Methodological details appendix

This file contains the full text of all experimental materials used in the study "Effective strategies for overcoming the naturalistic heuristic: An experiment on consumer acceptance of clean meat", as well as all survey materials. De-identified data and code for this project will be made available on github upon publication.

Treatments

1. Priming treatment

Half the subjects were randomly selected to be presented with the following comments and asked to answer a question about them.

Here is a selection of comments that other MTurk workers have made about clean meat:

- "Artificial meat sounds disgusting."
- "This seems very unnatural. I don't feel comfortable about this."
- "No one will like clean meat."
- "Clean meat isn't real meat."
- "Our guts are not meant to digest unnatural things."

To what extent do you agree with these comments?

2. Treatments to help overcome the naturalistic heuristic

The articles that subjects were shown in each treatment arm are provided in the next pages, with the treatment arms corresponding to the article titles as follows:

Direct debunking: "Natural" doesn't mean "good"

Embrace unnatural: There's no such thing as a "natural" food

Descriptive norms: Consumers demand clean meat

Placebo: The simple yet potent exercise that benefits everyone

Each article was constructed to contain about 150-200 words and 3 images, written in the style of a typical news article. To increase the attention paid to each article, the articles were broken down to each span 3 pages, and on each page the subject must click on a button to advance to the next page. The subjects are informed before reading the article that they will later be asked questions on what they read, so as to encourage them to pay attention.

"Natural" doesn't mean "good"

Sometimes we hear that a new product that has been developed is "unnatural".

However, just being "natural" doesn't mean a product is good. Arsenic occurs naturally and can contaminate local water sources, but we probably wouldn't think arsenic is good! Appendicitis and health conditions like heart disease might have natural causes, but we still strive to avoid them.



Arsenic naturally contaminates many water sources.



Appendicitis has natural causes.



Antibiotics are grown in a lab.

While not all "natural" products are good for us, many "unnatural" products are actually beneficial. Most antibiotics were developed in a lab. Most of us also appreciate the benefits of electricity or fermented foods.

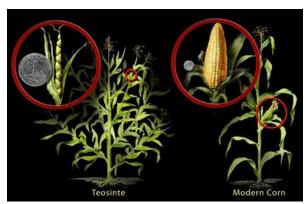
At the end of the day, whether or not a product is natural does not determine whether it is good for us.

There's no such thing as a "natural" food

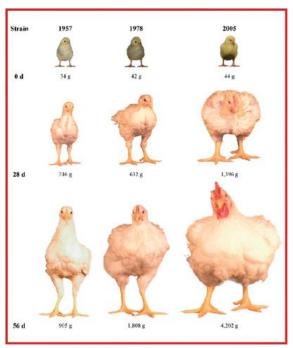
Unless you're living exclusively on foraged berries and wild-caught fish, you're eating food that's the result of thousands – or even tens of thousands – of years of purposeful human intervention. Why is the banana such a perfect food? Because we bred it to be that way. Why is corn so big and sweet? Because that's how we like it. From cows that produce gallons of milk a day to chickens that reach maturity by four weeks, our food is as much a cultural artifact as it is a natural one.



Natural vs. modern banana.



Natural vs. modern corn.



Natural vs. modern chickens.

Cultured cells and microbes are also used in some of the oldest foods on the planet. If you wanted to cut food produced with the help of microbes out of your life, you'd have to stop consuming bread, beer, wine, yoghurt, vinegar, sour cream, sauerkraut, soy sauce, kombucha, and kimchi. Not to mention that fact that, if you look at them under a microscope, lab-grown muscle tissue and animal-grown muscle tissue are identical.

Consumers demand clean meat

Demand for "clean" meat products keeps growing, despite higher price points compared with conventional meat, according to data from Nielsen Perishables Group.

The call for food transparency continues to build, and with it, the use of terms like "natural," "hyper-local" and "antibiotic-free" in conversations around our food. When it comes to meat, discussions include the added dimensions of livestock care and processing, complicating the labeling of meat products well beyond what's needed for an organic banana or a package of fiber cereal. So what exactly do these meat labels mean, and what are the nuances? But perhaps more importantly, do consumers really want "cleaner" meat?



Consumer demand for clean meat has been increasing over time.



Consumers now care about clean meat.



72% of people say they would be interested in eating clean meat.

A recent survey, published this month in PLOS One, investigated the views of people in the United States, a country with one of the largest appetites for meat and an equally large appetite for adopting new technologies.

72 percent of people who normally eat beef and pig products said they would still do so if they were produced as cultured meat. The perceived advantages of clean meat were that it was environmentally and animal-welfare friendly, ethical, and less likely to carry diseases.

The simple yet potent exercise that benefits everyone

Walking. We all know it's good for us. But why?

Regular physical activity is essential for good health. It reduces the risk of chronic diseases (like heart disease, stroke, certain cancers and type 2 diabetes), promotes healthy weight, reduces the risk for depression, lowers blood pressure, and decreases stress.

All it takes is 30 minutes a day. Moderate walking is a terrific form of exercise, as it doesn't over-stress the body like some more intense activities can. Walking is good for your body, plain and simple.



Walking can decrease stress.



Walking can be done anywhere.



Walking can improve your health.

What you may not have considered is the effect communities might have on walking. Walkable communities are associated with healthy citizens. If kids are able to walk or bike to school safely, they are already accomplishing most of their required minimum physical activity by simply getting to and from school. There are benefits to adults as well.

With more and more Americans starting to get moving and walking each year, it's important for our communities to keep up.

On a scale of 1-5, where 1 is "not at all" and 5 is "a great deal", how much do you care about each of the following issues?

		Но	w much do you c	are?				
	Not at all	A little	A moderate amount	A lot	A great deal			
Catastrophic risks (e.g. nuclear risks, pandemics)	0	0	0	0	0			
Youth	0	0	0	0	0			
Local development	0	0	0	0	0			
Women's issues	0	0	0	0	0			
Elderly	0	0	0	0	0			
Climate change	0	0	0	0	0			
	Not at all	A little A	moderate amour	nt A lot /	A great deal			
International development	0	0	0	0	0			
Health	0	0	0	0	0			
Education	0	0	0	0	0			
Arts and culture	0	0	0	0	0			
Economic poverty	0	0	0	0	0			
Animal well-being	0	0	0	0	0			
	Not at all A little A moderate amount A lot A great deal							

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Recall

Thinking about your diet **over the past 30 days**, please select the responses that best describe how often you eat each of the following types of food.

The image below shows the approximate size of a single serving for different categories of food.



	Frequency								
	never	< 1 serving per week	1-3 servings per week	4-6 servings per week	1 serving per day	2-3 servings per day	4 or more servings per day		
Fish and seafood (tuna, shrimp, crab, etc.)	0	0	0	0	0	0	0		
Beans (soy, chickpeas, chili, etc.)	0	0	0	0	0	0	0		
Grains (breads, pasta, rice, etc.)	0	0	0	0	0	0	0		

		Frequency						
	never	< 1 serving per week	1-3 servings per week	4-6 servings per week	1 serving per day	2-3 servings per day	4 or more servings per day	
Veggie meats (tofu, veggie dogs, veggie burgers, tempeh, etc.)	0	0	0	0	0	0	0	
Fruit (apples, bananas, oranges, etc.)	0	0	0	0	0	0	0	
Beef (steak, meatballs, in tacos, etc.)	0	0	0	0	0	0	0	
Sugary foods (pop/soda, candy bars, etc.)	0	0	0	0	0	0	0	
Vegetables (carrots, mushrooms, potatoes, etc.)	0	0	0	0	0	0	0	
	never	< 1 serving per week	1-3 servings per week	4-6 servings per week			4 or more servings per day	
Other meat (duck, lamb, venison, etc.)	0	0	0	0	0	0	0	
Turkey (turkey dinner, turkey sandwich, in soup, etc.)	0	0	0	0	0	0	0	
Nuts (almonds, cashews, walnuts, peanuts, etc.)	0	0	0	0	0	0	0	
Eggs (omelet, in salad, in baked goods, etc.)	0	0	0	0	0	0	0	
Dairy (cheese, milk, yogurt, etc.)	0	0	0	0	0	0	0	
Chicken (fried chicken, in soup, grilled chicken, etc.)	0	0	0	0	0	0	0	
Pork (ham, pork chops, ribs, etc.)	0	0	0	0	0	0	0	

	Frequency						
	never	< 1 serving per week	1-3 servings per week	4-6 servings per week	1 serving per day	2-3 servings per day	4 or more servings per day
Other added fats (oil, salad dressing, chocolate, etc.)	0	0	0	0	0	0	0
	never	< 1 serving per week	1-3 servings per week	4-6 servings per week	1 serving per day	2-3 servings per day	4 or more servings per day

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Do you follow any special diet? Check all that apply.

