

[Transcript] Plain English with Derek Thompson / The Spectacular Rise and Fall of Fake Meat in America

Hey there, humanoids. This is David Chewmaker here with a very exciting announcement. Your favorite wrestling podcast feed, The Ring of Wrestling Show, is now going daily. And you can hang out with me and Kaz on Mondays and Thursdays for the Masked Man show. And you can join me, Peter Rosenberg, alongside stat guy Greg and Dip, every Tuesday with Chief Pete. And on Fridays, I'll welcome a friend or special guest from the world of wrestling. And on Wednesdays, we have a very special new show called Wednesday Worldwide that you're going to want to check out. Pay-per-view reaction, one-of-a-kind interviews, fantasy booking, talking about bagels. That's what we do here on The Ring of Wrestling Show. Follow the show now on Spotify and do us a favor. Give us five stars. And do us another favor and stay sane. For the past 50 years, Americans have basically responded to the case against eating animals by consistently eating more animals. We have heard again and again about the moral and ecological cost of eating meat from viral documentary footage of slaughterhouses to activist organizations like PETA, scientific reports on the fossil fuel cost of producing a medallion of beef. And it hasn't made much of a difference. The share of Americans who call themselves vegan or vegetarian has barely increased in the last 20 years. With every passing decade, Americans have eaten more and more meat per capita. And this doesn't make us unique, by the way, as most countries get richer. They eat more and more meat. But a few years ago, I was certain that we were near peak meat. I saw the rise of plant-based meat products like impossible burgers and beyond meat sausages. And I thought they seemed like a landmark moment in food history. For decades telling Americans what they should not eat, that had not worked. But maybe using technology and innovation, entrepreneurship to expand the menu, giving Americans more meat alternatives. I thought maybe that would work. And to a certain extent, this was mere projection. I am a meat eater. I really like steak. But also, in the last few years, I have eaten a bit more impossible burgers. And a lot more beyond meat meatballs. In 2019 and 2020, I looked pretty smart with this peak meat prediction. Meat substitute products truly surged. There was a moment where it seemed like every chain, Duncan, McDonald's Burger King were experimenting with fake meat. But the last two years have made my peak meat prediction look pretty silly. Beyond meat's publicly traded stock is down more than 80% from its all-time high. Impossible has announced layoffs of more than 20% of its staff. Restaurants have slashed their plant-based meat options.

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So what happened?

Well, today's guest wrote a blockbuster story for Bloomberg on this very topic.

Dina Shankar has been covering the food industry for many years, since we actually shared an office in New York about 10 years ago.

In this episode, we talk about the spectacular rise and fall of fake meat and what it tells us about food and taste and politics and technology.

I'm Derek Thompson. This is Plain English.

Dina Shankar, welcome to the show.

Thank you so much for having me.

So let's tell this story properly.

In 2009, Ethan Brown founds the company Beyond Meat.

What does he tell the world he's trying to accomplish?

Ethan had what was at the time a really revolutionary idea.

He was going to mimic animal meat using plants.

Now, of course, plant-based protein has been around for thousands of years, but the idea that you could make a piece of food that was essentially meat,

that looked like meat, smelled like meat, tasted like it, cooked like it,

but you were going to make it only with plant materials was a really new idea at the time.

And a few years later, another Brown, a Stanford University biochemist named Pat Brown, no relation to Ethan, founds Impossible.

This is 2011, and he makes some even grander claims about the future of his company, including in a profile for the New Yorker magazine.

He says, we're going to take a double-digit portion of the beef market.

We're going to send meat into a death spiral.

What are some of the most important differences between Brown II and Impossible and Brown I at Beyond?

So Ethan wanted at Beyond, Ethan wanted to make his plant-based meat

by kind of breaking down plants into their component parts

and then reassembling them so that they would match what meat looks like,

what he called sometimes the core architecture or the blueprint of meat.

Pat Brown at Impossible had a different idea.

His was that meat got its essential meatiness from something called heme.

Heme exists in all plants and meats, but it's in the highest concentration in beef.

