Melissa: Hello, and thanks for tuning into the podcast. Be sure to stay on after the interview, to hear more about today's topic, including some helpful resources and more context about today's interview. Plus an interesting tidbit about a podcast series I did that NPRs this American life also did a segment on the very same week. So some very interesting food for thought. Enjoy the show.

[00:00:00] Hello. And welcome back to the sound bites podcast. Today's episode is about food stigma, basically the opposite of the health halo and how people think and why we make certain food decisions and how understanding that process can hopefully better help us make our. Own Informed food decisions based on facts and not fear back in episode 1 0 8, I interviewed Dr.

[00:00:27] Jason Riis about critical thinking and behavior change ever since then. I've wanted to bring him back on the show for a follow-up episode. So I'm really excited to share with you that I have two expert guests today. I have Dr. Jason Riis. Who's the founder of behavioralize, which is a consulting firm dedicated to applying behavioral.

[00:00:46] To helping organizations solve consumer behavior challenges. He works across industries, but most of his work is in food and healthcare. He has a PhD in cognitive psychology from the university of Michigan, and he spent 10 plus years as a full-time faculty member at Harvard business school. And then at the Wharton school, at the university of Pennsylvania, where he taught courses in marketing and consumer behavior.

[00:01:12] My other guest is Dr. Brandon McFadden. He's an associate professor in the department of applied economics and statistics at the university of Delaware. His research focuses on consumer behavior and interaction with the food system. He received a PhD in agricultural economics with a minor in statistics from Oklahoma state university and his research often uses.

[00:01:36] Experimental economic methods to study food choice and behavioral economics to better understand consumer perceptions of food labels and production methods. Welcome to the show.

[00:01:47] Thanks Melissa. Pleasure to be here.

[00:01:49] Pleasure to be here.

[00:01:50] You guys have actually worked together for about five years. now , I would love for each of you to share a little bit more about the work that you do,

especially as it relates to today's topic and any disclosures you have to note, , Dr. Riis, why don't we start with you?

[00:02:06] Yeah, sure. So, yeah, I mean, you mentioned Brandon and I have worked together. It's true. We've both been interested in critical thinking and food kind of through separate academic research streams. My PhD is in psychology and I studied consumer behavior in that tradition.

[00:02:21] , Brandon ends up touching on many of the same topics though, as an economist and psychologists and economists are famous for poking jabs at each other, , for the assumptions of the, of the respective fields historically, but they've come much closer together. And psychologists have, , for a long time been saying and demonstrate.

[00:02:42] That people aren't perfectly rational, which is, , to any human that's kind of obvious, , we don't make perfect decisions. We don't make perfect plans. We don't make perfect use of our information. We all have goofball moments. And of course even economists have known that, but psychologists demonstrated some of the very specific and systematic ways in which people diverge from perfect rationality that has been recognized in recent years.

[00:03:09] So it's a lot easier for us to be civil than it used to be.

[00:03:13] Well, that's interesting. Dr. McFadden, would you like to respond to that?

[00:03:18] No, I think that's pretty spot on as an economist. I do a lot of the similar things. I just, I talked more about prices and incentives probably that's about that's that's probably the big difference. Yeah.

[00:03:29] Fun. How did you two get connected in the first place?

[00:03:32] We were on an advisory board, , for large food and ag company, , together. And the focus of that advisory board was just understanding consumers, understanding stakeholders and how, how they think. , and through that, we developed the collaboration around critical thinking, trying to understand how it's defined and how we should think about it in the food space.

[00:03:53] So our actually our initial collaboration was putting together just some structured thinking around critical thinking, talking about some of the ways in which we think it's misunderstood or under appreciated as a challenge

in the food space. We actually did a large survey with registered dieticians. , and the work is still published.

[00:04:13] I believe on the today's dietitian website, a trade journal. I'm sure many of your listeners will be familiar with, but we surveyed some 800 dieticians through that and ask them questions about where they saw critical thinking failure. , what they thought about critical thinking failures. And of course they also, they saw them almost on a daily basis from their customers and clients and patients and such.