	Atkins
	Low-carbohydrate
	Low-fat
	Low-salt
	Low-sugar
	Paleo
	Pescatarian
П	Vegan

Vegetarian

None of the above

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Attitudes
Some people say that eating locally-grown food is morally preferable to eating food grown far away. What do you think?
O Strongly agree
O Agree
O Somewhat agree
Neither agree nor disagree
O Somewhat disagree
O Disagree
O Strongly disagree
Circingly disagree
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Do you think that food grown far away has a larger impact on the environm grown food?	ent than locally-
 Definitely yes Probably yes Might or might not Probably not Definitely not 	
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How much do you think food grown far away harms the environment?	
O A great deal	
O A lot	
O A moderate amount	
O A little	
O Not at all	

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How concerned are you at	oout this harm?
O A great deal	
O A lot	
O A moderate amount	
O A little	
O Not at all	
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Some people say that eating via factory farming. What of	ng vegetarian food is morally preferable to eating meat produced to you think?
O Strongly agree	
O Agree	
O Somewhat agree	
O Neither agree nor disagre	e
O Somewhat disagree	
O Disagree	
O Strongly disagree	

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Do you think that farm animals are sentient	(feel pleasure or pain)?
O Definitely yes	
O Probably yes	
Might or might not	
O Probably not	
O Definitely not	
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How much do you think conventional meat	t production, <i>i.e.</i> factory farming, harms animals?
O A great deal	
O A lot	
O A moderate amount	

A littleNot at all
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How concerned are you about this harm?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all
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Do you think that conventional, *i.e.* factory farmed, meat products have a larger impact on the environment than vegetarian food products?

 Definitely yes Probably yes Might or might not Probably not Definitely not
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How much do you think conventional meat products harm the environment?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all
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How conce	erned are you	about this ha	ırm?						
A greatA lotA modeA littleNot at a	rate amount								
These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Please rate each of the following according to the extent that you think they are intelligent									
or unintellig	gent:								
	Very unintelligent	Unintelligent	Somewhat unintelligent	Neither intelligent nor unintelligent	Somewhat intelligent	Intelligent	Very intelligent		
Fish	0	0	0	0	0	0	0		
Chicken	0	0	0	0	0	0	0		
Dogs	0	0	0	0	0	0	0		
	Very unintelligent	Unintelligent	Somewhat unintelligent	Neither intelligent nor unintelligent	Somewhat intelligent	Intelligent	Very intelligent		

Pigs	0	0	0	0	0	0	0
Humans	0	0	0	0	0	0	0
Cows	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0

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Please rate each of the following according to the extent that you think they are capable of experiencing pain:

				Neither capable			
	Completely incapable	Mostly incapable	Somewhat incapable	nor incapable	Somewhat capable	Mostly capable	Highly capable
Chicken	0	0	0	0	0	0	0
Pigs	0	0	0	0	0	0	0
Fish	0	0	0	0	0	0	0
Dogs	0	0	0	0	0	0	0
Humans	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0
Cows	0	0	0	0	0	0	0

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What are the <u>TWO</u> most important things that you take into consideration when deciding whether to purchase meat at the grocery store? Meat includes chicken breasts, ground beef, pork chops, eggs, fish fillets, etc.

You may select up to TWO of the criteria below.

	Nutritional content of the product
	How the product tastes
	Price of the product
	Whether the animals had a good standard of living
	The environmental impacts of the product
	Whether the product is antibiotic and/or hormone free
	Other (please specify):

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Please rate the following according to how difficult you think each goal would be for you.

Think about how much effort it would take, whether you feel like it is something you could possibly do, and whether it is something you could stick with over time.

	Very difficult	Difficult	Somewhat difficult	Neutral	Somewhat easy	Easy	Very easy
Completely eliminating conventional meat products from your diet in the next year	0	0	0	0	Ο	0	0
Reducing your consumption of conventional meat products by 25% in the next year	0	0	0	0	0	0	0

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Treatment: cultured meat health

Now you will be presented with information on a new food product. Please read the following short article about the product.

You will later be asked some questions about it.

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Animal agriculture poses significant health risks to humanity, including the spread of disease, antibiotic overuse and bacterial contamination. "Clean" meat—that is, real meat grown in a lab from animal cells without the need to raise and slaughter an actual animal—offers significant benefits in this respect, and is currently being developed by several startup companies.



Clean meatball

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Some of the public health benefits of clean meat include:

• Antibiotic resistance: 80% of antibiotics used in the United States are used on farm animals.[1] This overuse of antibiotics causes bacteria to evolve and become antibiotic-resistant. In November 2015, a superbug was discovered that is resistant to even our last resort antibiotics; this is believed to be a result of the overuse of antibiotics in animal agriculture. In May 2016, the superbug was detected for the first time in the US, prompting the director of the Center for Disease Control to claim that "the end of the road isn't very far away for antibiotics."[2] Clean meat is expected to reduce or eliminate the use of antibiotics in meat production.

[1] "Update: Farm Animals Get 80 Percent of Antibiotics Sold in U.S." Wired. 2010. http://www.wired.com/2010/12/news-update-farm-animals-get-80-of-antibiotics-sold-in-us/

[2] "A 'superbug' emerges in China to remind us that antibiotics won't last forever." The Washington Post.

2015.https://www.washingtonpost.com/news/speaking-of-science/wp/2015/11/19/a-superbug-emerges-in-china-to-remind-us-that-antibiotics-wont-last-forever/

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• **Disease:** Animal epidemics are common in animal agriculture, including avian flu, mad cow disease and swine flu. **Because clean meat does not require actual animals, this is not a concern.**

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• Bacterial contamination: The process of slaughtering an animal creates a myriad of potential avenues for contamination. Consumer Reports inspected 458 pounds of ground beef from a variety of sources, and found that all of it contained fecal contamination.[1] Other common sources of contamination include salmonella and E. coli. Because clean meat is produced in a sterile environment and does not require slaughtering an animal, risk of bacterial contamination is greatly reduced.

[1] "How Safe Is Your Ground Beef?" Consumer Reports. 2015. http://www.consumerreports.org/cro/food/how-safe-is-your-ground-beef

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Treatment: veg health

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Animal agriculture poses significant health risks to humanity, including the spread of disease, antibiotic overuse and bacterial contamination. **Vegetarian meat alternatives** offer significant benefits in this respect, and new options are currently being developed by several startup companies. This article discusses a new, animal-free substitute.



New meatball substitute

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Some of the public health benefits of this product include:

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[2] "A 'superbug' emerges in China to remind us that antibiotics won't last forever." The Washington Post.

2015.https://www.washingtonpost.com/news/speaking-of-science/wp/2015/11/19/a-superbug-emerges-in-china-to-remind-us-that-antibiotics-wont-last-forever/

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Treatment: cultured meat enviro

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Animal agriculture is one of the most environmentally destructive industries in the world. With the global population expected to reach 9.7 billion by 2050, and meat production expected to double in that time, organizations like the United Nations are urging populations to eat less meat. However, all indicators suggest that meat demand will continue to rise despite these warnings. Clean meat—that is, real meat grown in a lab from animal cells without the need to raise and slaughter an actual animal—offers significant benefits in this respect, and is currently being developed by several startup companies.



Clean meatball

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Specifically, clean meat can help with:

• Climate change: Animal agriculture is responsible for anywhere from 14 to 51% of all greenhouse gas emissions; clean meat requires up to 99% less greenhouse gas emissions than conventionally-produced meat[1]

[1] "Study claims meat creates half of all greenhouse gases." Independent. 2009. http://www.independent.co.uk/environment/climate-change/study-claims-meat-creates-half-of-all-greenhouse-gases.

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• Water: A conventionally-produced hamburger requires roughly 660 gallons of water; clean meat requires up to 96% less water[1]

11 "To make a burger, first you need 660 gallons of water..." Los Angeles Times. 2014. http://www.latimes.com/food/dailydish/la-dd-gallons-of-water-to-make-a-burger-20140124-story.html

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• Land: One-third of the habitable land on earth is currently devoted to animal agriculture; clean meat requires 99% less land[1]

[1] Livestock's Long Shadow." United Nations Food and Agriculture Organization. 2006. http://www.fao.org/docrep/010/a0701e/a0701e00.HTM

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Treatment: veg enviro

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Click Count: 0 clicks

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New substitute meatball

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Specifically, this product can help with:

• Climate change: Animal agriculture is responsible for anywhere from 14 to 51% of all greenhouse gas emissions; this substitute requires up to 99% less greenhouse gas emissions than conventionally-produced meat[1]

[1] "Study claims meat creates half of all greenhouse gases." Independent. 2009. http://www.independent.co.uk/environment/climate-change/study-claims-meat-creates-half-of-all-greenhouse-gases.

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Treatment: cultured meat ethical

Now you will be presented with information on a new food product. Please read the following short article about the product.

You will later be asked some questions about it.

