

[Transcript] Plain English with Derek Thompson / A Diet Conspiracy: Is Ice Cream Secretly Good for You?

Hey, it's Sean Fennessey, one of the hosts of the Prestige TV podcast.

HBO's Barry is back for a fourth and final season, and that means I'll be back recapping the show with co-creator and star Bill Hader to dive deep on the themes, scenes, and major moments in the series.

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Today's episode is kind of about ice cream and kind of about the entire diet research industry and kind of about the nature of science.

And it begins with a story.

Last summer, the author David Johns got a hot tip.

He learned that a dissertation by a Harvard PhD had reported that ice cream was protective against diabetes.

And Dave thought, that sounded pretty weird.

We all know the deal with ice cream.

It is delicious.

It's sugary.

It's definitely not good for you.

But motivated by perhaps a sense of wishful thinking, he went and checked it out.

And it turned out that the department chair at Harvard had himself produced data showing a strong correlation between eating ice cream and good health.

So Dave kept digging and he found another paper finding this connection and another paper and another.

But when these papers were reported in the press, they rarely mentioned their ice cream findings.

The scientists essentially waved away the results of their own science.

And so what initially seemed like a sort of hilarious mistake now seemed like something bordering on a conspiracy.

In The Atlantic, Johns wrote, quote, studies show a mysterious health benefit to ice cream and scientists don't want to talk about it.

End quote.

Today's guest is the public health historian and journalist, David Johns.

We talk about ice cream, of course, but I think if you listen closely and especially if you listen all the way to the end, you'll understand that this episode isn't really just about the science of ice cream.

It is about something much more important than that.

It's about how science works, how bias in science works.

It's about how the search for truth can be especially in something as complicated as what we eat, a rocky road.

Get it?

Rocky road.

You know what?

I'm not re-recording it.

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I'm keeping the pun in.

I'm keeping it and suffering the consequences.

I'm Derek Thompson.

David Johns, welcome to the podcast.

Thanks so much for having me.

Dave, I think we have to start with a rumor that you heard last summer.

This was a rumor about a Harvard doctoral student presenting diet research to his thesis committee.

In that research, he made a stunning confession about his conclusions.

Take us into that thesis committee.

What was his confession?

Yeah, this was a little tip or story that I heard from somebody in the broader public health world, who I was talking to for a totally different reason, and told me about this very funny dissertation defense that had happened at Harvard, where a doctoral student named Andres Artisan Korat was defending his nutrition science dissertation. He had found that consumption of ice cream, I think eating about a half cup of ice cream a day, was associated with a reduced risk of diabetes.

The idea was like ice cream was somehow protective.

Obviously, this was very surprising, not what budding nutrition science would expect to discover.

It was something that seemed to run against everything that the entire field had said before.

You've read this dissertation.

You read that this isn't the first study that has come across a similar effect.

That is the idea that ice cream might actually be good for you.

It might reduce your risk of getting diabetes.

You reached out to Andres Artisan Korat.

Would he talk to you?

Yeah, I emailed him through his Tufts University email address, where he's a nutrition scientist.

He didn't respond to me a couple times.

Then I think I tried him through LinkedIn, thinking that would go to his personal email.

Nothing there.

Maybe tried another time through his academic.

I think I emailed him four times.

Finally, I reached out to the Tufts Press Office and I said, hey, I was trying.

I was puzzled because I thought I was not that long ago a postdoc.

I have a degree and I have a PhD in the history of public health.

When reporters call typically young scientists or eager to talk to journalists because, A, it's like I know all about this particular area of research that no one else cares about and also because, well, it's one of the norms of science to be transparent and to be open and to share your findings.

Eventually, the Tufts Press Office got back to me and said, he's not available for this, basically.

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Then I actually asked, I was like, why is he not available for this?

They were like, we could try to find out and that base guy never found out.

So now we've got a real mystery on our hands and like a good detective, you go digging to find corroborative evidence.

This brings us to the University of Minnesota scientist, Mark Pereira.

He also studied the health effects of eating dairy.

You write, quote, when I scroll to the bottom of Pereira's article, down past the headline making conclusions, I saw in table five a set of numbers that made me gasp.

Dave, what made you gasp?

So like a historian or like academics in general, like you deal more with like paper records than journalists.

I'm sort of a hybrid.

I use journalistic methods, which are super powerful and important and historical kind of methods as well, obviously in this case, writing for popular audience.

