Video and Call-to-Action Study Methodology

May and June 2016

1.1 Video Selection

We researched the videos created by Mercy For Animals with the intent to place them into one of four broad categories that represent the majority of MFA's videos:

1. *Cruelty*: videos focused entirely on cruelty footage with scenes of farmed animal suffering, confinement, and abuse
2. *Cruelty Comparison*: videos comparing suffering farmed animals to happy animals or non-farmed animals, such as dogs
3. *Cute*: videos containing only footage of happy and cute farmed animals
4. *Lifestyle*: videos describing vegan food and how to eat vegan

In order to capture some of the variance among videos, we selected three videos per category. A total of 12 such videos and one control video were selected and tested. All MFA and ChooseVeg logos were removed from the videos prior to testing. Each video was between 40 and 90 seconds in length. The 60-second control video delivered a simple environmental message and did not contain anything animal related.

Video Type	**Video**
Cruel 515 total participants	Hen Hell*
	Lose Your Appetite
	Benny's Life
Comparison 507 total participants	The Choice Is Yours
	Happy and Free
	We Are the Same
Cute	Baby Animals

513 total participants	Sleepy Animals*
	Love Dogs, Love Pigs**
Lifestyle 524 total participants	Kitchen Makeover
	Six Vegan Swaps
	Stuff I Eat
Control	Saving the Environment
*Video no longer public **Video no longer public but linked to a similar video	

1.2 Call-to-Action Selection

The call to action is the statement appearing at the end of the video that indicates what we want the viewer to do. Typically, the call to action asks the viewer to eliminate or eat less meat. We selected the calls to action that MFA most frequently uses:

1. Please leave animals off of your plate
2. Please cut out or cut back on animal products
3. Please choose vegan

The three calls to action were compared to a control with no call to action.

1.3 Data Collection

In May and June 2016, 3,080 participants were recruited from Amazon Mechanical Turk (MTurk) for a two-wave survey. The study was advertised as a "video and emotions" survey. The wave-two survey was posted 24 hours after data collection for the first wave was completed. A total of 2,672 participants completed the second survey 1–7 days after it was posted (86.8% response rate). After data cleaning, 2,594 participants were included in the analysis.

Data was collected in two survey waves:

1. **Wave 1**: Participants were randomly assigned to watch one of the videos. Immediately after watching their respective videos, they were asked to indicate to what extent they felt happy, inspired, interested, sad, angry, disgusted, and guilty. They were also asked about their age and gender.
2. **Wave 2**: One day after the first wave, participants who completed the wave-one survey were contacted via MTurk to complete the second survey. Participants were asked whether they intended to change their meat consumption over the next 30 days and

whether they wanted a free *Vegetarian Starter Guide*. They were also asked about their attitudes toward farmed animals and veg eating.

1.4 Experimental Conditions

There were 52 treatment arms (13 videos x 4 versions = 52). Four versions of each video were created, three with a different call to action at the end and one with no call to action, as in the following examples:

1. Hen Hell video with call to action “Please leave animals off of your plate”
2. Hen Hell video with call to action “Please cut out or cut back on animal products”
3. Hen Hell video with call to action “Please choose vegan”
4. Hen Hell video with no call to action
5. Vegan Swaps video with call to action “Please leave animals off of your plate”

Participants were randomly assigned to watch one video that featured one call to action. They were then grouped by video type and call to action. For example, a participant who watched *Hen Hell* with the “Please choose vegan” call to action was placed in the “cruelty” video type group and the “Please choose vegan” call-to-action group. More than 500 participants were in each video type group and approximately 650 participants were in each call-to-action group.

Two separate analyses were performed for the video type and call to action. The video type analysis consisted of four treatment arms and one control:

1. Cruelty
2. Cruelty Comparison
3. Cute
4. Lifestyle
5. Control

The call-to-action analysis consisted of three treatment arms and one control:

1. Please leave animals off of your plate
2. Please cut out or cut back on animal products
3. Please choose vegan
4. Control (no call to action)

1.5 Outcome Measures

Emotion. Immediately following their respective videos, participants were asked to indicate to what extent they felt happy, inspired, interested, sad, angry, disgusted, and guilty (1–5 scale from *Slightly/Not at all* to *Extremely*). Emotions were measured only in the wave-one survey.

Intention to reduce meat consumption. In the wave-two survey, participants were asked, *“Realistically, how much red meat, chicken or fish do you think you will be eating one month (30 days) from now?”* (1–7 scale from *Completely eliminate* to *Greatly increase*). This variable was transformed into a binary outcome for analysis by which participants who indicated they would eliminate or decrease their meat consumption were assigned a *1* and participants who indicated their meat consumption would stay the same or increase were assigned a *0*.

Attitudes toward farmed animals. In the wave-two survey, we measured three attitudes toward farmed animals on a 1–5 scale from *Strongly disagree* to *Strongly agree*). Participants were asked whether farmed animals had rich emotional lives like cats and dogs, whether farmed animals were intelligent and smart, and whether farmed animals had the ability to suffer and feel pain.