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Since the post-war period, increased demand for meat has forced suppliers to make meat production more efficient. While this has allowed meat supply to match meat demand, it is often done at the expense of the factory farmed pigs, chickens and cows—animals that are just as capable of suffering as the dogs and cats we love. Each year, hundreds of billions of

animals are raised for food, and most of them endure immense amounts of suffering. **Clean meat—that is, real meat grown in a lab from animal cells** without the need to raise and slaughter an actual animal—offers significant benefits in this respect, and is currently being developed by several startup companies.



Clean meatball

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The harm done to animals in the creation of conventional meat products that would be avoided with clean meat includes:

Confinement in small cages: Farm animals are often kept in cages so small they are unable to turn around or fully extend their limbs. This also prevents them from engaging in natural behaviors[1]

[1] "Cruel Confinement." The Humane Society of the United States. http://www.humanesociety.org/issues/confinement_farm/

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Surgical mutilations: Animals routinely face castration or debeaking without painkillers[1]

[1] "Farm Animals Need Our Help." ASPCA. http://www.aspca.org/animal-cruelty/farm-animal-welfare

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Slaughter: Animals are often killed while fully conscious[1]

[1] "Cruel Slaughter Practices." The Humane Society of the United States.

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Treatment: veg ethical

Now you will be presented with information on a new food product. Please read the following short article about the product.

You will later be asked some questions about it.

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Since the post-war period, increased demand for meat has forced suppliers to make meat production more efficient. While this has allowed meat supply to match meat demand, it is often done at the expense of the factory farmed pigs, chickens and cows—animals that are just as capable of suffering as the dogs and cats we love. Each year, hundreds of billions of animals are raised for food, and most of them endure immense amounts of suffering.

Vegetarian meat alternatives offer significant benefits in this respect, and new options are

currently being developed by several startup companies. This article discusses a new,

animal-free substitute.



New meatball substitute

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The harm done to animals in the creation of conventional meat products that would be avoided with this product includes:

• Confinement in small cages: Farm animals are often kept in cages so small they are unable to turn around or fully extend their limbs. This also prevents them from engaging in natural behaviors[1]

[1] "Cruel Confinement." The Humane Society of the United States.

http://www.humanesociety.org/issues/confinement_farm/

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• Surgical mutilation: Animals routinely face castration or debeaking without painkillers[1]

[1] "Farm Animals Need Our Help." ASPCA. http://www.aspca.org/animal-cruelty/farm-animal-welfare

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Slaughter: Animals are often killed while fully conscious[1]

[1] "Cruel Slaughter Practices." The Humane Society of the United States.

http://www.humanesociety.org/issues/slaughter/

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Treatment: control health

Please read the following short article.

You will later be asked some questions about it.

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Animal agriculture poses significant health risks to humanity, including the spread of disease, antibiotic overuse and bacterial contamination.



Meatball

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• Antibiotic resistance: 80% of antibiotics used in the United States are used on farm animals.[1] This overuse of antibiotics causes bacteria to evolve and become antibiotic-resistant. In November 2015, a superbug was discovered that is resistant to even our last resort antibiotics; this is believed to be a result of the overuse of antibiotics in animal agriculture. In May 2016, the superbug was detected for the first time in the US, prompting the director of the Center for Disease Control to claim that "the end of the road isn't very far away for antibiotics."[2]

[1] "Update: Farm Animals Get 80 Percent of Antibiotics Sold in U.S." Wired. 2010. http://www.wired.com/2010/12/news-update-farm-animals-get-80-of-antibiotics-sold-in-us/

[2] "A 'superbug' emerges in China to remind us that antibiotics won't last forever." The Washington Post.

2015.https://www.washingtonpost.com/news/speaking-of-science/wp/2015/11/19/a-superbug-emerges-in-china-to-remind-us-that-antibiotics-wont-last-forever/

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• **Disease:** Animal epidemics are common in animal agriculture, including avian flu, mad cow disease and swine flu.

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• **Bacterial contamination:** The process of slaughtering an animal creates a myriad of potential avenues for contamination. Consumer Reports inspected 458 pounds of ground beef from a variety of sources, and found that all of it contained fecal contamination.[1] Other common sources of contamination include salmonella and E. coli.

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Treatment: control enviro

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Animal agriculture is one of the most environmentally destructive industries in the world. With the global population expected to reach 9.7 billion by 2050, and meat production expected to double in that time, organizations like the United Nations are urging populations to eat less meat. However, all indicators suggest that meat demand will continue to rise despite these warnings.



Meatball

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• Climate change: Animal agriculture is responsible for anywhere from 14 to 51% of all greenhouse gas emissions[1]

[1] "Study claims meat creates half of all greenhouse gases." Independent. 2009. http://www.independent.co.uk/environment/climate-change/study-claims-meat-creates-half-of-all-greenhouse-gases-

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• Water: A conventionally-produced hamburger requires roughly 660 gallons of water[1]

[1] "To make a burger, first you need 660 gallons of water..." Los Angeles Times. 2014. http://www.latimes.com/food/dailydish/la-dd-gallons-of-water-to-make-a-burger-20140124-story.html

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• Land: One-third of the habitable land on earth is currently devoted to animal agriculture[1]

[1] Livestock's Long Shadow." United Nations Food and Agriculture Organization. 2006. http://www.fao.org/docrep/010/a0701e/a0701e00.HTM

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Treatment: control ethical

Please read the following short article.

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Since the post-war period, increased demand for meat has forced suppliers to make meat production more efficient. While this has allowed meat supply to match meat demand, it is often done at the expense of the factory farmed pigs, chickens and cows—animals that are just as capable of suffering as the dogs and cats we love. Each year, hundreds of billions of animals are raised for food, and most of them endure immense amounts of suffering.



Meatball

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• Confinement in small cages: Farm animals are often kept in cages so small they are unable to turn around or fully extend their limbs. This also prevents them from engaging in natural behaviors[1]

[1] "Cruel Confinement." The Humane Society of the United States.

http://www.humanesociety.org/issues/confinement_farm/

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• Surgical mutilation: Animals routinely face castration or debeaking without painkillers[1]

[1] "Farm Animals Need Our Help." ASPCA. http://www.aspca.org/animal-cruelty/farm-animal-welfare

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Slaughter: Animals are often killed while fully conscious[1]

[1] "Cruel Slaughter Practices." The Humane Society of the United States.

http://www.humanesociety.org/issues/slaughter/

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Open-ended

What thoughts went through your mind while reading the article? Please enter up to 3 thoughts that went through your mind. If you had less than 3 thoughts, leave the remaining text boxes blank. Thought #1 Thought #2 Thought #3 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks How do you feel about this product? Extremely positive Moderately positive Slightly positive Neither positive nor negative Slightly negative Moderately negative

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Extremely negative

Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks How interested are you in this product? Extremely interested Very interested Moderately interested Slightly interested O Not interested at all These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Would you eat this product? O Definitely yes O Probably yes Might or might not O Probably not O Definitely not

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First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds					
					Click Count: 0 clicks
					Do you think this product is less harmful to one's health than conventional meat products?
O Definitely yes					
O Probably yes					
Might or might not					
O Probably not					
O Definitely not					
Do you think this product is less harmful to the environment than conventional meat products?					
O Definitely yes					
O Probably yes					
Might or might not					
O Probably not					
O Definitely not					

Do you think this product is less harmful to animals than conventional meat products?

	Definitely yes
0	Probably yes
0 1	Might or might not
0	Probably not
0 1	Definitely not
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	ou have any concerns about this product? You may select multiple items.
Do y	
Do y	ou have any concerns about this product? You may select multiple items.
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy t may not taste as good as conventional meat
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy t may not taste as good as conventional meat t seems unnatural
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy t may not taste as good as conventional meat t seems unnatural t may be more expensive
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy t may not taste as good as conventional meat t seems unnatural t may be more expensive t may not be safe to eat
Do y	ou have any concerns about this product? You may select multiple items. It seems unhealthy It may not taste as good as conventional meat It seems unnatural It may be more expensive It may not be safe to eat In the is no reason to avoid eating conventional meat products Other (specify):
Do y	ou have any concerns about this product? You may select multiple items. t seems unhealthy t may not taste as good as conventional meat t seems unnatural t may be more expensive t may not be safe to eat There is no reason to avoid eating conventional meat products

First Click: 0 seconds Last Click: 0 seconds

Do you perceive any ex	pected benefits to this product? You may select multiple items.
☐ It may be more enviro	•
It may reduce farm anIt may be tastier than	-
☐ It seems safer to eat t	han conventional meat
☐ It seems healthier tha	n conventional meat
☐ It may be cheaper that	n conventional meat
	Other (specify):
☐ I foresee no benefits	
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Now please rate the following according to how difficult you think each goal would be **for you**.

Think about how much effort it would take, whether you feel like it is something you could possibly do, and whether it is something you could stick with over time.

