

SUMMARY OF STRATEGIC SUGGESTIONS

What does the historical, psychological, economic, and theoretical evidence suggest for how we can most effectively reduce and end factory farming and animal agriculture?

- **Focus on institutions.** Frame animal-free food as a sweeping change of the food system, not as an individual lifestyle choice, trend, quirky art experiment, or fad. Ask people to get involved in advocacy as a scientist, entrepreneur, activist, or conscious consumer instead of just asking people to make personal diet choices such as vegetarianism.

- **Diversify terminology.** Focus on the audience when deciding between *clean*, *cultured*, *cell-cultured*, *plant-based*, *cell-based*, *in vitro*, and *animal-free*. It's okay—actually desirable—for advocates to not exclusively use one of those terms. Avoid misleading terms with strong evidence against them such as *franken-* and *lab-grown*, especially in media.

Other suggestions not defended on this poster

- **Be cautiously transparent and avoid hype.** Frame it foremost a morally-driven social movement, only secondarily a profit-driven enterprise. Avoid hype, such as unrealistically short timelines or sensationalizing the technology.

- **Collaborate and cooperate.** For example, plant-based entrepreneurs shouldn't dismiss cell ag as a pipe dream even if they truly believe that. Adjust for the *unilateralist's curse*.¹

- **Focus on the animal impact.** When discussing ethical benefits, advocates should prioritize them in this order all else equal: (1) animal welfare, (2) sustainability, general human health like antibiotic resistance, (3) personal health like nutrition and weight loss.²

- **Be bold and honest, yet kind and accepting.** Be direct in calling out the massive devastation animal farming causes, but avoid aggression and be sure to place the blame on the animal farming industry itself instead of on individual consumers.

BACKGROUND

This research is part of *The End of Animal Farming* (Beacon Press 2018), an upcoming book that illuminates humanity's transition to an animal-free food system and provides a strategic roadmap for achieving that outcome.

Sentience Institute is a nonprofit think tank researching the most effective strategies to expand humanity's moral circle. Currently, animal farming is its main research focus due to the scale, neglectedness, and tractability of the issue.

Sentience Institute was founded as part of *effective altruism* (EA), a social movement and research community focused on doing as much good as possible. For more information on EA, visit its website (sentienceinstitute.org) or the general EA landing page (effectivealtruism.org). Much of the content from this poster can be found in more detail on our website and in *The End of Animal Farming*.

EXAMPLE OF AN RCT IN THIS FIELD

Social movement strategy questions are hard to answer with randomized controlled trials given their social and long-term nature, but some subquestions can be addressed this way. For example, one RCT looked at two subquestions of the *clean vs cultured* debate: (1) What is the difference in simulated purchasing choices between users presented with the term *clean* and users presented with the term *cultured*? (2) How do these choices change when presented with a critical media article?

Subjects were recruited on Amazon Mechanical Turk and presented positive articles about “clean” or “cultured” meat.

Clean beef: the future of meat?
PUBLISHED: 20 January 2018

Dr. Mark Post, a researcher at Maastricht University in the Netherlands, served up the first clean beef product for taste testing at an event in London in 2013.

Clean beef involves painlessly taking tissue from a live cow, extracting cells from the tissue, and feeding and nurturing them until they multiply many times. Eventually, the cells come together into small strips of muscle about a centimeter long and a few millimeters thick. Thousands of these strips are then layered together to form a beef product. From one tiny piece of tissue can come 45,000 pounds of beef.

"Let's make a proof of concept, and change the discussion from this is never going to work" to, "well, we actually showed that it works, but now we need to get funding and work on it." Dr. Post said in an interview last fall in his office at Maastricht University.

"I think really the most important driver is the realization that livestock beef production has serious issues. It will not be able to match the demand in 2050 — the global demand — so we will have a shortage," he said. "It comes at the expense of a lot of environmental damage, because cows emit methane. And there are increasing concerns about the animal welfare issues."

As public awareness of clean beef grows, proponents like Post seem hopeful that their products will, one day, become just as acceptable as meat grown on animals — perhaps even more so.

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Cultured beef: the future of meat?
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Subjects were asked eight purchasing questions, varying chicken/beef, conventional/humane, price, and product type. Subjects were only exposed to one of “clean” or “cultured.”

Below, you will be comparing two chicken products. Please read the descriptions of each product carefully and then indicate which of the two products you would purchase if they were side by side in a grocery store.

Conventional Product
Price: \$2.50/pound Product Type: Chicken Nugget
Cultured Product
Price: \$1.50/pound Product Type: Chicken finger
Note: Conventional products are typical chicken products found in grocery stores today. Humane products are those with additional welfare certifications, such as “grass fed” or “pasture raised.”
If you had to choose one product to purchase, which one would you buy?

Subjects were then shown negative articles using either term.

'Clean meat' or 'unclean meat'? Critics bash activists for 'misleading' term
PUBLISHED: 20 January 2018

Dr. Mark Post, a researcher at Maastricht University in the Netherlands, served up the first "clean beef" product for taste testing at an event in London in 2013.

While environmental and animal rights activists celebrated the occasion and new developments over the next several years, critics suggest the new technology is less promising. They say that lab-grown, i.e. "clean," beef still involves taking tissue from a live cow, and that the meat is unnatural and over-processed.