[00:04:37] But one of the things that we saw was that there was some under appreciation of just how fundamental, critical thinking failures are. So we asked, , what's the cause of critical thinking failures and people piled onto the media. , of course the media has lots to be accountable for there, , including social media, but, , critical thinking failures have been happening forever.

[00:04:59] Well before there was social media well before there was media of any kind, the human mind is just not put together or wired in a way to optimize critical thinking. It's put together to optimize fast decisions and getting along with the people in your tribe So that's what it does very well. , critical thinking failures are fundamental part of human nature.

[00:05:18] And we think that often goes under appreciated. So that was the topic of this piece we did in today's dietician. And we talked about some specific challenges of critical thinking that we see.

[00:05:28] Thank you. , just to maybe take a step back, can you just kind of give us, , I talk about critical thinking on the podcast. And hopefully my listeners have heard episode 1 0 8 with you, but maybe just for a little refresher, for those who aren't familiar, can you kind of just give us a top line explanation of what critical thinking is?

[00:05:47] I would say what really peaked our interest to. In reference to critical thinking is, , Jason gave a great explanation about kind of how we've evolved over time to be reactionary and not necessarily so analytical.

[00:06:00] And now we live in a time where, , we live in an information economy. There's information nonstop. And so what we were interested in, I think at some level, The fact that people get information, documentaries, social media. And so how can, , you can kind of systematically think about how people receive that information, , use that to form thoughts, and then where they

kind of use that information that they've gained from this new source to kind of form a opinion based on everything else.

[00:06:29] And to hopefully kind of appreciate what they don't know. So I think, , the way we really approach it is to realize that health professionals particularly have clients who get a lot of information, likely a lot of bad information and how to help them help a client parse through this information and think about it more critically so they can be more independent and understanding and filtering through the information we received.

[00:06:52] Excellent

[00:06:53] in a sentence. I think we've described critical thinking as, or in a soundbite, Melissa. I should say we have described it as the ability to make objective judgements based on available facts and information. Something to that effect. Okay. And of course it has many aspects to it, but that's roughly what we're talking about.

[00:07:12] And Brandon described that, , the rich information ecosystem that we all live in, and it's very hard to make objective judgments based on available facts and information because there's lots of it out there.

[00:07:24] So building on that, are there some specific aspects of critical thinking. That you want to share with us.

[00:07:32] And then I know we're going to talk about a study that you were involved with and share some examples with food stigma.

[00:07:41] Yeah. So why don't I start around one very fundamental piece of this objective analysis of facts. Is understanding what you know and what you don't really know. And that's just what you believe, but what you really know why you know, it, what sorts of evidence you might have for it is what you know calibrated to the truth and what ultimately ends up happening.

[00:08:06] So that's a very fundamental piece and psychologists, and more recently economists have been trying to measure people's ability to do that. And we've got some interesting measures of that. And I can talk about one of them. Brandon and I've collaborated on a couple of versions of this, but I can talk about one that we did pertaining to MSG.

[00:08:26] Should I start with that? Sure. So there's of course, quite a bit of negative sentiment towards a variety of. Food ingredients and additives and even products and manufacturing methods and such and production methods. And in food, where did these negative attitudes or sometimes border on stigma. Where do they come from?

[00:08:45] We were instant trying to measure this or, sorry. Brandon was not directly involved in this project, but he knows the methodology. This was around MSG. And we were interested to understand how well people kind of knew what they knew and knew what they didn't know. So did they have that self-awareness that meta-awareness of, of their level of knowledge.

[00:09:03] So it's a fairly standard test of that sometimes called an overconfidence test because the direction tends to be that we are over-confident or overly certain that we think we know more than we do. So the way it works is this. You ask people a series of fact-based questions. So we did this for MSG. We asked, , does this food contain MSG.

[00:09:24] Which of these ways is MSG actually produced, , when was MSG first identified, things like that. So fact-based things where there's not really controversy about whether they're true or not. And we can go to very good sources to see if they're true and it's multiple choice answers. So you answer all 10 of these and you get a certain number of them, right?

[00:09:41] Let's say. On average people were getting like 30% of the questions. Correct. We then ask them, how many of those questions do you think you got Correct. So if you're answering the questions, do you find them difficult to answer or you weren't quite sure. , you should know that you shouldn't say yeah, actually I wasn't sure of these answers.