	Very difficult	Difficult	Somewhat difficult	Neutral	Somewhat easy	Easy	Very easy
Completely eliminating conventional meat products from your diet in the next year	0	0	0	0	0	0	0
Reducing your consumption of conventional meat products by 25% in the next year	Ο	0	Ο	0	Ο	Ο	Ο
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Had you previously hea	ard of clea	n meat?					
O Yes							
O Yes O No							
O No These page timer metric	cs will not	be display	ed to the re	cipient.			
No These page timer metric First Click: 0 seconds	cs will not	be display	yed to the red	cipient.			
O No These page timer metric	cs will not	be display	yed to the red	cipient.			

Cultured meat: Ethical framing Just like some people are vegetarian for ethical reasons, some people say they would prefer to eat clean meat for ethical reasons. Do you know any vegetarians personally? Yes Maybe O No These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks

Do you think you know anyone who might prefer to eat clean meat on ethical grounds?

Yes

Maybe

O No

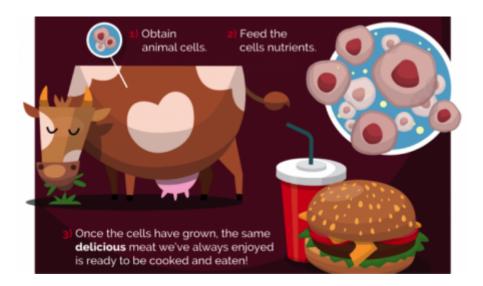
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No framing

Cultured meat: Process framing

Here is some more information about the process of producing clean meat:



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Discrete choice - Treatment intro

You will now be asked some questions comparing **clean** meatballs, **conventional** meatballs, and **vegetarian** meatballs.

Clean meatballs are meatballs made from meat that is grown from animal cells in a lab.

Conventional meatballs refers to the typical meatballs you can buy in a grocery store, *i.e.* meatballs produced with meat from factory farms.

Vegetarian meatballs refers to meatballs made from plant sources, such as beans or grains, that do not contain any meat ingredients.

Do you understand these three definitions?

Yes

Somewhat

O No

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Discrete choice - Block 1 Treatment

Suppose you faced a choice b	petween the following 3 product	s. Which would you buy?
1 lb. clean meatballs \$5	1 lb. conventional meatballs \$20	1 lb. vegetarian meatballs \$10
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Suppose you faced a choice b	petween the following 3 product	s. Which would you buy?
1 lb. conventional meatballs \$20	1 lb. vegetarian meatballs \$15	1 lb. clean meatballs \$5
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Suppose you faced a choice b	petween the following 3 product	s. Which would you buy?
1 lb. clean meatballs \$20	1 lb. vegetarian meatballs \$5	1 lb. conventional meatballs \$10

0	Ο	Ο
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Suppose you faced a choice bet	ween the following 3 produc	cts. Which would you buy?
1 lb. conventional meatballs \$5	1 lb. clean meatballs \$10	1 lb. vegetarian meatballs \$15
0	Ο	Ο
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Suppose you faced a choice bet	ween the following 3 produc	cts. Which would you buy?
1 lb. conventional meatballs \$10	1 lb. clean meatballs \$15	1 lb. vegetarian meatballs \$20
0	0	0

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Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Suppose you faced a choice between the following 3 products. Which would you buy? 1 lb. vegetarian meatballs 1 lb. conventional meatballs 1 lb. clean meatballs \$10 \$20 \$15 \bigcirc These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Discrete choice - Block 2 Treatment Suppose you faced a choice between the following 3 products. Which would you buy? 1 lb. clean meatballs 1 lb. conventional meatballs 1 lb. vegetarian meatballs \$20 \$15 \$10

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Suppose you faced a choice be	tween the following 3 produc	ts. Which would you buy?
1 lb. vegetarian meatballs \$5	1 lb. clean meatballs \$15	1 lb. conventional meatballs \$10
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Suppose you faced a choice be	tween the following 3 produc	ets. Which would you buy?
1 lb. conventional meatballs \$5	1 lb. vegetarian meatballs \$15	1 lb. clean meatballs \$10
0	O	0
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Suppose you faced a choice between the following 3 products. Which would you buy?

1 lb. conventional meatballs \$15	1 lb. clean meatballs \$20	1 lb. vegetarian meatballs \$5
0	O	O
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Suppose you faced a choice be	etween the following 3 products	s. Which would you buy?
1 lb. vegetarian meatballs \$20	1 lb. conventional meatballs \$5	1 lb. clean meatballs \$10
0	Ο	0
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Suppose you faced a choice be	etween the following 3 products	s. Which would you buy?
1 lb. conventional meatballs \$15	1 lb. clean meatballs \$5	1 lb. vegetarian meatballs \$20
0	0	0

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Veg and control: Ethical framing
Some people are vegetarian for ethical reasons.
Do you know any vegetarians personally?
O Yes
Maybe
O No
These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds
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Do you think you know anyone who might prefer to be vegetarian on ethical grounds?
O Yes
Maybe

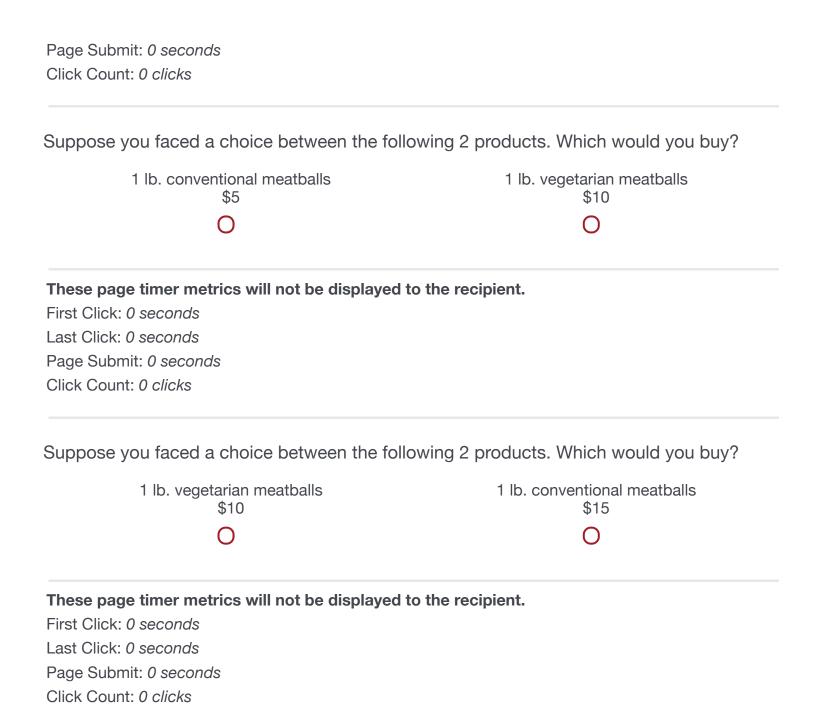
O No
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Discrete choice - Control intro
You will now be asked some questions comparing conventional meatballs, and vegetarian meatballs.
Conventional meatballs refers to the typical meatballs you can buy in a grocery store, i.e. meatballs produced with meat from factory farms.
Vegetarian meatballs refers to meatballs made from plant sources, such as beans or grains, that do not contain any meat ingredients.
Do you understand these two definitions?
O Yes
O Somewhat
O No

Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Discrete choice - Block 1 Control Suppose you faced a choice between the following 2 products. Which would you buy? 1 lb. vegetarian meatballs 1 lb. conventional meatballs \$15 \$5 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Suppose you faced a choice between the following 2 products. Which would you buy? 1 lb. conventional meatballs 1 lb. vegetarian meatballs \$15 \$20

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Suppose you faced a choice between the following 2 products. Which would you buy?

1 lb. conventional meatballs \$20	1 lb. vegetarian meatballs \$5
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Suppose you faced a choice between the fo	llowing 2 products. Which would you buy?
1 lb. conventional meatballs \$10	1 lb. vegetarian meatballs \$20
Ο	0
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Discrete choice - Block 2 Control	
Suppose you faced a choice between the fo	llowing 2 products. Which would you buy?

1 lb. conventional meatballs \$10

1 lb. vegetarian meatballs \$5

These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds
Click Count: 0 clicks
Suppose you faced a choice between the following 2 products. Which would you buy?
1 lb. conventional meatballs 1 lb. vegetarian meatballs \$10
0
These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks
Suppose you faced a choice between the following 2 products. Which would you buy?
1 lb. conventional meatballs 1 lb. vegetarian meatballs \$15
0

First Click: 0 seconds

Click Count: 0 clicks Suppose you faced a choice between the following 2 products. Which would you buy? 1 lb. conventional meatballs 1 lb. vegetarian meatballs \$5 \$20 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Suppose you faced a choice between the following 2 products. Which would you buy? 1 lb. conventional meatballs 1 lb. vegetarian meatballs \$15 \$20 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks

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Suppose you faced a choice between the following 2 products. Which would you buy?