So I went into the paper records and I was reading through the paper trail of the academic literature.

And it seemed to me that this one particular paper written by this guy, Mark Pereira at the University of Minnesota, as you mentioned, had like kind of spawned this whole interest in this research area, which was about dairy and diabetes.

And it started up just after like September 11th or the 20th into the 21st century.

In 2001, the then Surgeon General David Satcher had announced we're in an obesity epidemic.

So that was sort of the beginning of like the idea that there was epidemic, obesity and diabetes.

So people started asking questions about like, what should we eat to prevent obesity?

What should we eat to prevent diabetes in particular?

And it was really confusing, particularly dairy was confusing.

So this guy Pereira had gone and looked at this, had gone in this research, this guy Mark Pereira.

And his first study, which looked at dairy in this cohort of like 5,000 people, basically found that almost every kind of dairy was protective against diabetes, which was really surprising because we were still in like the like end of what you might call the low fat era, which almost, which ran more or less through the 90s.

So this idea that, you know, something with a lot of saturated fat, including whole milk, cheese, all these, you know, basically were like protective against diabetes, ran against a lot of kind of conventional thinking.

So he was super surprised about that as I went through the table because I've got ice cream on my brain at this point, I've got, you know, I see in the table, this table five, the strongest effect he found was with something called dairy-based desserts.

Dairy-based desserts, when I later finally talked to Pereira, he was like, yeah, that's mostly ice cream, you know.

So that was a category that was like, I mean, when you eat dairy-based desserts, you're eating, you know, mostly ice cream, maybe some, you know, pudding, Klondike bars thrown in there, but that's the ice cream too, you know.

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And you find that dairy-based desserts were associated for overweight people with dramatically reduced odds for developing insulin-resistant syndrome.

You found, in fact, that ice cream had the largest effect seen in the study, 2.5 times the size of what they'd found for milk.

So essentially, it seems to me like you now have two pieces of information.

You have Karat's dissertation and you have Pereira's table five, both of which point bizarrely, serially, toward the same conclusion that ice cream might be sort of kind of good for us.

Tell me at this point, what is going on in your head?

Yeah, I was just, I was shocked.

I mean, I was like, first of all, because it was like, I had, you know, in Artisan Karat's dissertation, he described his own finding and then these previous findings.

And then, but just by random chance, I looked at this totally different study, this big cohort study, you know, an observational epidemiology study, which is a common commonly used study in nutrition science that had also shown it.

And so I was just like, I actually screamed at my computer screen.

That's like an ice cream joke, basically.

But it was literally true.

I literally like, I was like, what?

You know, at my computer screen, I literally like could not believe that I had seen this result.

So yeah, so I started reaching out to the researchers who had conducted these studies for interviews,

including Mark Pereira.

I think this is a good moment to pause and ask this methodology question.

How do these studies work?

How do nutrition scientists figure out or try to figure out what kinds of foods are better for us?

So, so there's a range of methods that that scientists use in nutrition science, including kind of, you know, they look at, do kind of laboratory stuff where they're working in mice or they, or they, or they're, you know, doing very basic science research where they're digging into the molecular biology, but by and large, the most influential and historically most important methodology used in nutrition science is observational epidemiology.

So these are cohort studies where they, where they get a big group of people and they follow them over time.

So the idea is you start with healthy people at the beginning and then you follow them over time and, and you track all kinds of things about their behavior, what they eat to the extent that you can measure it well.

And then you, and then you find kind of, and then you look for health outcomes, whatever things happen to them.

Do they develop heart disease?

Do they develop diabetes?

The most famous example is the Framingham study where they basically followed the whole

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population of Framingham, Massachusetts, not the whole population, but a large population over time.

And that established, importantly, that blood pressure and high cholesterol and body weight were associated with heart disease outcomes, but, but basically like it's a correlation, right?

So you, so you can say that they're associated, but, but sometimes it's not entirely clear whether they, there might be some complexity in that association that, that either you're not seeing.

And I should say Harvard has conducted its own very famous epidemiologic cohort studies, the most famous one known as the nurses health study where they followed a group of nurses over time for a couple of decades.

The nurses presumably are in the same kind of socioeconomic status and they measure their dietary intake like every four years, along with their, their medical outcome.

And speaking of Harvard, the Harvard School of Public Health did its own observational studies of dairy and diabetes.