[00:09:58] So if you actually got 30%, correct, you ought to be able to say, yeah, I think I got about 30% of those. Correct. But that's not what happens when people get 30% correct? I think they got more like 50, 60%. We tend to be overconfident and that's true across people across domains. What was interesting in the study that we did here is we found that people who tended to avoid MSG were actually more overconfident about MSG.

[00:10:27] They got about 25 or 30% of the questions. Right. But they thought they got like 60% of them. Right. Those who consumed MSG and weren’t particularly worried about it, they were much less overconfident. So that's a

study that's suggestive of less rationality going into a particular type of food avoidance.

[00:10:47] Okay. And that kind of reminds me of the Dunning Kruger effect. Is that similar?

[00:10:51] Yeah, the Dunning-Kruger effect. It's tied in here. So David Dunning and Justin Kruger. Two psychologists who noticed that it seemed that the people generally, who knew the least were the ones who were the most overconfident, even the most certain about what they knew.

[00:11:08] So the people who are the most wrong are the ones who think they're the most. Right. , and they've observed that generally in a variety of domains. , and in some ways that makes sense because it's not really, until you start to understand things or get in the weeds of them that you realize, oh my gosh, this is far more complicated than I ever thought.

[00:11:26] It's one of the reasons. Graduate students often experienced this real Gulf or drop in confidence because once they really start studying, they realize, oh my gosh, the world is far more complex than I ever realized. There's so much that I don't know. But at the very beginning of learning experiences or without much self-reflection people kind of think they know more than they do.

[00:11:46] So the people who know the least tend to think that they know much more than they really do. That's the Dunning-Kruger effect. That's consistent with what we saw here, the people who were avoiding MSG were the ones who actually knew the least about MSG, but we're the ones that thought they knew the most about it.

[00:12:02] Very interesting. And I'm glad you explained that because to me that conveys, it's not that these people are arrogant or they think they're all that it's and I'm sure there's a lot of psychology that goes into it, but the way you explain it, it kind of sounds like we kind of take things at a simplest.

[00:12:19] Basic value until like you said, we start getting into the details in the weeds and we're like, our mind has kind of blown like, whoa, wow, there's a lot to this. And that makes perfect human sense to me.

[00:12:30] Yeah, no, it's well said it's not arrogance. It's absolutely not arrogant. So there certainly are arrogant people out there, but that's not what this is about.

[00:12:37] Human nature. The mind is designed to give us intuitions and fast perceptions of the world and what's going on. And those perceptions seem real. As soon as we get them, , like I'm afraid of this, therefore it must be dangerous when you have that palpable reaction to something. It just feels like it has to be right.

[00:12:54] And it's very hard to think through that. So we get these very strong intuitions. That's how the mind works and you're right. It's not arrogance. It's human nature.

[00:13:02] Arrogance can come into this. In one way, , the way Jason described asking the question, , you give a test, how well did you do on the test?

[00:13:09] That's really, , testing somebody's overconfidence in their own abilities. Another way. These questions are often worded is how well did you do relative to other people who took the test when it's framed like that? It's a little bit more towards arrogance. Of course then just kind of the within inability, right?

[00:13:27] My own ability. It's kind of, , I don't know if you've heard the joke that, , nobody's a bad driver. Right. Everybody's above the median.

[00:13:34] Yeah. We all think we're above average. Everybody thinks they're above average. Yeah, that's right. Yeah. So let's talk about, and if there's any other like aspects you wanted to pull in, please do, as we go along, I know we talked about a lot about risk perception in episode 1 0 8.

[00:13:51] Of course. When I wrap up, I've got some related episodes that I'm going to share with people. And you're talking about this thinking fast, thinking fast and thinking slow. Book, , system one, thinking system, two, thinking it gets really detailed. So we're not going to do all that today, but there's other resources that I'll share with people, but let's talk about some sort of prime examples.

[00:14:11] , you mentioned MSG, but maybe some other examples that we've had in the past and maybe some newer things on our plates, quote unquote right now. Cause I know for example, burger king. , a few months ago made an announcement that they're banning a bunch of artificial ingredients from its menus.