And so he said, I'm going to make heme out of soy,

and I'm going to use that, and I'm going to put it in my meat-like products to make those really meaty.

So they were both going after the same goal, but in different ways.

Right. He basically finds this, it's like an iron-based compound heme, right?

H-E-M-E, he finds a way to produce it with genetically modified yeast,

and that gives it its sort of like bloodiness.

I remember when I lived in New York, I lived in the East Village of New York in like 2012-ish, 2014,

and across the street there was a bear burger,

and bear burger was one of the first companies to sell impossible burgers.

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And I remember biting into one and not hating it and being shocked I didn't hate it and feeling like, oh, this thing, it kind of looks like it's bleeding, right?

Is that sort of bleeding effect? Does that come from heme itself, or is that just a part of the general plant-based magic in these alternative meats?

Yes, that does come from heme.

And actually, Ethan at Beyond also wanted his burgers to bleed, but he did it with beet juice.

So the idea that the burger would be bloody in the middle was common to both of them, actually. And give me a sense of the kind of promises that the Browns were making, not just to their investors, but also at, like, TED Talks, because what I find so interesting about these kind of companies is that, like, there are VC-based companies that are raising money, and then there are, like, TED Talk-based institutions that are trying to raise prestige or excitement. And they were really succeeding on both accounts, right?

They were mainstays in these kind of conferences, and they were raising hundreds of millions of dollars.

So what were the promises they were making? How were they doing it?

That's right. So they were really taking advantage of this conference circuit and getting their message out in front of these really, I think, educated groups of people that for years have been hearing about and talking about the problems in our food system and the way the problems in our food system were terrible for the environment, terrible for our health.

And then there was always a question as to how we were going to solve these problems.

Now, here comes Ethan Brown, and he says, I have a solution.

My plant-based meat is going to help solve our health problems, and he would say on the stage who would list cancer, diabetes, heart disease, and it would also help our environmental problems, natural resource depletion, climate change. And he made this great case for, oh, and of course, animal welfare, which we also have all learned about sort of how gruesome factory farming can really be. So that was, Ethan was going to solve all three.

Pat really focused on the environmental piece more than anything.

He talked about the quote, unquote, ongoing wildlife holocaust that was happening because of humankind's insatiable demand for beef.

And it should be said that neither Brown was wrong when they were talking about the way our demand for meat hurts the environment, our health, and animals.

These are all real problems.

What they were offering was a solution that was really sexy to a lot of people because it didn't involve changes in policy, it involved a new consumer product.

I think that's exactly it.

People like, say, Leonardo DiCaprio, the celebrity investors, they want to bet on the future they want to live in.

They want to bet on a world that has less animal cruelty, that has less climate depoliation, but they also want to make money.

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And so it was so thrilling about these companies that they seemed to crack a code that allowed them to do everything at once, to save the planet, save the animals, and make a crap ton of money.

So in 2019, Beyond Meat goes public.

And it is a total gang buster.

It is, as you reported, the most successful initial public offering since the 2008 financial crisis, the most successful IPO in a decade.

Can you help me understand why?

There's the attitude, enthusiasm about it, the hope that we're going to save the world.

But they were also notching some pretty significant commercial victories, too, right?

That's right.

So Impossible and Beyond went different routes to the mass consumer commercialization.

Basically, Beyond went first into supermarkets.

And the big first win for Beyond was when Whole Foods put Beyond burgers in their meat case so that they would attract not the vegetarian who knows that veggie burgers are usually in the freezer,

but that it would be the meat eater would go to buy their ground beef

and they would see this option and think, maybe I'll try that.

So that was a really big deal.

Impossible went a different route.

They went through restaurants and they didn't have a lot of product at first.

And so they did what was a really great way to get headlines without having a lot to sell, which is they went to really fancy chefs.

So the first chef that sold the Impossible burger was David Chang at Mama Fukunishi in Manhattan.

And David Chang is not just like a well-known chef.

He's a well-known chef who loves meat.

And here he is, and he's endorsing this burger.