They released a report in 2005, they released a follow up report in 2014.

All of this is in your wonderful article.

Both of these studies find an ice cream signal.

Both of these studies find that yes, ice cream actually does seem to reduce people's chance of getting diabetes, but when each of these studies is reported to the press, the message is not about ice cream.

It's about yogurt quote, higher intake of yogurt is associated with a reduced risk of type two diabetes, whereas other dairy foods and consumption of total dairy are not period.

That is a quote from the 2014 paper.

Now, this is where things get, I think, really, really fascinating.

You reached out to a co-author of that paper, Daryush Mozaffarian.

What did Mozaffarian say about the conclusion of this paper?

Yeah, I should be clear.

The 2005 paper, like the data were kind of all over the place, like in some of these, in some of the Harvard papers, in general, the people felt like the dairy results were all over the map, but the 2005 paper actually emphasized the low fat.

Like there was skim milk and low fat milk were the main thing that we're emphasizing the 2005 paper, not yogurt.

They didn't talk about yogurt in that paper, but there was an ice cream find.

The ice cream finding was strong and notable despite this weird thing associated with low fat and skim milk.

In that first paper, they have three different cohorts.

They have three different studies, basically.

That first paper, they looked at just one of the cohorts.

The 2014 paper, they looked at all of their cohorts, so all three of their cohorts.

So a whole lot more data, a whole lot more time.

And yeah, ice cream popped out as one of the most notable signals.

So in the course of talking with Tufts, Darius Mozaffarian is the dean of the Tufts Nutrition

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School, and they arranged an interview with him, and he basically, I ran through the numbers with him on the phone.

I was like, hey, I've read a lot of scientific papers.

I'm not an epidemiologist.

I'm not a statistician, but I have some understanding of how to read the results of scientific papers.

So I had a feeling that the way that the conclusions of the paper were reported didn't make sense to me when considering some of the data.

So I ran through the numbers with him on the phone, and he was like, basically, yeah, you're right.

These results were not reported entirely accurately.

Basically, the conclusions focused exclusively on yogurt, but ice cream was actually associated. They probably should have mentioned that, basically.

I'd really do, I want to pause here, because this is, to me, pretty wild.

You have some of the top nutrition researchers in the world who are studying the health effects of dairy, and they're finding that both yogurt and ice cream reduce diabetes, but they're reporting their findings as only yogurt reduces diabetes and nothing else that we study did.

I mean, I'm not trying to accuse the scientists of lying, but you have a co-author of this Harvard study, Darius Mosefarian, who's essentially saying, yeah, the conclusions were not accurately reported.

I mean, I am not a conspiratorial person, but this is starting to feel like an ice cream conspiracy, like scientists ignoring the apparent health benefits of ice cream.

So you do the good journalist thing.

You say, all right, maybe I've stumbled onto an ice cream conspiracy, or maybe I'm just crazy.

So you call up other sources.

The source, Kevin Klatt, a nutrition scientist at UC Berkeley, says the ice cream effect is actually more consistent than the yogurt effect across all the studies that you've given him.

Dierga Tobias, the academic editor of the American Journal of Clinical Nutrition, agrees.

So Dave, explain to me, how did Harvard explain to you why they basically ignored these ice cream findings?

Yeah, so Frank, who was the senior author of this 2014 paper, explained to me, and this was explained in the paper as well, that they believed that the ice cream finding was due to what is called reverse causation.

So reverse causation is something that is well known in the social science literature more broadly, but is also discussed commonly in epidemiology.

So a good example to think about reverse causation is sometimes you can't tell whether the exposure drove the disease or the disease drove the exposure.

So a good example of this is mouthwash and mouth cancer.

In the epidemiology litter in the past, there has been a correlation has turned up between mouthwash and mouth cancer.

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So this set off concerns that mouthwash was somehow causing mouth cancer.

Another additional explanation, people concluded that in fact, it was the mouth cancer that was causing the mouthwash use because people were getting bad breath because of the mouth cancer.

So they were using mouthwash.

It's not like cigarettes and lung cancer where the exposure causes the disease.

Having the disease causes the exposure.

So it's kind of reversed.

So it's kind of similar idea with ice cream is the way they see it.

The idea was that maybe some of the people in their cohort had gotten sick in effect or had developed kind of prediabetes or early stages of heart disease and had had high blood pressure or high cholesterol and had then been either told by their doctors or decided of their own volition to cut back on sweets and things that they knew would cause them to gain weight, including ice cream.