[00:14:33] Chipolte did this years ago. Panera has its no no list. , subway probably led the charge back in 2014. I believe after a blogger whose name I won't mention was calling out the company for using. , chemical in their bread that is also used in yoga mats. So, , , we have this sort of this like free from these clean labels.

[00:14:58] So yeah, it could be ingredients that could be foods in and of themselves, but are there any examples that you can share with us

[00:15:06] Interestingly, I think there's some overlap there. With the MSG, , because. A lot of people are aware of MSG likely because of labels that say no MSG, right?

[00:15:18] Food that's labeled or restaurants that say we don't use it. MSG that implicitly communicates to a consumer that there might be something wrong with MSG. Right? , same thing when I see it, you see a label that says, , less sodium reduced sodium that communicate something to a consumer. And so the overlap there is this kind of free from, or does not contain type of advertising.

[00:15:40] I think it can be highly influential because it doesn't in any way communicate any of the benefits or actual costs. It just tells you that it's free from something. Right. But that communication, the way someone might receive it is, well, I should avoid this. Right. This is communicating to me that there's something possibly wrong with this ingredient or nutrient.

[00:15:57] There's a reason it shouldn't be in there.

[00:15:59] Yes. And particularly, as you said, if it's got a chemical sounding name. Consumers are going to double down. Right. And so you can imagine though, from a consumer standpoint, This being very, , effective because , consumers are busy. It doesn't matter what life stage you're in.

[00:16:14] Right. If you're a young, professional who's career focus, or if you're a young family or whatever, you're busy, you have a lot of other things to worry about. And so in general, it's a big ask to want the consumer to be concerned about every little aspect of the food system. Now, , we kind of have this curse of knowledge if you work in the food system.

[00:16:32] Cause we're all very sensitive to these things because we think about it a lot. But the average person. It doesn't have a lot of time to dig into this. And we know that people in general are more sensitive to costs right. Than they are

to benefits. And so the idea that there could be this risk associated with this food, even if I don't understand it, or, , I don't have time to really understand it or look at the evidence.

[00:16:55] And so I'm just going to take this as a cue and, , I'm going to be overly concerned, likely about the costs. And then I'm going to use that to make a decision. And so I, I do think there's some overlap there and definitely some of the restaurants, like you mentioned, subway burger king are really playing on that concern about chemophobia, , in a study that we've done before, where we've asked people about things like GMO labeling,

[00:17:19] Do you want GMO labels? That's often used as a reason for, , a policy I needed policy, but, , we've asked people to, , do you want the food label that contains DNA and you get about the same proportion, right? About 80% say that they want food with DNA label, which of course. Would it be ridiculous because as almost everything in the grocery store, then just be carrying a label that would just become noise. Right.

[00:17:41] There's food in this package.

[00:17:43] Right. And so it's very effective or it can be, , one thing that's interesting, again, like I said, if you ask people something like GMOs, for instance, if you ask people, , are you concerned about it? They say, yes. Do you want to know if it's in food? They say yes. But if you look at something like scanner data, so you look at, , what people are actually purchasing, you see most people are purchasing.

[00:18:03] Foods with GMOs, The market share in general for a non GMO products or organic products is just much smaller than food that likely have GMO ingredients.

[00:18:13] Right, right. What people say they want or that they're doing versus what they're actually doing is always a fascinating concept to me.

[00:18:20] It

[00:18:20] is. And, , in general, , often when we ask questions, something like, would you like food that contains GMOs to be labeled, , often those questions aren't accompanied with any actual cost to the consumer. So that's another issue

is there's no cost imposed. And so if you ask somebody, if they'd like information for free, sure.

[00:18:40] Even if they don't plan on using it, they'd really be irrational to say no. Right. Because then, , if it's available, then you have every opportunity to use it or not.

[00:18:47] Right. Interesting. What other examples can we use? I know, like I said, there's like GMO, we really don't hear much about it these days, but actually.

[00:18:56] there's A new term, and I believe you're an expert in this Dr. McFadden. So if you want to speak to, , what's going on with the GMO labeling right now,

[00:19:04] I'll try to get this policy name out is kind of clunky. I think it's the national bio-engineered food disclosure standard and it passed a couple of years back and they opened it for public comment and essentially food for manufacturers.