And that was the route that Impossible took was they went from David Chang to other high-end chefs.

And Beyond went supermarket chain after supermarket chain.

Pretty soon though, it became clear that the real battle for attention and wins was happening with fast food.

And we saw this like back and forth, like each one claiming new partners.

Beyond got Carl's Jr., which again was like this really big deal because Carl's Jr.,

this was the same burger chain that had those crazy commercials with Paris Hilton in a bikini eating a big juicy burger.

And they were going to sell the Beyond burger.

What an endorsement.

And Impossible got White Castle, which was a really big deal.

And then after Beyond went public, Beyond got Dunkin' Donuts with their sausage,

and Impossible got the really, really big win, which was the Impossible Whopper at Burger King.

And I'm not trying to create a moral equivalence here,

but there is a commercial analogy here to be made with something like blockchain, right?

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A new technology comes online, and every company that can conceivably incorporate the blockchain into their business says,

oh, we've got a blockchain business, we've got a blockchain option, we've got a blockchain product, it's JP Morgan, and it's Stripe, and it's just, it's everyone trying to get in on what they think is going to be this emerging future within their sector.

And to be clear, this emerging future, a little bit like crypto and blockchain, has an incredible 2020 from your piece, quote,

Americans bought 5.3 million units of fresh meat alternatives in the eight weeks ended April 25, 2020.

Those are, you know, including the first six weeks of the pandemic.

That was three times the amount of a year earlier, according to Nielsen.

Suddenly, you write, beyonds prediction in one of its investor pitch decks that fake meat was on track to become the new fake milk was looking increasingly plausible.

Help me understand why you think 2020 was such a great year for this alternative meat sector.

So the first thing is that the beyond meat IPO in 2019, not only boosted beyond, it also it, it paved the way for all these other companies to start introducing their own products.

There were startups that had new products, there were big companies like Conagra and Nestle that were either sort of like giving their old products new facelifts or introducing new ones.

Tyson even started getting into the plant-based market.

So you had in supermarkets, if you went to look for a plant-based meat product, you could get a new product every time.

There was just a constant flow of new products.

So when, you know, everybody got locked down from the pandemic and people had a different kind of disposable income because they weren't going out to restaurants.

They weren't going on vacations and food really took on a really important new role in those months.

And so for a lot of people, this was a great opportunity to try plant-based meat.

One was a lot of people were trying to be healthier and everyone thought this is a really good way to do it.

People were also just bored and this gave them like something new to try.

And so you just had, and of course there was a shortage of real meat in supermarkets.

You couldn't find the real thing.

And so you had all of these factors sort of converged into this huge opportunity for this category.

Right. It was a perfect storm.

I remember in the first maybe six months of the pandemic, I loved going to bars and suddenly I couldn't go to bars anymore.

I had never really been a cocktail maker myself.

And suddenly I was like, okay, you know what?

I still want a negroni.

I still want a dirty martini.

I'm just going to learn how to make it at home.

And so I think a lot of people, whether it was for them, it might have been cocktails, it might have been board games.

They were trying new things.

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There was like an explosion in novelty curiosity.

Let me figure out some thing I can add to my life so that even though I am not leaving my living room and life could not be more effing boring, it still feels like there's variety in my life.

And this new food category offered a perfectly easy way to inject variety into dinner.

You could say, you know, kids, we're going to, you know, have pasta again and pasta and meatballs. But this time it's going to be beyond meatballs.

And let's like compare and contrast what, you know, Tuesday's dinner feels like versus, you know, Thursday's pasta and actual meat meatballs.

I think that novelty demand was such a huge part of the boom.

At this time or in the next years, the world began to open up.

But now tell me what's happened to the alternative meat market since 2020?

So the sales have just really fallen since then.

We had some numbers in our story that showed in supermarkets sales of refrigerated plant-based meat,

which is that section where they were really going head to head with the real animal meat.

Those sales fell 14% by volume for the 52 weeks ending December 4th, according to IRI.

And in restaurants, sales of the orders of the plant-based burgers were down 9% for the 12 months ending November 2022.