1 lb. conventional meatballs \$15 1 lb. vegetarian meatballs

\$10

0

U

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Video - WTP

Next, you will be presented with a short, 90 second video about factory farming. Some images may be disturbing. We will provide you with a bonus of 50 cents. Would you prefer to give up some part of this bonus in order to skip the video?

Yes

O No

These page timer metrics will not be displayed to the recipient.

How much of this bonus would you be willing to give up to avoid watching the video? You may enter any number from 0 to 50. For example, if you would be willing to give up the entire bonus to skip the video, please enter 50. If you would be willing to give up 10 cents of the bonus to skip the video, please enter 10.

Regardless of what value you enter, there is some chance you may be asked to watch the video and will be awarded the full bonus. However, this probability depends on what you enter, and if you enter a higher number you have a lower chance of being asked to watch the video.

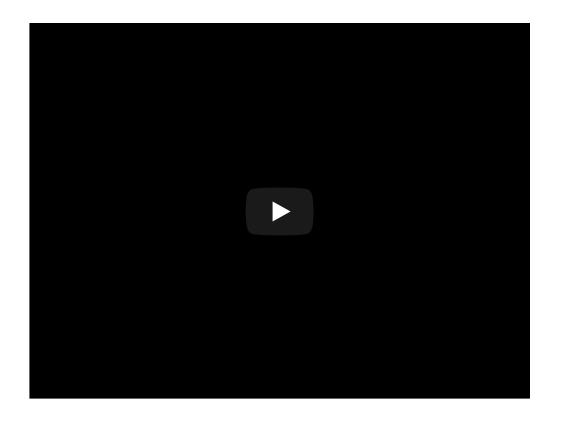
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Video - WTP - gets video

Thank you for your response. Please watch the following short, 90 second video. Following the video, you will be asked a few related questions.



Did you watch the video?



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Thank you for your response. In the next section, you will be asked a set of questions about your beliefs.

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Attitudes - Post

Some people say that eating vegetarian food is morally preferable to eating meat produced via factory farming. What do you think?

O Strongly agree

Agree

O Somewhat agree

O Neither agree nor disagree

O Somewhat disagree

O Disagree

Strongly disagree

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Do you think that farm animals are sentient (feel pleasure or pain)?
O Definitely yes
O Probably yes
O Might or might not
O Probably not
O Definitely not
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How much do you think conventional meat production, <i>i.e.</i> factory farming, harms animals?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all

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How concerned are you about this harm?

A great deal

O A lot

A moderate amount

A little

O Not at all

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We will give you an additional 10 cent bonus. However, you can choose to give some of this bonus to a charity that helps prevent harm to farm animals. For every 1 cent of your bonus that you give up, we will give 2 cents to this charity. How much would you like to give up?

For example, if you select "5", you will receive 5 cents and the charity will receive 10 cents; if you select "0", you will receive 10 cents and the charity will receive 0 cents; if you select "10", you will receive 0 cents and the charity will receive 20 cents.

	1	2	3	4	5	6	7	8	9	
O	O	O	O	O	0	O	O	O	O	(
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the envir	ronment	than veg	getarian 1	food pro	ducts?					
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O A lot
O A moderate amount
O A little
O Not at all
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How concerned are you about this harm?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all
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Please rate each of the following according to the extent that you think they are intelligent or unintelligent:

				Neither intelligent			
	Very	Lloiotelliaant	Somewhat	nor	Somewhat	lotellia est	Very
	unintelligent	Unintelligent	unimenigent	unintelligent	intelligent	menigent	intelligent
Fish	0	0	0	0	0	0	0
Dogs	0	0	0	0	0	0	0
Humans	0	0	0	0	0	0	0
Cows	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0
Chicken	0	0	0	0	0	0	0
Pigs	0	0	0	0	0	0	0

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Please rate each of the following according to the extent that you think they are capable of experiencing pain:

Chicken	\circ	\circ	\circ	\circ	\circ	\circ	\circ
		,			Somewhat capable	,	Highly capable

	Completely incapable	Mostly incapable	Somewhat incapable	Neither capable nor incapable	Somewhat capable	Mostly capable	Highly capable
Horses	0	0	0	0	0	0	0
Fish	0	0	0	0	0	0	0
Cows	0	0	0	0	0	0	0
Pigs	0	0	0	0	0	0	0
Humans	0	0	0	0	0	0	0
Dogs	0	0	0	0	0	0	0

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"More and more people in the U.S. are reducing their meat consumption." Do you agree or disagree with this statement?

0	Strongly agree
0	Agree
0	Somewhat agree
0	Neither agree nor disagree
0	Somewhat disagree
O	Disagree
0	Strongly disagree

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How do you feel towards vegetarians?
O Extremely positive
Moderately positive
O Slightly positive
Neither positive nor negative
O Slightly negative
Moderately negative
O Extremely negative
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Expectations

Do you expect to reduce your consumption of conventional meat products over the next few weeks? (0 = Definitely not, 10 = Definitely yes)

0	1	2	3	4	5	6	7	8	9	10
O	U	O	O	O	O	O	O	O	O	O
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	ch do yo few wee	•		-		ption of	convent	ional me	at produ	ıcts over
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) Yes										
_										

O No
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Would you like to be notified when the new product that was described here is available in your area?
YesMaybeNo
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Please enter your e-mail address to receive this one-time notification. You may leave this field blank if you would not like to receive an e-mail.
E-mail address

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Demographic questions

What is your zip code?

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What is your age?

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What is your gender?	
MaleFemaleOther	
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What is your highest education level? Less than high school degree High school degree Some college, no degree Associate or technical degree College degree Master's degree or other professional degree Ph.D.	

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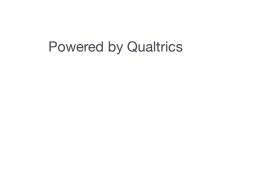
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What is your household income before taxes?	
O Less than \$20,000	
\$20,000 - \$34,999	
\$35,000 - \$49,999	
\$50,000 - \$74,999	
S75,000 - \$99,999	
\$100,000 - \$149,999	
\$149,000 - \$199,999	
\$200,000+	
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n general, would you consider your political views as: Very conservative	
O Conservative	
O Moderate	
O Liberal	
Very liberal	

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Wha	at is your current religion, if any?
0	Protestant
0	Roman Catholic
0	Mormon
0	Orthodox such as Greek or Russian Orthodox
0	Jewish
0	Muslim
0	Buddhist
0	Hindu
0	Atheist
0	Agnostic
0	Nothing in particular
0	Other (specify):

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How much do 10 = A lot)	o you expect to	reduce your consu	mption of co	onventional mo	eat products	over the next fe	ew weeks? (() = Not at all
		ucts", we are referri ish and seafood (e.						
0	1	2 3	4	5	6	7 8	9	10
0	0	0 0	0	0	0	0 0		0
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Γhink about h		g according to how t it would take, whe vith over time.		_		-	o, and wheth	er it is
		ucts", we are referri ish and seafood (e.						
		Very difficult	Difficult	Somewhat difficult	Neutral	Somewhat easy	Easy	Very easy
Completely elir conventional myour diet in the	neat products from	0	\circ	\circ	\circ	\circ	\circ	\circ

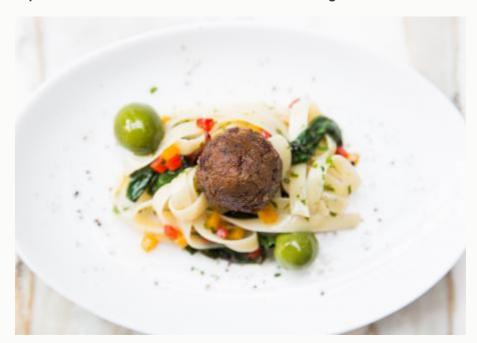
	Very difficult	Difficult	Somewhat difficult	Neutral	Somewhat easy	Easy	Very easy
Reducing your consumption of conventional meat products by 25% in the next year	0	\circ	0	0	0	0	0

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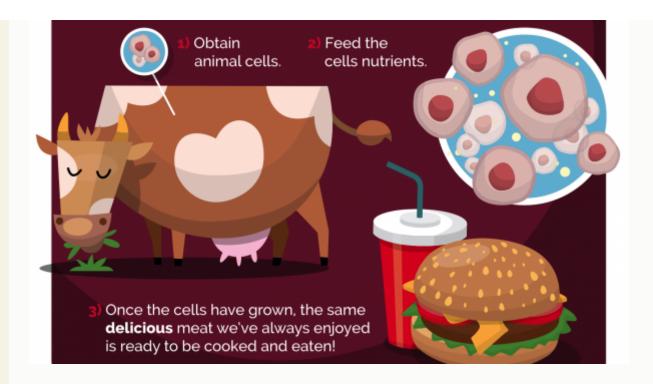
Priming

In a previous survey, you were told about "<u>clean meat</u>" products – that is, real meat grown from animal cells without the need to raise and slaughter an actual animal.