[00:19:18] And, sorry, I can't recall the size. But there is. , size component here, as far as the size of the company, , so firms over a certain size are required to label food. That's a GMO or it has GMO ingredients starting January one of this year. Okay. So, , it passed a few years back.

[00:19:33] They had public comment and part of this is part of the public comment was about how these labels can be done. And so, , you can use a symbol, , text QR code. And I think there's like a link you can provide and you're right. The term that kind of came out in the public comment was that rightfully so a lot of people don't like the term genetic modification because.

[00:19:55] There is some implicit communication there that perhaps we haven't modified food before, essentially the genes, , conventional breeding, previous breeding techniques, don't alter the, , the genetic makeup of things. And that's not the case. And we, and we've asked that actually in surveys before, like how many genes are altered by these different production methods.

[00:20:12] And in general, people think more genes are altered by genetic modification, which is actually not the case. So that's why some people in the scientific community, don't like the term genetic modification. People don't

understand. And I say people in general, on average, don't really understand the way genes are passed on when things are bred.

[00:20:32] And so there was this push that maybe we should use some kind of different language here, That communicates better and also more of an umbrella term. Because if there are different types of Gene editing now, So it's not just genetic modification. So, yeah, we've got this term bio engineered and that was kind of interesting to watch because advocates for labeling of GMOs, weren't happy with this option because they're concerned that it might provide an overly optimistic attitude instead of the negative attitude.

[00:21:02] that apparently they would like to come with a label, , we've did a study recently. , we hope to have it sent to a journal soon for publication. And we did an experiment where some people saw a label. And then some people saw text and we're trying to figure out not only the effect of bioengineering, but the effect of using this label, because that was another thing that advocates weren't happy about it because it was kind of a, an attractive label.

[00:21:24] It's, , it's pretty, and we did find that people in this treatment that just saw the symbol were more likely to choose that bioengineered option. Than if they were shown text instead of the symbol. So it does appear that the symbol is looked at a little bit more favorably. The nuance there is.

[00:21:43] Where does that really put the overall attitude about GMOs? Right? Because it's negative already, right? There's a horn effect, With GMOs. And there's a bit of a halo effect for other things. For instance, like with organic foods, typically people think they're more nutritious. They're safer, things like this, but , local is even attached with it.

[00:21:59] There are all these attachments with organic. They kind of put it in a better light. And there are a lot of things attached with the GMOs that provide this stigma. And so one thing that's really not clear. That's interesting to me that shaking out here is where should that perception be? And that's something that behavioral scientists are interested in

[00:22:15] Like actual risk and perceived risk, Because our risk perceptions don't always match the actual risk. Great example I like to use, as , from the numbers, I've looked at more people die. Every year from a vending machine, then they do shark attacks. But of course you wouldn't be scared of a vending machine.

[00:22:32] We have a lot of fear of sharks, but all that to say, this is something that I think a lot of people are interested in is helping the public match actual and perceived risk. And it's not clear where that's at but we obviously know there's some stigma So there's, there's over concern likely about the risks.

[00:22:48] And then you've got this now this new label, maybe it decreases some of that, but is there still a higher level of concern about GMOs and there should be given the evidence and the actual risk.

[00:22:59] I mean, one way that psychologists try to judge. The appropriateness of a level of concern is, , how tightly associated it is with fear and emotion.

[00:23:10] There's a concept psychologists often talk about affect heuristic – affect as being another word for emotion. The idea is that people judge the riskiness of something by how it makes them feel. There's the shark attack example is a great one. You instantly feel afraid and therefore there's a risk.

[00:23:25] And yeah, if you're in front of a shark, there is a risk, but the overall risk of dying by shark is incredibly low. We judged the risk of things by these feelings. And this has been measured in the case of GMOs, many of the strongest opponents to GMOs shown to have these very, very negative emotional reactions that border on border on that actually include disgust reactions.

[00:23:51] And when it's disgust reaction, when it's that emotional, You tend to get away from more nuanced reasoning. Like people have these disgust reactions actually even say things like, , this should be banned, no matter how great the benefit or how small the cost, , doing twice as much of this is the same as doing just a little bit of it, like a completely insensitive to the quantity of the potential harm that's being done.

