used these characteristics to generate a propensity score for survey respondents who had seen the film, and those who had not. People with all 17 of these characteristics received the highest score and those with the fewest received the lowest. However, just because someone has a high score does not mean that they have seen the film — it just makes it more likely that they have seen it. Therefore, a person with a very high score may not have seen the film yet, and a person with a very low score may have seen it despite themselves (for instance, a teacher may have screened the film in a class where students with low scores saw it).
Once scores were assigned, we created two groups: people who had watched *Food, Inc.* and those who had not. Next we compared the range of scores in each group and then performed “one-to-one matching,” which allowed us to use an automated method to remove subjects from each group until both groups were composed of the same number of respondents with the same range of propensity scores (e.g., each person who saw the film was paired with a person who did not see the film, but was equally likely to see the film based on their propensity scores). The salient difference between the two groups was whether or not they had viewed *Food, Inc.*

This method allowed us to create something similar to an experimental study design where subjects are randomly assigned to a control group and a treatment group. Here, the “treatment” group is comprised of those who had seen *Food, Inc.*, and the “control” group is comprised of those who had not seen the film but were equally likely to. By making these groups completely parallel, we were able to examine whether differences in knowledge and behavior are attributable to exposure to the film.

### Comparing Outcomes

We wanted to find out whether seeing the film *Food, Inc.* increased people’s knowledge about food safety and, perhaps even more importantly, whether it encouraged people to change any behaviors around buying or eating food. We asked: did the *Food, Inc.* viewer change somehow, due to exposure to this documentary film?*

**Knowledge**

- The film significantly impacted knowledge about genetically modified foods and sustainable agricultural practices. Viewers of the film knew significantly more about genetically modified corn, for instance.

**Behaviors**

- Among those with the lowest propensity to see *Food, Inc.*, viewers were significantly more likely than non-viewers to support organized efforts to improve food safety and, specifically, to support legislation that improves food safety. These findings suggest that the film is not just speaking to the choir but creating new converts to the movement.
- Among those with low- or mid-level propensity, viewers were significantly more likely than non-viewers to look for information about food safety and consistently buy organic or sustainable food.
- Overall, viewers were significantly more likely to encourage their friends, family and colleagues to learn more about food safety and shop at their local farmers market. Additionally, almost all viewers had significantly higher odds of eating healthy food.
- Viewers were significantly more likely to contribute time or money to support organized efforts around:
  - improving the treatment of animals in the food industry
  - improving food and drinks served in schools
  - passing legislation that improves food safety
  - passing legislation that offers fair wages and job protection to farm workers and food processors

*While we cannot measure “change” since we did not collect data from viewers before viewing, comparing them to matched non-viewers allows us to suggest that the difference may be attributed to viewing the film.
### SOCIAL IMPACT: SELF-REPORTED CHANGES IN KNOWLEDGE & ATTITUDES

Some questions in the survey could only be asked of people who had seen the film. Therefore, these findings did not involve the use of the control group, which means there is no correction for self-selection bias.

- The vast majority of viewers — an astounding 84% — said “this film changed my life.”
- Even though only 37% of viewers said “I consider myself a politically active person,” 80% said they could be part of a social movement to reform agribusiness.
- 79% of viewers said that the film explained to them what they could do to solve the problems addressed in the film.
- Over two-thirds of viewers said they learned ‘a lot’ or ‘very much’ about the following issues:
  - Agribusiness policies
  - Sustainable agriculture
  - Food safety issues
  - Treatment of animals in U.S. agribusiness
  - Treatment of workers in U.S. agribusiness
  - Genetically modified foods

### After watching the film, do you feel like you could be a part of a social movement to reform agribusiness?*

<table>
<thead>
<tr>
<th>YES</th>
<th>80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>4%</td>
</tr>
<tr>
<td>UNSURE</td>
<td>17%</td>
</tr>
</tbody>
</table>

* due to rounding, total does not equal 100%

### Did Food, Inc. explain to you what you could do to help solve the problems addressed in the film?*

<table>
<thead>
<tr>
<th>YES</th>
<th>79%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>7%</td>
</tr>
<tr>
<td>UNSURE</td>
<td>14%</td>
</tr>
</tbody>
</table>

* due to rounding, total does not equal 100%

### Viewers said they learned ‘a lot’ or ‘very much’ about the following issues:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Policies</td>
<td>79%</td>
</tr>
<tr>
<td>Sustainable Agriculture</td>
<td>67%</td>
</tr>
<tr>
<td>Food Safety Issues</td>
<td>87%</td>
</tr>
<tr>
<td>Treatment of Animals in U.S. Agriculture</td>
<td>85%</td>
</tr>
<tr>
<td>Treatment of Workers in U.S. Agriculture</td>
<td>79%</td>
</tr>
<tr>
<td>Genetically Modified Foods</td>
<td>73%</td>
</tr>
</tbody>
</table>
RECOMMENDATIONS FROM RESPONDENTS

Participant Media expressed interest in understanding what more they could do to help their network get involved in efforts to reform agribusiness. To address this issue, the Lear Center created a simple open-ended question geared toward capturing a broad range of responses rather than guiding respondents to describe a particular practice or discuss a specific issue (see the Methodology section for more details on the qualitative aspects of the survey).