So then their ice cream intake would decline.

Basically the healthy people would be the ones who could be continuing to eat ice cream.

The data would be skewed in that direction.

So you might see an association between health and eating ice cream.

So does that make sense?

It does make sense to me.

So basically if people who are diagnosed with diabetes eat less ice cream because their doctors tell them to eat less ice cream or perhaps self-report eating less ice cream because they're slightly embarrassed by it, which is a slightly different effect self-reporting rather than a reverse causation, then when you look at the cohorts at the end of this observational study, it looks like people with diabetes aren't eating ice cream and the people who are healthy are eating ice cream and therefore you can make a simplistic sort of causal argument that eating ice cream is causing the health of the healthy people. But this actually, this raises another question for me.

If receiving a diabetes diagnosis makes people less likely to eat sweets or even self-report eating sweets, right?

I can see, okay, that has reverse causation effects for people without diabetes eat more ice cream, yada yada, I get that.

But shouldn't we see that effect for all sweets?

Like shouldn't we see it for cake and donuts and cookies?

Why aren't there studies showing that cake and donuts and cookies and creme brulee ward off diabetes?

It seems like it's only ice cream where you have this reverse causation excuse.

Scientists keep finding that ice cream is reducing diabetes effect and they're making up the reverse causation excuse explicitly for ice cream.

Yeah, it's interesting.

I should say, right, it was not about that they hadn't been diagnosed with diabetes.

They were diagnosed with high cholesterol or high blood pressure.

So things that precursors to diabetes.

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But yeah, it's interesting.

You would think that like, right, it's not like people who have high cholesterol or high blood pressure are like, I must stop eating ice cream.

This is the only food that matters.

There's going to be a whole range of things that they will presumably avoid leaving aside the question of whether they actually do that, which is a different issue because there's some research that suggests that certainly not everybody who is diagnosed with high blood pressure or high cholesterol actually changes their diet.

But actually, so after my articles published, there have been on Twitter, I've seen some people say, oh, actually, here's a similar effect for sugary cereals or something like this.

So they have pointed out some kind of similar effects for kind of sweets.

But one of the main things that you'd think that people would cut back on if they were diagnosed in this way was is soda.

And for sugar, sweetened beverages, we don't see that actually.

So I mean, that's like the almost the number one food you'd think that people would say you should cut back on if you're at risk of gaining weight, et cetera, et cetera.

And we don't see it for that.

So in the biggest picture, it seems to me when I read this article, I thought, you know, you have all these diet scientists who are interested in understanding what foods in the broad category of dairy are good for us.

And sometimes they find conclusions that they like.

For example, yogurt is good for you.

They see that they've concluded that and they're like, I like that conclusion.

And so they report it.

But then it's like, there's other conclusions that they're reaching, such as ice cream seems to protect against diabetes.

And for some reason, they don't like those conclusions.

They don't sit well with the scientists.

And therefore, it's not fully a conspiracy of silence, but they just don't really want to talk about it.

They don't really want their PR teams to talk about it.

They don't want to talk to journalists about it.

Did you come away with a similar sense that the scientists that you would talk to, even if they were good people, we should have putting their thumb on the scale for yogurt, even when the research seemed to indicate that yogurt and ice cream basically had the same metabolic effect?

I think the scientists themselves believed that the ice cream effect as an association was not real, that it was an artifact of the data somehow.

They thought they had partially explained how it was an artifact of the data.

So they were like, we're not going to report this.

The other aspect of it is that nutrition scientists, particularly those at Aledian institutions like Harvard, there is a tradition and a public relations chain that is connected to the research

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because so many people are interested in diet and nutrition.

That's probably one reason we're talking right now.

These are interesting stories.

Everybody cares about ice cream.

Everybody cares about yogurt.

These are things we consume every single day, so we want to know the answers.

And some of the best experts in the world are at Harvard.

And so they're accustomed to thinking of themselves, I think, or maybe even think of it as part of the responsibility to speak to the public and to tell them what we know and to give them updated information on the science, right?

So so many of these types of studies get press releases that the press office puts out thing.

And through that process, as the sausage is made and it's delivered to the public, things get simplified, things get left out, things that might be seen as kind of irresponsible.

Like how could you go out and tell the public that ice cream could be beneficial for diabetes if you think that that finding is not believable, right?