So what we've seen is that just sales are falling in restaurants and in supermarkets.

And this is what's so interesting to me because it's like one of these Icarus narratives where you have a revolution that seems to be rising and rising, and then it suddenly crashes.

And just within three years, you have this sector that includes the largest IPO in a decade.

And then suddenly, as you just reported, it's falling by about 10% within supermarkets and about 10% in restaurants.

So I want you to help us figure out why.

One possibility is that alternative meat, fake meat, whatever you want to call it, it's basically a fad. And when I say a fad, I mean it's something that consumers want to do a little bit for a little while, but then they want to stop.

And in this way, it kind of reminds me of another food startup, Blue Apron.

My wife and I tried Blue Apron, we ordered the food, we looked at the menus, we did it for about four weeks, and then we were like, OK, we're done.

If every single Blue Apron customer does what we did, Blue Apron cannot make a profit.

Its unit economics are completely screwed.

And it turns out that Blue Apron's unit economics have been rather screwed.

So first, let's discuss this sort of fad-ish element.

Do you have any data, any reporting, that Americans who were buying alternative meat simply stopped?

Yeah, so basically what we found is that the target market for these products, which was always the meat eater, is not a frequent buyer.

And that means that the people that buy the most of it per capita are actually vegans and vegetarians who are a very small and generally static percentage of the population.

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And so meat eaters do eat these products sometimes, but just not with any level of frequency that vegans and vegetarians do.

Yeah, I didn't realize that until I read your reporting, but it's just so true.

You cannot be, definitionally, you can't be a growth category if a non-growing portion of the US population is buying a steady share of your product.

There's just nowhere to grow.

They wanted to be a meat alternative.

They wanted to be served in supermarkets next to beef.

But the people who eat beef, I guess, just stopped buying the product after a few times.

I wonder whether that leads us to number two, which is that it's not just that people prefer the taste of hamburgers, but also there were some health concerns, right?

How did the promised health benefits of the alternative meat product match up against some of the research about these products' health?

So Ethan Brown, as we discussed, made these really big health proclamations about his products.

And one of the things that Ethan has said is that it can even improve, like, athletic performance on that very same day.

And a lot of people came to the category with this idea that they were going to eat something healthy for them, that it was good for them.

So Pat Brown at Impossible, he handled this question differently.

He was not really coming out there and making these huge promises around health.

But when somebody asked him about health, he would always say something along the lines of like, well, it's not a kale salad, but it's healthier than a regular burger.

What consumers took away at first was like, these are healthy.

Now, healthy and healthier are different.

From my reporting, talking to the doctors that have looked at this most closely, the best thing that they say is that it's probably healthier than a Burger King burger.

That's the best thing that they say.

One of the doctors I spoke to, Dr. David Katz, who is himself a big advocate of plant-based diets.

And he really believes in them from a health perspective, animal welfare environmental.

He says, at best, these burgers are a lateral move from a Burger King burger.

So what does this mean?

This means that if you're a consumer and you're trying to pick something healthy, maybe you're learning that this isn't healthy.

Maybe it's healthier than a Big Mac.

Maybe, maybe, but it's not healthy.

If you want to have something healthy, maybe you hear from your doctor that you'd be better off with a piece of grilled chicken or lentils.

There's a lot of healthy food out there.

Nobody is saying that these foods, nobody that isn't selling these foods is saying that these are healthy foods.

I think that's so important because I can, you know, if I want to get on my soapbox here, I can say like, look, if fake meat,

is better for animals and better for the environment and a lateral move from a health standpoint and

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only a little bit less delicious than a whopper, then like, on net, it's clearly better for the world and people like should eat it.

But that should be very different than is.

And in the real world, like people just aren't thinking about these like moral categories, I think, when they're worried about like, what am I going to feed myself or my kids or my partner, my husband, my wife for dinner on Tuesday?

Like they're just thinking about these simple things of price and of taste and cost.

And it just seems like this product category hasn't overcome those anxieties about taste and cost. Another thing that we've seen is that, as you've mentioned, like the corporate deals have really started to tumble.