From over 20,000 respondents, we received 4,835 responses to the open-ended question; some responses were quite lengthy and contained scores of suggestions.

- The top suggestion for Participant Media and TakePart was to advertise more. Many respondents expressed frustration that they would have missed this film if it had not appeared in their Netflix queue.
- *Food, Inc.* viewers were more likely to be childless, but they were highly likely to suggest that Participant target kids and schools with their *Food, Inc.* messaging. Respondents felt that this film should be screened in schools and that the messages shared in the film needed to be delivered to children, specifically, since they have a lot of power to change the behavior of their parents.
- Respondents felt that Participant could be helpful to viewers in the future by:
  - Better explaining how individual action leads to system change
  - Being very blunt about what to do about food safety issues and how to fix the problems
  - Providing information about support available within viewers’ communities
  - Clearly depicting success stories
- Respondents also suggested that *Food, Inc.* viewers would benefit from maps or lists of local farmers markets and information on how to read product labels.
- Lastly, respondents felt Participant should do the following to stimulate action from its viewers:
  - Promote actions their viewers can make every day
  - Ask viewers to contact their representatives
  - Given that viewers want to vote with their dollars, tell them what products to buy

Overwhelmed vs. Empowered Respondents

Some viewers felt empowered after seeing the film but others felt overwhelmed by the information presented. Overwhelmed or immobilized respondents did not see a clear path for action and expressed a general sense of helplessness. Empowered or mobilized respondents seemed hopeful that they could apply what they had learned and incorporate specific actions into their everyday lives.

- Empowered respondents typically discussed the connection between the micro and the macro, the local and the global. They understood, for instance, how their individual purchasing power, in aggregate, can affect a powerful industry like agribusiness.
- Empowered respondents often mentioned the importance of having a strong sense of community and access to social support.

<table>
<thead>
<tr>
<th>CONCEPTUAL CATEGORIES (top 30 out of 308)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. advertise/media coverage</td>
</tr>
<tr>
<td>2. want more info &amp; ways to get involved</td>
</tr>
<tr>
<td>3. show/teach in schools</td>
</tr>
<tr>
<td>4. spread the word/get the word out</td>
</tr>
<tr>
<td>5. start early with kids/youth</td>
</tr>
<tr>
<td>6. organic</td>
</tr>
<tr>
<td>7. buy local/organic</td>
</tr>
<tr>
<td>8. make film available</td>
</tr>
<tr>
<td>9. policy change</td>
</tr>
<tr>
<td>10. agribusiness</td>
</tr>
<tr>
<td>11. keep doing (what you’re doing)</td>
</tr>
<tr>
<td>12. local involvement</td>
</tr>
<tr>
<td>13. N/A</td>
</tr>
<tr>
<td>14. affordability/cost of food</td>
</tr>
<tr>
<td>15. social media</td>
</tr>
<tr>
<td>16. more documentaries</td>
</tr>
<tr>
<td>17. educate</td>
</tr>
<tr>
<td>18. government</td>
</tr>
<tr>
<td>19. college students</td>
</tr>
<tr>
<td>20. recommend companies/products</td>
</tr>
<tr>
<td>21. contact legislature</td>
</tr>
<tr>
<td>22. farmers markets</td>
</tr>
<tr>
<td>23. broader than USA/global perspective</td>
</tr>
<tr>
<td>24. list of local farms/farmers markets</td>
</tr>
<tr>
<td>25. reform</td>
</tr>
<tr>
<td>26. animal cruelty</td>
</tr>
<tr>
<td>27. individual change</td>
</tr>
<tr>
<td>28. small/local farmers</td>
</tr>
<tr>
<td>29. eat healthy</td>
</tr>
<tr>
<td>30. Monsanto</td>
</tr>
</tbody>
</table>
METHODOLOGY

OVERVIEW

The Lear Center’s impact evaluation of Food, Inc. and its campaign began over a year after the film’s release — beginning in November 2010 and concluding in April 2011. The year between the release of the film and data collection allowed for the population of viewers to grow well beyond moviegoers to those who were exposed to the film through television, video/DVD rental, or online media in their homes, classrooms and communities. Additionally, waiting a year made it possible to capture sustained changes in knowledge, attitudes and behavior, as opposed to the short-lived or aspirational changes that might register in a survey taken immediately after a screening of a film.