You might say to yourself, it would be irresponsible for us to put this in a headline because we don't trust it, right?

But there is a there's a there's a very important tension in there, which is that at some point, that kind of common sense or what you think you know from the rest of the literature begins to outweigh the data from your own study.

So then it's like, are you just ignoring the data?

Are you just not paying attention to what the numbers say?

So like there are there are consequences that hang on these studies that I think are in the scientists head.

And so and part of that is because of this publicity aspect.

I want to close on some deep thoughts about science and the way that it's practiced today.

But before we get there, I want to ask you the question that I imagine is rummaging around in a lot of people's brains right now, which is, what if it's just true?

What if it's just true that ice cream is good for us, is metabolically protective?

Even if you don't believe it, Dave, make the best case before we before we unpack it, I'm going to give you a chance to go on both sides of this, but make the best scientific case, the best story about why ice cream might actually be somewhat good for us.

I'll be candid.

An earlier draft, I had a line in the article where I was like, I don't think I believe this is true.

It's like, I basically was like, I gave my opinion.

But after talking to lots of people, I mean, after talking to a bunch of experts, some made the case that like, we don't know.

I mean, if you think about ice cream, it's actually a relatively whole food, right?

It's got its, yes, it has a lot of sugar, yes, it has a lot of saturated fat, but it's mostly a whole dairy product, right?

One expert said to me, it's got fat, it's got protein, it's got vitamins, it's got minerals, right?

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It's a nutrient rich food.

And so those things could be good for you.

And maybe actually eating ice cream is better than eating some other things that are common in the American diet that are worse.

Like ice cream is probably better than chips or something, something like eating, one nutrition expert said to me, it's better for you than bread.

Which was like, my jaw dropped at that point because I was like, bread is the staff of life.

Like that's the food that like, I don't know, during the 80s and 90s low fat diet was like, that's a core part of what you should be eating, breads and cereals.

I actually want to read the full motsefarian quote because it's a really interesting quote that touches on something I think about a lot in diet science.

This is from motsefarian quote, there's this perception that ice cream is unhealthy, but it's got fat, it's got protein, it's got vitamins, it's better for you than bread.

Given how horrible the American diet is, it's very possible that if somebody eats ice cream and eats less starch, it could actually protect against diabetes.

End quote.

This is a really good reminder that in basketball, there's this idea of value over replacement player or VORP, like if you take Yana's off the box and replace him with an average center, what happens?

And I feel like in conversations about diet, we need a VORP for diet.

Like sometimes I read an article that's like, why seltzer is bad for your teeth?

And I'd be like, okay, compared to what?

Compared to pure water and only drinking water, yeah, maybe seltzer's a little bit worse for your teeth.

But have you seen Americans?

Have you met Americans?

We drink soda by the leaderful, so switching to a sugar-free seltzer is not a relative attack on our enamel.

It's clearly, from a VORP standpoint, a step up.

And that made me think, not that I'm a part of big ice cream here and I'm going to give a whole speech about how I actually think ice cream is good for us, but I can see how ice cream, like everything else that we eat, replaces something else.

If people are going to have dessert, either it's Twizzlers or it's ice cream, and maybe ice cream is better than Twizzlers, if they're going to have a certain number of calories in a day, maybe it's a bunch of white bread or maybe it's ice cream, and maybe ice cream is better for you than white bread.

So while it's almost like it doesn't even make sense to say ice cream is good or bad in the abstract, it's good or bad compared to what, and maybe the American diet is generally so filled with shit that eating ice cream doesn't present an obvious relative risk to our metabolic health.

Does that interpretation kind of sit with what you were told by the fancy epidemiologists of Harvard and the nutrition scientists, or have I gotten something wrong there?

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No, I actually love that framing of your value of a replacement.

In the nutrition science field, historically, dealing with this replacement, like what food are you eating something instead of, was something that was not considered as deeply as it should have been.

In some areas it was, but for the most part, there have been a lot of studies that have been like, blueberries do X, and the focus is just on blueberries, or the focus is just on low-fat milk or whatever it is.

But there are some new efforts that assess foods, that go through the foods and consider them in the sense that you're talking about.

But I really like your framing, like using the kind of sports connection makes it a lot more fun and probably something that the field should consider in terms of describing it publicly.

So let's do the million other question right here.

You got all this research from Harvard, from the University of Minnesota, from Tufts, all showing this ice cream effect.