Like Duncan pulled the faux sausages, Taco Bell did this taste test with Beyond's carne asada, but the reviews were mixed.

The McDonald's McPlant burger doesn't seem to be a mainstay.

What is the fact that companies have not held on to these products told you about the consumer reaction to them?

When these companies were first figuring out their way into the market, when Beyond and Impossible were first figuring out how are they going to reach the most consumers?

They were talking about supermarkets or restaurants and sort of which is going to hit more people. So in some ways that it made total sense to go to try to go through Burger King or McDonald's, right?

Because those have just massive customer bases.

You'll get in front of more people that way than you could ever imagine.

But like you said earlier in the show, that certainly depends on Burger King and McDonald's.

And it also leaves open the question of whether you're selling to the consumer that is most likely to buy your product.

These products do have consumers that want them.

I think the tests have shown that the consumers at the fast food restaurants are not those consumers.

There have been some success stories.

The Impossible Whopper is still on the menu.

They've added another Impossible Burger at Burger King, but the sausage and the chicken that they've tried there just have not landed in a way that put them on the main menu.

In a Bloomberg interview, Peter McGinnis, the current CEO of Impossible, said during one of those tests that if it went well, it would get on the menu.

And then it did not get on the menu, which they don't usually tell us the results of the test, but that was during the test he said that.

And so you will still find people that really like their Impossible Chicken nuggets, but maybe they weren't the ones that were buying, that maybe they weren't going to Burger King to buy them.

And so these companies want, you know, one thing they really did achieve with these big deals was getting their name out there. The awareness that comes with a Burger King deal is just unparalleled. But that is not the same as selling tons of chicken nuggets at Burger King.

Meanwhile, this is other meat alternative that has found its way into the hype cycle, which is cellular meat.

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This has gotten a lot of attention from, again, celebrities and investors. It checks the boxes of Ted Talk morality and investor interest.

Bill Gates is into it. Leonardo DiCaprio is investing. What is cellular meat and where is it in the sort of technology cycle relative to the plant-based options we've been discussing?

So cellular meat is made by, and its simplest explanation is they extract cells from living animals, like a cow, and then they grow those cells by adding components to, quote, unquote, feed it.

And then theoretically, they then grow enough cells to make something like a burger or a chicken breast.

Now, they have a lot of money. They've raised over \$2 billion to do this. There are a lot of companies that are trying, and a lot of them are making small amounts of product.

So far, none of them has said that they can do it at scale. So that's one really big barrier.

There has not been any definitive study showing that it's actually better for the environment unless we're talking about beef, which beef looks like it will be better for the environment.

But there's so much energy and electricity and heating required to do this that right now it doesn't look like the chicken made this way is going to be better for the environment than chicken raised on a farm.

And so it's very expensive. Trying to do these things for the first time is extremely expensive, and then trying to do them over and over again will also cost a lot of money.

And on taste, you know, I've had some cell-based animal products, and I would just say that the chicken I had a couple years ago was okay.

And the salmon I had was actually really impressive. But they're certainly, they have a lot of work to do, like way more work than plant-based meat had when they first got started.

So where this will go is an open question. And then, of course, do consumers want it?

That's something that we're seeing consumers have been rejecting plant-based meat for the reasons we discussed and whether they will ultimately accept cell-based meat, which is more foreign than plant-based meat is just another big question.

Yeah, it raises something that I haven't talked about a lot, I guess, in the last few minutes, which is a kind of ick factor. You know, if you tell people, like, we made this meat from plants and it bleeds because we found a way to imitate an iron-based compound that makes plants fake bleed.

Like, for some people, it's like, that's really cool. Like, what an incredible technological achievement. And for other people, it's like, I'm sorry, you want me to feed this to my three-year-old? Like, are you nuts?

Like, that sounds absolutely disgusting. And so, like, ick is very, very personal. It's up to every individual to determine, like, what is cool and what is disgusting.