Attitudes toward meatless meals. In the wave-two survey, we measured three attitudes toward meatless meals on a 1–5 scale from *Strongly disagree* to *Strongly agree*. Participants were asked whether eating meals without red meat or chicken was easy, whether meals without red meat or chicken were delicious, and whether the food the participants ate contributed to animal suffering.

***Vegetarian Starter Guide* requests.** At the end of the wave-two survey, participants were asked to enter their email addresses if they wanted a free 40-page *Vegetarian Starter Guide*. This variable was transformed into a binary outcome for analysis by which participants who entered their email addresses were assigned a *1* and participants who left the question blank or entered "no" were assigned a *0*.

1.6 Constructed Outcomes

Attitudes toward farmed animals, combined. In addition to looking at the effect of the treatments on each individual attitude in the analysis, we also combined the three animal attitude measures into a combined "animal attitudes" outcome. To do this, we standardized each measure and then took an average of the three standardized measures for each participant.[1] See the table below for an example of the calculations.

	Atd 1	Atd 5	Atd 6	Atd 1 (std)	Atd 5 (std)	Atd 6 (std)	Combined outcome
Obs 1	4	3	4	0.32	-0.42	-0.60	-0.23
Obs 2	5	5	5	1.32	1.45	0.85	1.21
Obs 3	5	5	5	1.32	1.45	0.85	1.21
...	...	...	...	...	...	...	...

Attitudes toward meatless meals, combined. Just as we combined the animal attitudes, we combined the three food attitude measures into a combined "food attitudes" outcome for analysis. The method was the same as outlined above in the "Attitudes toward farmed animals, combined" section.

All attitudes, combined. To help summarize the effect of the treatments on attitudes towards farmed animals and factory farming, we averaged across the six measured attitudes to create a general "all attitudes" outcome. The method we used to average across the six attitudes was the same as outlined above in the "Attitudes toward farmed animals, combined" section except that we averaged across all six attitudes.

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[1] The formula used for standardizing the variables was: $\frac{X - \bar{X}}{SD(X)}$

Combined outcome, all measures. To estimate the effect of the treatments on overall behavior and attitudes towards farmed animals and factory farming, we combined the diet and attitude measures. The goal of this was to summarize the findings in a succinct way so we could easily see which video type and call-to-action was most effective (rather than trying to summarize the eight measures in our head). We used four different methods to estimate the combined outcome. The four methods yielded similar results and are outlined below. The eight measures (six attitudes, intention to reduce meat consumption, and *Vegetarian Starter Guide* requests) were standardized for each method.

Method 1. We took an average across the eight standardized measures. In this method, the attitudes are given significantly more weight than the diet measures (6/8 = 75%), which made it a less than ideal than the other methods.

Method 2. We took an average across the combined "food attitudes" outcome, the combined "animal attitudes" outcome, intention to reduce meat consumption, and *Vegetarian Starter Guide* requests. This method reduced the weight of attitudes to 50%. However, we consider intention to reduce meat consumption and *Vegetarian Starter Guide* requests as more important than attitudes (because they're closer approximations for behavior change), so we wanted them to bear equal, or more, weight than attitudes.

Method 3. We took an average across the combined "all attitudes" outcome, intention to reduce meat consumption, and *Vegetarian Starter Guide* requests. This method weighed the three outcomes of interest evenly at 33% each (attitudes, intention to reduce meat consumption, and *Vegetarian Starter Guide* requests). For this reason, and because it didn't result in substantially different results as the other methods, we chose to report this as the combined outcome.

Method 4. We ran principal components analysis as a robustness check for Methods 1-3.

	Method 1			**Method 2**			**Method 3**			**Method 4**		
	d	**95% CI**	***p***	***d***	**95% CI**	***p***	***d***	**95% CI**	***p***	***d***	**95% CI**	***p***
Comparison	0.188	0.121	0.002	0.208	0.121	0.001	0.207	0.121	0.001	0.190	0.122	0.002
Cruel	0.144	0.121	0.019	0.160	0.121	0.009	0.159	0.121	0.009	0.131	0.122	0.034
Cute	0.126	0.121	0.040	0.131	0.121	0.033	0.126	0.121	0.041	0.131	0.122	0.034
Lifestyle	0.036	0.120	0.552	0.069	0.120	0.258	0.085	0.120	0.165	0.034	0.121	0.580

1.6 Analysis

To estimate the treatment effects of the video type relative to the control, we computed standardized effect sizes (Cohen's *d*). In addition to estimating treatment effects relative to the control, *d* allowed us to compare across video types intuitively. The R package "compute.es"

was used to estimate *d*. The same analysis was performed to estimate the treatment effects of the calls-to-action.

To address concerns about multiple hypothesis testing, we restricted the false discovery rate (FDR) using the weighted FDR control method proposed in Benjamini and Hochberg (1997).