What do you think is the truth?

What do you think is the truth about ice cream?

Early on in this research, I thought this was a conspiracy blooming in my head, and I was throughout this time, or I was like, am I crazy for thinking this?

As I said in the article, I was like, am I high on my own ice cream supply?

It just seemed so improbable that ice cream could be protective against diabetes.

But by and by, various researchers convinced me, they said, we don't know.

We actually don't know what the answer is, and that's the bottom line.

And so I kind of shifted to that position where I said, look, if some of these experts are saying we don't know, these are among leading lights in the field, like whom I just say, I don't believe it.

But to be honest, that's still my gut instinct.

And I think there are explanations for why it could still be an artifact of the epidemiology and not a real signal.

Let me give you my takeaway from your piece, and you tell me how it's that with your intention when you wrote it.

Your essay did not dramatically increase my confidence that ice cream is good for me.

Your essay made me much more skeptical of diet science in general, because it gave me a front row seat to a bunch of nutrition scientists that did observational studies on whole milk and yogurt and ice cream and a bunch of other dairy products.

And I would like to think that science is the domain in life where we put our priors aside, we put our gut feelings aside, and we simply ask, what does the data tell me the end?

I just want to know, what does the data tell me?

And what we find over and over again is nutrition scientists looking at a yogurt effect and an ice cream effect that again and again are basically the same, same effect size, same physical significance.

But because nutrition scientists have a gut feeling that ice cream is bad for you and

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yogurt is good for you, it is reported through PR people and through their offices and into the media that these studies showed that yogurt protects against diabetes and nothing was said about ice cream.

That tells me that they were selective in their scrutiny of their own research.

They decided to scrutinize the ice cream finding when they just as easily could have scrutinized the yogurt finding.

You and I both know yogurt eaters tend to be healthier, tend to be more moderate, tend to be higher income, tend to work out more.

You can say everything that was said about ice cream, you can say about yogurt, but fundamentally, people just have a feeling that yogurt's good and ice cream is bad.

So it made me feel like this is not the beginning of my crankishness about diet science, but it did make me a little bit more skeptical that these observational studies are well powered to do the thing that we rely on them for.

I think I might have shifted a little bit in that direction too.

I do think it's a little bit more complicated than that in that it's not just nutrition science.

Scientists in reaching a final judgment about what the evidence says, they do worry about the consequences of what it might say.

And I should say, with regard to yogurt, if you look at the literature, there was evidence to support the idea that yogurt might be protective in certain ways, and there was a lot of enthusiasm

about the microbiome and probiotics.

So this yogurt finding fit into this other scientific trend, which was grounded in the literature.

Harvard had previously found that yogurt consumption was associated with reduced weight gain. People hypothesized about these probiotic effects, but frankly, there's a lot of hand waving in the probiotic claims.

But there was this belief that yogurt, there might be something to yogurt, there was never a belief that there might be something to ice cream.

But more broadly, this type of challenge is something that goes on throughout science, and it's not something that we really talk about that much about science, is that when you're drawing conclusions from the data, it's really always a judgment call.

It is always a judgment call, even in the smallest paper with the littlest impact to one that's about ice cream and yogurt that's going to make headlines across the country. There's always a judgment call, and deciding whether the data are sufficient to support some kind of conclusion is always a matter of judgment.

And sometimes scientists can kind of import a lot of the common sense type of stuff into making that judgment, and it might kind of override the data in a particular study.

So I think that's one of the broader conclusions is scientists themselves cannot be objective in the way that we usually think about it.

The data are not the data, are not the data.

The data are born of decisions to conduct one study versus the other.

There's always some sort of priority setting, which is values-based, that is involved in

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science.

And so the values are always there.

The objectivity in science comes through the process, comes through the community, comes through the engagement, comes through the challenges, comes through people, weird journalists like me writing some article about ice cream, right?

And so all of these types of challenges, the objectivity comes out over time, but it's not...

We need to get away from the idea that the objectivity is located in an individual scientist who sits above, sits beyond, sits somewhere with a view from nowhere.

You have a great quote that gets exacted at this point.

In 2004, the English epidemiologist Michael Marmot wrote,

Scientific findings do not fall on blank minds that get made up as a result.

Science engages with busy minds that have strong views about how things are and ought to be.

It's a wonderful quote, and it gets at this idea that science is, yes, when it's done well, a really strong attempt, the best method that human beings know of eliminating biases and trying to create objective results that can be replicated.