A picture of a "clean meat" meatball is included again below. How well do you remember this product?



C Extremely well
O Very well
Moderately well
Slightly well
Not well at all
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On the next few pages, we are going to ask about your attitudes towards "clean meat" products.
As a reminder, here is the basic process by which clean meat products are made:



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attitudes towards clean meat

How do you feel about clean meat products?

Extremely positive

Moderately positive

Slightly positive

Neither positive nor negative

○ Slightly negative	
Moderately negative	
Extremely negative	
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How interested are you in purchasing clean meat products?	
Extremely interested	
Very interested	
Moderately interested	
Slightly interested	
Not interested at all	
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Would you eat a clean meat product?	
O Definitely yes	

O Probably yes
Might or might not
O Probably not
O Definitely not
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Do you have any concerns about alon most products? You may called multiple items
Do you have any concerns about clean meat products? You may select multiple items.
☐ It seems unnatural
☐ It seems unhealthy
☐ There is no reason to avoid eating conventional meat products
☐ It may not taste as good as conventional meat
☐ It may be more expensive
☐ It may not be safe to eat
Other (specify):
☐ I have no concerns
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Places explain the most important concern(s) you have about clean most products	
Please explain the most important concern(s) you have about clean meat products.	
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Page Submit: 0 seconds	
Page Submit: 0 seconds	
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Page Submit: 0 seconds Click Count: 0 clicks	
Page Submit: 0 seconds Click Count: 0 clicks Do you perceive any expected benefits of clean meat products? You may select multiple items.	
Page Submit: 0 seconds Click Count: 0 clicks Do you perceive any expected benefits of clean meat products? You may select multiple items. It may be more environmentally sustainable	
Page Submit: 0 seconds Click Count: 0 clicks Do you perceive any expected benefits of clean meat products? You may select multiple items. It may be more environmentally sustainable It seems healthier than conventional meat	
Page Submit: 0 seconds Click Count: 0 clicks Do you perceive any expected benefits of clean meat products? You may select multiple items. It may be more environmentally sustainable It seems healthier than conventional meat It may reduce farm animal suffering	
Page Submit: 0 seconds Click Count: 0 clicks Do you perceive any expected benefits of clean meat products? You may select multiple items. It may be more environmentally sustainable It seems healthier than conventional meat It may reduce farm animal suffering It may be cheaper than conventional meat	

☐ I foresee no benefits	
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Overall, what is your opinion towards clean meat products?	?
	10
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You will now be asked some questions co	omparing clean meatballs, conventional meat	balls, and vegetarian meatballs.
Clean meatballs are meatballs made from	n meat that is grown from animal cells in a lab).
Conventional meatballs refers to the typi factory farms.	cal meatballs you can buy in a grocery store,	i.e. meatballs produced with meat from
Vegetarian meatballs refers to meatballs ingredients.	made from plant sources, such as beans or g	rains, that do not contain any meat
Do you understand these three definition	s?	
O Yes		
Somewhat		
O No		
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JOE BIOCK I		
Suppose you faced a choice between the	following 3 products. Which would you buy?	•
1 lb. clean meatballs	1 lb. conventional meatballs	1 lb. vegetarian meatballs
\$5	\$20	\$10
O	O	O
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Suppose you faced a choice between the following	3 products. Which would you buy	?
1 lb. conventional meatballs	1 lb vogetarien meethelle	1 lb. clean meatballs
\$20	1 lb. vegetarian meatballs \$15	\$5
0	0	0
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Suppose you faced a choice between the following	3 products. Which would you have	12
Suppose you raced a choice between the following	o products. Which would you buy	/ :
1 lb. clean meatballs	1 lb. vegetarian meatballs	1 lb. conventional meatballs
\$20	\$5	\$10
O	0	O
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1 lb. conventional meatballs \$5	1 lb. clean meatballs \$10	1 lb. vegetarian meatballs \$15
φ5	\$10	\$15
0	0	O
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Click Count: U clicks		
Suppose you faced a choice between the fo	ollowing 3 products. Which would you buy?	?
1 lb. conventional meatballs	1 lb. clean meatballs	1 lb. vegetarian meatballs
\$10	\$15	\$20
\circ	\circ	0
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Suppose you faced a choice between the fo	Mowing 3 products. Which would you huv?	
Suppose you laced a choice between the ic	mowning 5 products. Willelf would you buy	
1 lb. vegetarian meatballs	1 lb. conventional meatballs	1 lb. clean meatballs
\$10	\$20	\$15
0	0	0
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F: 1 Ol: .1 . O		
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E Block 2		
Suppose you faced a choice between the	following 3 products. Which would you buy	?
1 lb. clean meatballs \$20	1 lb. conventional meatballs \$15	1 lb. vegetarian meatballs \$10
0	0	0
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Suppose you faced a choice between the	following 3 products. Which would you buy	?
1 lb. vegetarian meatballs	1 lb. clean meatballs	1 lb. conventional meatballs
1 lb. vegetarian meatballs	1 lb. clean meatballs	1 lb. conventional meatballs
1 lb. vegetarian meatballs \$5 These page timer metrics will not be displayed	1 lb. clean meatballs \$15	1 lb. conventional meatballs
1 lb. vegetarian meatballs \$5 These page timer metrics will not be displayed. First Click: 0 seconds	1 lb. clean meatballs \$15	1 lb. conventional meatballs
1 lb. vegetarian meatballs \$5 These page timer metrics will not be displayed First Click: 0 seconds Last Click: 0 seconds	1 lb. clean meatballs \$15	1 lb. conventional meatballs
1 lb. vegetarian meatballs \$5 These page timer metrics will not be displayed. First Click: 0 seconds	1 lb. clean meatballs \$15	1 lb. conventional meatballs

Suppose you faced a choice between the fo	llowing 3 products. Which would you buy?	?
1 lb. conventional meatballs \$5	1 lb. vegetarian meatballs \$15	1 lb. clean meatballs \$10
0	0	\circ
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Suppose you faced a choice between the fo	llowing 3 products. Which would you buy?	•
1 lb. conventional meatballs \$15	1 lb. clean meatballs \$20	1 lb. vegetarian meatballs \$5
Ψ13	Φ20	0
0	0	O
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Suppose you faced a choice between the fo	llowing 3 products. Which would you buy?	>
1 lb. vegetarian meatballs	1 lb. conventional meatballs	1 lb. clean meatballs
\$20	\$5	\$10

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Suppose you faced a choice bet	ween the follow	ring 3 produ	cts. Which wo	uld you buy?			
1 lb. conventional meatballs \$15	S	1 lb.	clean meatballs \$5		1 lb. v	egetarian meatt \$20	palls
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eneral attitudes							
Please indicate the degree to wh	ich you agree o	or disagree v	with the follow	ing statements	.		
	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
More and more people in the U.S. are reducing their meat consumption.	0	0	0	0	0	0	0
Most people I know personally would be interested in eating "clean meat" products.	0	0	0	0	0	0	0

Aget people in the LLC	agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
Most people in the U.S. would nave concerns about the health or safety of "clean meat" products.	0	\circ	0	\circ	0	0	0
Most people in the U.S. would be nterested in eating "clean meat" products.	0	\circ	0	0	0	0	0
Most people I know personally would have concerns about the nealth or safety of "clean meat" products.	0	0	0	0	0	0	0
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Some people say that eating veg By "conventional meat products' hicken, turkey, duck), and fish a	", we are referr	ing to the kir	nds of red mea	at (e.g. beef, po	ork), white and	d other meat (
				,	would iiid iii	,	
Strongly agree				,	would inid in		
Strongly agree Agree				,	would iiid iii		
Strongly agree				,	would iiiid iii		
Strongly agree Agree				,	would iiiid iii		
Strongly agree Agree Somewhat agree				,			
Strongly agree Agree Somewhat agree Neither agree nor disagree				,			

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Do you think that farm animals are sentient (feel pleasure or pain)?
O Definitely yes	
Probably yes	
Might or might not	
O Probably not	
O Definitely not	
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How much do you think conventional meat production harms ani	mals?
A great deal	
O A lot	
A moderate amount	
○ A little	
O Not at all	

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How concerned are you about	this harm?
A great deal	
O A lot	
A moderate amount	
O A little	
Not at all	
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Do you think that conventional	I meat products have a larger impact on the environment than vegetarian food products?
	ts", we are referring to the kinds of red meat (e.g. beef, pork), white and other meat (e.g. eggs, hand seafood (e.g. tuna, shrimp, crab) products that you would find in a typical grocery store.
O Definitely yes	
O Probably yes	
Might or might not	

O Probably not
O Definitely not
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These page timer metrics will not be displayed to the recipient. First Click: 0 seconds
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How much do you think conventional meat products harm the environment?
By "conventional meat products", we are referring to the kinds of red meat (e.g. beef, pork), white and other meat (e.g. eggs, chicken, turkey, duck), and fish and seafood (e.g. tuna, shrimp, crab) products that you would find in a typical grocery store.
O A great deal
O A lot
A moderate amount
O A little
O Not at all
These page timer metrics will not be displayed to the recipient.
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How concerned are you about this harm?