But I have to imagine that even if cellular meat, and I say this as a huge fan of the technology, even if it passes certain thresholds of taste and cost, it's still going to be a chicken grown in a Petri dish, you know, a beef grown in a lab.

And for some people, it's just going to take, I think, several years for them to get over the idea that their ribeye comes from a scientist with a Petri dish rather than an actual Mumu cow in a farm.

I want to close with just two questions about, like, what this all means. You draw a really interesting comparison in your piece. You say, look, there's been a revolution in alternative milk.

There's been this revolution in almond milk and soy milk and oat milk. Why do you think milk alternatives have thrived where meat alternatives have not?

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Milk alternatives seemed like a really good comparison a few years ago. But there's some major differences between milk and meat.

The first is that there is a built-in audience for the alternative dairy products, and that's those people that are lactose intolerant.

So they physically cannot eat milk or drink milk, but they still want to have cereal in the morning. They still want to have their coffee.

The second thing that I think is also really important is that milk is very often an ingredient. It is not the main course.

So somebody might be perfectly happy. They might prefer even oat milk in their coffee because the coffee is the main ingredient.

They just want something to make it a little creamy. But that same person might have a grilled cheese for lunch because they still like cheese.

They still like dairy. They're not rejecting dairy.

And so those two differences I think are hugely consequential for this comparison and were maybe overlooked a bit in the early days of the rise of fake meat.

The complementarity part of it I think is so important. I eat the vast majority of my plant-based meat as meatballs and pasta.

And there it's not about me focusing on the taste of the meat. It's like this is one of three or four flavors in every single bite.

You've got the pasta, you've got the tomato, you've got the salt, and yeah, there's a little bit of meatiness in there, and that's kind of nice to have.

And it's cool that it didn't require the death of an animal.

But there again, it's much more like almond milk in cereal than it is like an impossible meat patty being like the centerpiece of a hamburger.

What is the rise and fall of alternative meat or fake meat?

What is it taught you, what are some of your big picture lessons about like business, about hype, like going forward as you report on just going to be new generations and new incredibly exciting hype cycles in the general space of food.

What's a lesson that you're taking from this Icarus story?

One thing that I've learned from following this particular category, but also that I've learned from my decade-ish of covering food is that food is really hard and a lot of businesses try to get into food to improve it in some way.

And I think it's a lot harder than people expect. One is the margins are really small. The other is that consumers are fickle and don't necessarily make the choice in the store that they say is the choice they'd like to make.

And that people have really strong feelings about food. And so people might be willing to make certain sacrifices for the greater good in a lot of parts of their life, but that doesn't always translate into their food choices.

And whenever anybody wants to get into the food business, I just strongly advise them to be really careful because I've seen so many food businesses get ahead of themselves.

And I've also seen some succeed, but I think food is really hard and people make their food choices based on a lot of different factors that are changing all the time.

And so it's a tough business. It's a tough business for anyone.

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I'm so glad you said that. I think it's a really profound point that food is really hard and a part of why changing food is really hard is that companies like Impossible and Beyond Meat, they have what you can think of, as I've said, they have like a TED Talk identity and they have a dinner table identity. And the TED Talk identity is like, is this business good? Is it good with a capital G? Is it doing good for the planet and good for the environment and is it good for your body? Like, is it good? But then like, there's the dinner table identity, which is like, does it taste good? Like, do I think it's kind of gross when I think about, you know, heme? Do I think it's delicious when I'm actually like chewing it?

Do I feel like a food that is extremely processed but doesn't involve animals is something that I want to serve my five or six year old every single day.

That's an incredibly complex stew of identity to think about. And I think that one big lesson for me is that I personally, in rooting for this product category, let my enthusiasm for the TED Talk identity of alternative meats to eclipse the dinner table identity of this product category.

It just bottom line. It didn't taste good enough. It didn't taste good enough to win the test at McDonald's. It didn't taste good enough to stay on the menu at Dunkin. And it hasn't tasted quite good enough for meat eaters to buy it in growing numbers in supermarkets.

Dina Shankar, thank you so much for walking us through this story and talk to you again soon.

Thank you.

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Thank you.