But those objective results don't fall on blank minds.

They fall on busy minds, and it is through interpretation sometimes, we tell stories about scientific results that aren't always a perfect encapsulation of what was discovered.

And your work and our conversations together, because we've talked to a few times since your essay was published, it's gotten me thinking about the pipeline between science and media representations of science.

Scientific research happens, and then the research becomes a paper.

And then that paper becomes a press release from, say, the Harvard Diet Science Department.

And then that press release becomes an article in The New York Times or The Atlantic.

And that article becomes a cable news chiron, a little thing at the bottom of a Tucker Carlson or Rachel Maddow show saying, you know, ice cream, colon, good, right?

And so now that complex piece of science has been reduced to three words, and those three words become the layperson talking point, right?

It's almost like this is a factory, we're taking the raw material of science and using it to become the finished material of the layperson talking point.

And at every single stage in that pipeline, science is being blasted with values, values, and this piece was just such a fantastic reminder that no matter where you come down on the issue of, you know, should I have half a cup of ice cream tonight, it made me think so much more clearly about the fact that science, as it becomes a media token, undergoes this absolutely fascinating process of interpretation and misinterpretation.

Yeah, I mean, I'll say throughout this piece, like the most common reader response to the piece was like, fantastic, I love it.

You know, now I'm going to get, you know, I don't have any more questions.

I'm going straight to my freezer and eating my cherry garsee or whatever.

You know, that was, that was by far the most common response.

The point that I was attempting to make was something broader, which is that science and scientists are one of our most cherished resources, right?

[Transcript] Plain English with Derek Thompson / A Diet Conspiracy: Is Ice Cream Secretly Good for You?

And we need a better understanding and a clearer depiction of how they do their work, which is not simply based on data that is completely disassociated from the rest of society, that they sit in some magic castle where they do their work, and they're totally disconnected from Congress and politics, which are frankly the people who pay for scientific research and make decisions about what scientific research should be done or what kinds of, you know, institutes of health we should have.

Science is often reported as truth versus myth.

Ice cream is bad for you.

Yogurt is good for you.

Maybe the sharpest conclusion I've come away from this conversation and from reading your essay several times is that scientific headlines in major media should have confidence intervals.

Not all headlines from science are 100% truth.

The finding that yogurt is good for you and the finding that ice cream is bad for you, those aren't 100% when the effects are high for yogurt and ice cream and the statistical significance for their effect on diabetes are essentially the same.

Like, we should just have, I think, a relationship with scientific findings that is actually, in the OG sense, very scientific.

We should understand that these are attempts to claw ourselves out of a pit of ignorance.

And therefore, each little finding should change our confidence at the margin just a little bit, but not reveal some obvious unalloyed truth.

Maybe that's just where I landed is science headlines, confidence intervals.

It would be nice.

This could be a real innovation for the newspapers.

But then again, now you're applying a quasi-scientific method to this problem, which I think of as not really involving science.

The problem is to do with all of these debates over masking or the lab leak theory or whatever, where we have these huge gaping uncertainties.

Or actually, with masking, I think the uncertainty is much smaller than people think.

Let's take lab leak.

Huge gaping uncertainties.

We just don't know.

And values rush in.

It's all about what you think about how far the government should intervene, what you think about the history of the politics of the coronavirus pandemic, or you think about China, or you trust Joe Biden, or you don't trust Joe Biden, or you hate Trump, or you don't hate Trump.

All that stuff is completely dominating the disagreement.

Has nothing to do with the evidence, because there's such little evidence.

I mean, to me, what little evidence we have supports the zoonosis.

But it's not a slam dunk case.

And so all this other stuff rushes in.

And to convince somebody who thinks it's a lab leak that it's not a lab leak, you're going to need a lot of evidence.

[Transcript] Plain English with Derek Thompson / A Diet Conspiracy: Is Ice Cream Secretly Good for You?

Right? Well, we don't have any.

So, you know.

Yeah, I agree.

And I'm not that you were setting the bait for us to talk about the lab leak, but I am not going to take it.

We're going to end it with ice cream.

Dave, I really appreciate the essay you talked to me.

It's so important, I think, to become sophisticated about our relationship to science.

And this was an incredibly fun gateway into that conversation.

So thanks again.

Thanks so much, Jack.

It was really fun.

Thank you for listening.

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