The research began with a 5-10-minute online survey that was disseminated through a link placed in a Participant Media email blast. The survey was also posted on the film’s promotional website, Hungry for Change, the Participant Media website, the TakePart
website and the Facebook and Twitter accounts associated with the film. All surveys were completed online; participation was voluntary and all survey items were in English.

**QUANTITATIVE ANALYSIS**

The survey methodology in this study of *Food, Inc.* adapts propensity score matching (PSM) techniques used in clinical research as well as communication studies. PSM specifically addresses the key problem of “selection bias” among movie viewers: only certain people choose to see certain films, making it very difficult for researchers to expose people randomly to a movie and to determine the actual impact of the film.

Propensity score matching is a method of statistical analysis that controls for simple selection bias in studying the effect of exposure to a treatment or intervention. In the case of a media campaign, the “intervention” may be a feature film, a song, a TV episode, a billboard, a game, a pamphlet, a PSA or a news report.

In this research, the first phase of PSM entailed finding the factors that would predict the likelihood of a subject being exposed to the film, *Food, Inc.* These factors might include some combination of personal taste, ideology, media preferences, past behavior patterns and demographics. Using logistic regression, we created a model based upon those predictors which included 17 variables.

In the second phase, subjects are assigned propensity scores: subjects who did not view *Food, Inc.* are matched and compared with subjects with the same propensity score who did view *Food, Inc.* In studies of this type, we are typically looking for differences in awareness, knowledge, attitudes and behavior based upon exposure to the film.

Using this methodology allowed the Lear Center’s researchers to create a detailed profile of likely viewers of the film and to compare viewers who saw the film with very similar people who did not. Unlike typical survey research, this method allows researchers to construct something similar to a classic study design where individuals are randomly assigned to a treatment group and a control group.

The PSM results are based on a subset of 15,157 respondents who answered all of the PSM questions in the survey (from a total of 22,489). All of these survey respondents were assigned a propensity score indicating the likelihood that they would view *Food, Inc.* The scores were based on 17 variables such as demographics, prior viewership of social issue films, and exposure to *Food, Inc.* promotional materials. After performing one-to-one matching, both the exposed and the control groups were composed of respondents with the same range of propensity scores. There were 708 people in each of these groups. The difference between the two groups was whether or not they had viewed *Food, Inc.*

**Advantages of PSM**

- PSM is an accepted tool for dealing with adjustments for bias in online surveys (the online population is not representative of the general population.)
- In multimedia evaluations, there are often many variables influencing outcomes, making simple weighting schemes difficult to determine. PSM allows for control of multiple variables so that the impact of the campaign can be examined more specifically.
- Pre-post testing can be problematic in that the survey is administered in two different time periods. Subjects will inevitably be exposed to a variety of other media messages between the pre- and post-test, which could contribute to altered outcomes in the
post-test. Also, the pre-test can serve to prime subjects for the post-test, encouraging them to think more about the issues related to the intervention than they may have otherwise.

Unexposed PSM respondents = pre-intervention respondents
Exposed PSM respondents = post-intervention respondents

Disadvantages of PSM

- It relies on a relatively large sample size that contains enough variety for an exposed cohort to have a comparable non-exposed cohort. Although the sample size on this study was very large, we have successfully performed a PSM analysis with as few as 1,000 respondents.

QUALITATIVE ANALYSIS

The survey included an open-ended question which asked people, “Do you have any suggestions about what Participant Media or TakePart could do to help people get involved in efforts to reform agribusiness?” The advantage of using an open-ended question is that the assumptions of the researchers would not limit the range of responses. In the 4,835 responses we received, respondents had the opportunity to provide information and feedback that they thought was relevant to mobilization and reform.

Responses were systematically coded based upon recurring themes within the data by a single coder. Open coding was used for any items that were stressed by respondents, regardless of whether the coder thought it was important or not. Open coding generated a code list that was then reviewed by the authors for recurring themes that could be ranked by frequency of occurrence through ATLAS.ti, a qualitative data analysis tool. These themes were then consolidated into conceptual categories when open codes were similar and, once combined, resulted in 308 categories. Next, the codes were analyzed to determine linkages that respondents made between concepts in their descriptions of the opportunities and challenges to making changes in their own lives and in society more broadly.

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