"The activists promoting lab-grown meat are really missing the mark," says Julia Robertson, author of *Whole: How America Reaches a Safe, Sustainable, and Healthy Food System*. "Humans have been eating meat for thousands of years. It has been a cornerstone of family dinners, human health, and our relationship with animals and the environment."

Robertson is particularly concerned with use of the term "clean meat."

"It's a misleading term that's used to create positive feelings in consumers. However, not only are these new products unnatural, but there is no actual evidence that lab-grown meat is safe for our health or better for the environment."

For now, lab-grown meat isn't for sale in stores or restaurants under any name. When that happens, consumers will have to listen to both sides of the argument and make their own decisions.

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Critics bash activists for promoting cultured meat
PUBLISHED: 20 January 2018

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Robertson is particularly concerned that lab-grown meat is marketed as a healthy choice.

"This is a big worry for consumers. Not only are these new products unnatural, but there is no actual evidence that lab-grown meat is safe for our health or better for the environment."

For now, lab-grown meat isn't for sale in stores or restaurants under any name. When that happens, consumers will have to listen to both sides of the argument and make their own decisions.

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Subjects were asked eight more purchasing questions with the same methodology.

First set results: 52.6% (n=487) of choices favored *clean*, while 41.5% (n=490) of choices favored *cultured* (p-value 0.0006). A second nearly-dentical study found similar results.

Second set results: 40.0% of choices favored *clean*, while 33.0% of choices favored *cultured* (p-value <0.0001). This means that *clean* choices dropped by 12.6% total (31.5% relative) and *cultured* choices dropped by 8.5% (25.8% relative).

Overall, this study was evidence in favor of the term *clean*.

FOCUS ON INSTITUTIONS³

Should we focus on changing individuals or changing institutions and social norms? For example, should we ask people to “go vegan” or “end animal farming” (messages)? Should we focus on vegan leafleting or corporate campaigns (interventions)?

Arguments for institutional focus⁴

1. It seems that few if any social movements have succeeded with a heavy focus on individual change. Attempts at this have been regarded as largely ineffective in well-studied movements.⁵

2. Institutional messages could reduce defensiveness by shifting blame away from the recipient and onto relevant institutions, facilitating moral outrage in the audience.⁶ Blaming the audience can induce more of a backfire effect.⁷

3. Institutional messaging makes it harder for people to become demotivated by the lack of a clear large-scale solution to the relevant issue.⁸ Emphasis on collective action can be more empowering for individuals to make changes.⁹

Arguments for individual focus

1. Usually the ask of the message is clearer when it's individual-focused, e.g. “go vegan” clearly means you should go vegan if you agree with the advocates, which can lead to more short-term behavior change and subsequent spillover effects by shifting personal identity.¹⁰

2. Institutional interventions might be less tractable due to the current number of individuals advocating for animal-free food, or the current Overton Window which arguably excludes common advocacy viewpoints, such as the need to end animal farming.¹¹

Types of institutions:



Some successful movements:



DIVERSIFY TERMINOLOGY

What should we call the different products we produce, especially between clean meat and cultured meat?

Arguments for *clean*¹²

1. *Clean* keeps the focus on the ethical benefits—lack of animal cruelty, sustainability, and reduced risk of contamination—which are what most people see as the most important feature of these foods, similar to *clean energy*.

2. *Clean* is a more directly appealing term, in the sense that it probably leads to increased immediate sales of the product as suggested through randomized controlled trials (see “Example of an RCT in This Field”).

3. *Clean* avoids misleading consumers about what the product actually is because *cultured meat* could mean meat that is fermented like yogurt, produced in labs at commercial scale, cultured in the way diamonds are (pressure and heat), or cultured in the way pearls are (artificially made inside the bodies of live bivalves).

Arguments for *cultured*¹³

1. *Cultured* doesn't sound like it's being used with an agenda, whereas *clean* could be perceived as a loaded term intended to influence consumers. This could be especially important if advocates need to deal with significant backlash.

2. Similarly, *cultured* could be a more acceptable term to big food and meat companies who want to invest in this new technology, but want to avoid the implication that their conventional meat products are unclean.¹⁴

3. *Clean* also has alternative meanings, such as the Biblical sense (meat from an animal with divided hooves who chews their cud) and the personal health-focused *clean eating* movement (focused on unrefined, unprocessed foods).

Arguments for a diverse approach

A diverse approach is a roughly even split between these terms with more public-facing, advocates using *clean* and more science-oriented advocates using *cultured*.

1. Different audiences could favor different terms much more. For example, biologists who want to discuss the empirical nature of a technology without any judgment on the ethical aspects might prefer the term *cultured*, while food scientists used to discussing fermentation might prefer *clean* or *cell-cultured*.

2. If we want to eventually call the product *meat*, same as conventional meat, then a diversity of terms could make the transition to that easier. It also opens up a different use of *clean meat*, to refer to all sustainable meat technologies (including plant-based) like the use of *clean energy*.

There is significant agreement that some of the more sensational terms, such as *franken-* and *lab-grown*, should be avoided in almost all contexts as negative and misleading.