A lot A moderate amount							
○ A little							
Not at all							
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Click Count: 0 clicks	Very		Somewhat	Neither intelligent nor	Somewhat		Very
Click Count: 0 clicks		the extent that Unintelligent		Neither		igent: Intelligent	Very intelligen
Click Count: 0 clicks lease rate each of the follow Chicken	Very		Somewhat	Neither intelligent nor	Somewhat		
Click Count: 0 clicks lease rate each of the follow Chicken	Very		Somewhat	Neither intelligent nor	Somewhat		
Click Count: 0 clicks lease rate each of the follow Chicken Fish Pigs	Very		Somewhat	Neither intelligent nor	Somewhat		
Click Count: 0 clicks Clease rate each of the follow Chicken Fish Pigs Humans	Very		Somewhat	Neither intelligent nor	Somewhat		
Click Count: 0 clicks Please rate each of the follow Chicken Fish Pigs Humans Cows Horses	Very		Somewhat	Neither intelligent nor	Somewhat		

	Completely incapable	Mostly incapable	Somewhat incapable	Neither capable nor incapable	Somewhat capable	Mostly capable	Highly capable
Dogs	0	0	0	0	0	0	0
Chicken	0	\circ	\circ	0	\circ	\circ	
Humans	0	0	0	0	0	0	\circ
Fish	0	\circ	\circ	0	\circ	0	\circ
Cows	0	0	0	0	0	0	0
Horses	0	\circ	\circ	0	\circ	\circ	\circ
Pigs	0	0	0	0	0	0	0
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How do you feel towards veg	jetarians f						
Extremely positive							
Moderately positive							
Slightly positive							
 Neither positive nor negative 							

 Slightly negative 			
Moderately negative			
Extremely negative			
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	of the survey is there anythin	ng alsa yau wauld lika ta sav?	
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	of the survey. Is there anythin	ng else you would like to say?	
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Here is a selection	of comments that	other MTurk work	ers have made ab	out clean meat:
"Artificial meat sou				
"This seems very u "No one will like cle		el comfortable ab	out this."	
"Clean meat isn't re				
"Our guts are not n	neant to digest uni	natural things."		
To what extent do	you agree with the	se comments?		
O Strongly agree				
O Agree				
O Somewhat agree				
O Neither agree nor	disagree			
O Somewhat disagr	ree			
O Disagree				
O Strongly disagree				

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Priming - Control

How well do you recall the "clean" meat product you were recently told about?

A picture of the product is included again below.



Extremely well

Very well

Moderately well

Slightly well

Not well at all

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Treatment intro

Please read the news article on the next page. Once you are finished, we will ask you several questions about it.

NOTE: the news article may take a moment to load.

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anti-naturalistic fallacy treatment #1

"Natural" doesn't mean "good"

Sometimes we hear that a new product that has been developed is "unnatural".

However, just being "natural" doesn't mean a product is good. Arsenic occurs naturally and can contaminate local water sources, but we probably wouldn't think arsenic is good!

Appendicitis and health conditions like heart disease might have natural causes, but we still strive to avoid them.



Arsenic naturally contaminates many water sources.



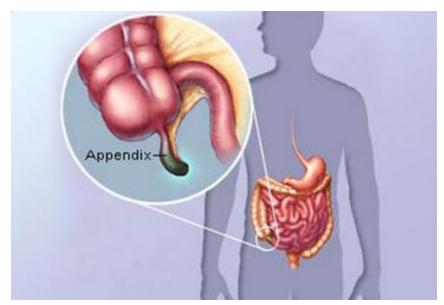
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Appendicitis has natural causes.



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Antibiotics are grown in a lab.

While not all "natural" products are good for us, many "unnatural" products are actually beneficial. Most antibiotics were developed in a lab. Most of us also appreciate the benefits of electricity or fermented foods.

At the end of the day, whether or not a product is natural does not determine whether it is good for us.

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anti-naturalistic fallacy treatment #2

There's no such thing as a "natural" food

Unless you're living exclusively on foraged berries and wild-caught fish, you're eating food that's the result of thousands – or even tens of thousands – of years of purposeful human intervention. Why is the banana such a perfect food? Because we bred it to be that way. Why is corn so big and sweet? Because that's how we like it. From cows that produce gallons of milk a day to chickens that reach maturity by four weeks, our food is as much a cultural artifact as it is a natural one.



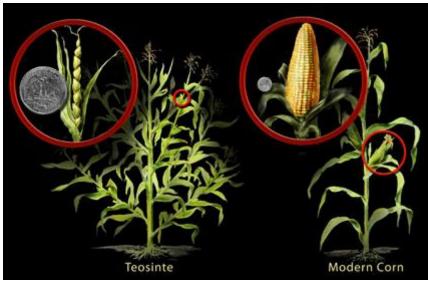
Natural vs. modern banana.



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Natural vs. modern corn.

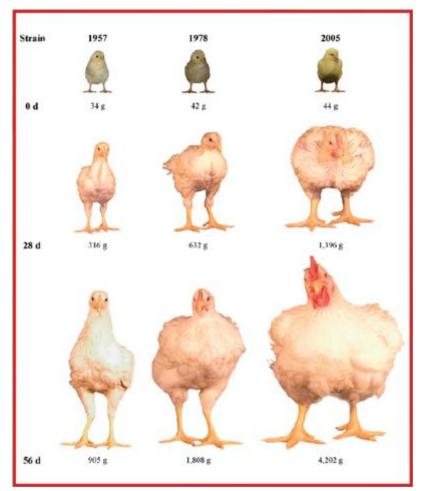


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Natural vs. modern chickens.

Cultured cells and microbes are also used in some of the oldest foods on the planet. If you wanted to cut food produced with the help of microbes out of your life, you'd have to stop consuming bread, beer, wine, yoghurt, vinegar, sour cream, sauerkraut, soy sauce, kombucha, and kimchi. Not to mention that fact that, if you look at them under a microscope, lab-grown muscle tissue and animal-grown muscle tissue are identical.



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anti-naturalistic fallacy treatment #3

Consumers demand clean meat

Demand for "clean" meat products keeps growing, despite higher price points compared with conventional meat, according to data from Nielsen Perishables Group.

The call for food transparency continues to build, and with it, the use of terms like "natural," "hyper-local" and "antibiotic-free" in conversations around our food. When it comes to meat, discussions include the added dimensions of livestock care and processing, complicating the labeling of meat products well beyond what's needed for an organic banana or a package of fiber cereal. So what exactly do these meat labels mean, and what are the nuances? But perhaps more importantly, do consumers really want "cleaner" meat?



Consumer demand for clean meat has been increasing over time.



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Consumers now care about clean meat.



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72% of people say they would be interested in eating clean meat.

A recent survey, published this month in PLOS One, investigated the views of people in the United States, a country with one of the largest appetites for meat and an equally large appetite for adopting new technologies.

72 percent of people who normally eat beef and pig products said they would still do so if they were produced as cultured meat. The perceived advantages of clean meat were that it was environmentally and animal-welfare friendly, ethical, and less likely to carry diseases.



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control condition

The simple yet potent exercise that benefits everyone

Walking. We all know it's good for us. But why?

Regular physical activity is essential for good health. It reduces the risk of chronic diseases (like heart disease, stroke, certain cancers and type 2 diabetes), promotes healthy weight, reduces the risk for depression, lowers blood pressure, and decreases stress.

All it takes is 30 minutes a day. Moderate walking is a terrific form of exercise, as it doesn't over-stress the body like some more intense activities can. Walking is good for your body, plain and simple.



Walking can decrease stress.



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Walking can be done anywhere.



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Walking can improve your health.

What you may not have considered is the effect communities might have on walking. Walkable communities are associated with healthy citizens. If kids are able to walk or bike to school safely, they are already accomplishing most of their required minimum physical activity by simply getting to and from school. There are benefits to adults as well.

With more and more Americans starting to get moving and walking each year, it's important for our communities to keep up.



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open-ended questions	
What thoughts went through your mind while	reading the article?
Please enter up to 3 thoughts that went throuleave the remaining text boxes blank.	ugh your mind. If you had less than 3 thoughts,
Thought #1:	
Thought #2:	
Thought #3:	
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How do you feel about clean meat products?	

O Extremely positive

Moderately positive
O Slightly positive
O Neither positive nor negative
O Slightly negative
Moderately negative
O Extremely negative
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How interested are you in purchasing clean meat products?
Extremely interested
O Very interested
O Moderately interested
O Slightly interested
O Not interested at all
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Would you eat this product?
O Definitely yes
O Probably yes
O Might or might not
O Probably not
O Definitely not
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Do you have any concerns about clean meat products? You may select multiple items.
☐ It may be more expensive
☐ It seems unnatural
☐ It may not be safe to eat
☐ It may not taste as good as conventional meat
☐ It seems unhealthy

☐ There is no reason to avoid eating conventional meat products
Other (specify):
☐ I have no concerns
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Do you perceive any expected benefits to this product? You may select multiple items.
☐ It seems safer to eat than conventional meat
☐ It may be more environmentally sustainable
☐ It may be cheaper than conventional meat
☐ It seems healthier than conventional meat
☐ It may reduce farm animal suffering
☐ It may be tastier than conventional meat
Other (specify):
☐ I foresee no benefits
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Now please rate the following according to how difficult you think each goal would be **for you**.

Think about how much effort it would take, whether you feel like it is something you could possibly do, and whether it is something you could stick with over time.

	Very difficult	Difficult	Somewhat difficult	Neutral	Somewhat easy	Easy	Very easy
Completely eliminating conventional meat products from your diet in the next year	0	0	0	0	Ο	0	0
Reducing your consumption of conventional meat products by 25% in the next year	0	0	0	0	0	0	0

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Attitudes Post

Some people say that eating vegetarian food is morally preferable to eating meat produced via factory farming. What do you think?
O Strongly agree
O Agree
O Somewhat agree
Neither agree nor disagree
O Somewhat disagree
O Disagree
O Strongly disagree
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Do you think that farm animals are sentient (feel pleasure or pain)?
O Definitely yes
O Probably yes
O Might or might not
O Probably not
O Definitely not

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How much do you think conventional meat produc	ction, <i>i.e.</i> factory farming, harms animals?
O A great deal	
O A lot	
O A moderate amount	
O A little	
O Not at all	
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How concerned are you about this harm?	
O A great deal	
O A lot	

O A moderate amount
O A little
O Not at all
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 Definitely yes Probably yes Might or might not Probably not Definitely not
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How much do you think conventional meat products harm the environment?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all
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How concerned are you about this harm?
O A great deal
O A lot
O A moderate amount
O A little
O Not at all

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Click Count: 0 clicks									
Please rate each of the following according to the extent that you think they are intelligent or unintelligent:									
	Very unintelligent	Unintelligent	Somewhat unintelligent	Neither intelligent nor unintelligent	Somewhat intelligent	Intelligent	Very intelligent		
Dogs	O	O	O	O	Ö	Ö	Ö		
Cows	0	0	0	0	0	0	0		
Fish	0	0	0	0	0	0	0		
Horses	0	0	0	0	0	0	0		
Humans	0	0	0	0	0	0	0		
Pigs	0	0	0	0	0	0	0		
Chicken	0	0	0	0	0	0	0		
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Please rate each of the following according to the extent that you think they are capable of experiencing pain:

	Completely	Mostly	Somewhat	Neither capable nor	Somewhat	Mostly	Highly
	incapable	incapable	incapable	incapable	capable	capable	capable
Chicken	0	0	0	0	0	0	0
Cows	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0
Pigs	0	0	0	0	O	0	0
Fish	0	0	0	0	0	0	0
Dogs	0	0	0	0	0	0	0
Humans	0	0	0	0	O	0	0

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"More and more people in the U.S. are reducing their meat consumption." Do you agree or disagree with this statement?

O Strongly agree

Agree

O Somewhat agree

Neither agree nor disagreeSomewhat disagreeDisagreeStrongly disagree
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How do you feel towards vegetarians?
Extremely positive
Moderately positive
O Slightly positive
O Neither positive nor negative
O Slightly negative
Moderately negative
Extremely negative
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Page Submit: 0 seconds Click Count: 0 clicks **DCE Intro** You will now be asked some questions comparing clean meatballs, conventional meatballs, and vegetarian meatballs. Clean meatballs are meatballs made from meat that is grown from animal cells in a lab. Conventional meatballs refers to the typical meatballs you can buy in a grocery store, *i.e.* meatballs produced with meat from factory farms. Vegetarian meatballs refers to meatballs made from plant sources, such as beans or grains, that do not contain any meat ingredients. Do you understand these three definitions? Yes

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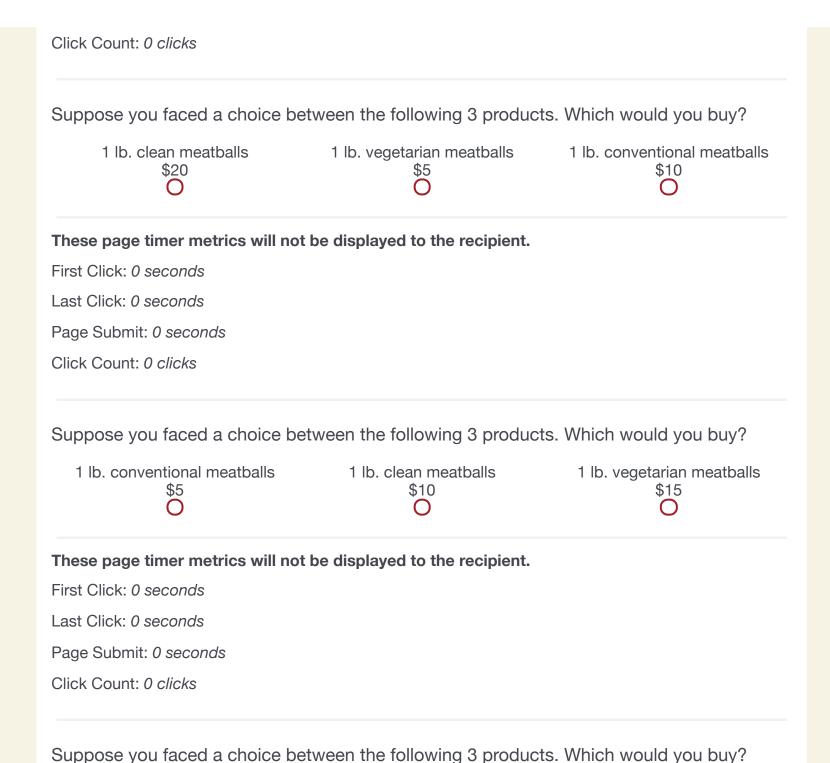
Somewhat

O No

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DCE Block 1		
Suppose you faced a choice b	etween the following 3 products	s. Which would you buy?
1 lb. clean meatballs \$5	1 lb. conventional meatballs \$20 O	1 lb. vegetarian meatballs \$10 O
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Suppose you faced a choice b	etween the following 3 products	s. Which would you buy?
1 lb. conventional meatballs \$20	1 lb. vegetarian meatballs \$15	1 lb. clean meatballs \$5

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1 lb. conventional meatballs \$10 O	1 lb. clean meatballs \$15 O	1 lb. vegetarian meatballs \$20 O
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Suppose you faced a choice b	etween the following 3 products	s. Which would you buy?
1 lb. vegetarian meatballs \$10 O	1 lb. conventional meatballs \$20 O	1 lb. clean meatballs \$15 O
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DCE Block 2		
Suppose you faced a choice b	petween the following 3 products	s. Which would you buy?

1 lb. conventional meatballs 1

1 lb. vegetarian meatballs

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Suppose you faced a choice be	etween the following 3 products	s. Which would you buy?
1 lb. conventional meatballs \$15 O	1 lb. clean meatballs \$20	1 lb. vegetarian meatballs \$5
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Suppose you faced a choice be	etween the following 3 products	s. Which would you buy?
1 lb. vegetarian meatballs \$20	1 lb. conventional meatballs \$5	1 lb. clean meatballs \$10 O

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Suppose	e you fac	ed a choi	ice betw	een the	following	3 prod	ucts. W	hich wou	ıld you bı	uy?
1 lb. c	convention \$15 O	al meatba	lls	1 lb. c	clean meat \$5 O	balls		1 lb. vege [.]	tarian mea \$20 O	tballs
-			ill not be	e display	ed to the r	ecipien	t.			
	k: 0 secon									
	k: 0 secon									
	omit: 0 sec									
Click Col	ınt: <i>0 click</i>	S								
Expecta	ntions									
•	expect to ks? (0 =	•			n of conv	entiona	al meat	products	over the	next
0	1	2	3	4	5	6	7	8	9	10

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Page Submit: 0 seconds Click Count: 0 clicks How much do you expect to reduce your consumption of conventional meat products over the next few weeks? (0 = Not at all, 10 = A lot)These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Would you like to receive more information about how to incorporate more vegetarian products in your diet, including tips to reduce your meat consumption and vegetarian recipes? O Yes Maybe O No

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Would you like to be notified when clean meat is available in your area?
O Yes
O Maybe
O No
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Please enter your e-mail address to receive this one-time notification. You may leave this
field blank if you would not like to receive an e-mail.
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