[00:24:16] And , when you can't talk about quantities and measurement and objectivity that's when you're probably not thinking in a strictly rational sense. You're not thinking about uncertainties when it's emotional like that. That's kind of when we start to think there's a big Gulf between the perceived risk and the real risk, and that's been shown, , in the case of GMOs.

[00:24:37] So revisiting the labeling for products like that does seem like potentially good opportunity for re-evaluation among the broader public of these technologies, because it's also the case that, , when people are very emotional and passionate, They're going to rant about it, , and others are going

to hear those rants and those angry words and prese that there is something actually to be afraid of.

[00:24:59] And very often there isn't and the nature of social media now is that some of these stronger, , more fired up voices get amplified. And it's very hard to navigate those kinds of things. You tend to think if someone is fired up about something, they're probably onto something. Well, they might not be.

[00:25:16] And some opponents of GMO's understand this affect heuristic very well.

[00:25:21] Well, if nothing else, some of the imagery that's been produced. It's very effective at invoking emotion, right? , you've likely seen images of syringes and tomatoes, Or there was one, , an image that was going around, like with an orange, with a pig face, That was like about citrus greening and using, , a GMO approach to citrus greening.

[00:25:41] But when you see these images, it evokes an emotion, And when you start with that invoked emotion, , when you, when that's a starting point, that just makes it so much more difficult to actually think critically and parse out What's good information. What's bad information and staying in a mindset that really allows you to be analytical, to arrive at a decision about, , what you think about the safety of something like a GMO.

[00:26:05] And so that begs the question. Are we getting any better at this? And. What advice do you have with all of your insights and the work that you do for us as consumers, for any health professionals listening to help their patients and clients be better at this whole critical thinking and just thinking in general?

[00:26:30] Yeah, I do think the world is continuing to navigate this challenge and it is true that social media, the prominence of them have, I think, made that more urgent. But also they do provide some hope, , with there being possibilities of setting up social media in a way that they're less prone to these kinds of problems.

[00:26:49] , and I, , there are academics and scholars and consultants and the companies themselves are, are still trying to navigate how to do that. But I think at a, , at a high level, the things that they should be trying to do are, , sort of

deactivate the emotionality of some of these debates emotion is essential and human thinking.

[00:27:07] And has to be. But just creating an emotional balance, I think is important. So understanding the emotions that can be on both sides of something, , you may have strong opposition, strong, emotional reaction to something like GMO or any kind of agricultural technology, but there should also be emotional reactions to the benefits, especially in emerging economies that some of these technologies can bring.

[00:27:31] We live in a global world. That's the reality. Another high level approach I think is extremely important is to try to get the right level of nuance around uncertainty, how to talk accurately and appropriately about uncertainty and, , scientists and their scientific work labor over this. They're constantly trying to provide the specific evidence for the degree of conclusion they have in their papers and talking about the limitations, the things that we don't yet know, but it's hard to express

[00:28:02] Uncertainty in a way that doesn't completely undermine your position. And I think we're all still trying to figure out how to get better at that. , one suggestion I've heard is you've got to talk with confidence and belief, but describe where the specific uncertainty is in your beliefs. what specifically don't we know.

[00:28:22] About COVID for example, , getting into the specifics, why you believe what you believe rather than just, , we can't just throw our hands up and say, oh, there's so much, we don't know.

[00:28:31] More research needs to be done.

[00:28:33] Yeah. That's not good enough. Right. We've got to talk about the specific things that are not yet perfectly well known or understood and start getting used to talking about degrees of confidence.

[00:28:44] , I'm 80% certain of X, and here's why I'm about 80%. Certain 80% is not 50%. It's not a coin toss. I'm very much leaning in this direction. And here's why those are the kinds of things I think we need to get better at rather than just insisting on complete certainty or complete uncertainty.

[00:29:05] Very interesting. Dr. McFadden, anything you want to add?

[00:29:09] This is probably going to sound really pessimistic, but I don't, I just don't know how you fix it. And specifically, when I think about the food system, I just think as long as marketing works, there's an incentive for food companies to play on consumers fears, , in a competitive market.

[00:29:27] And this is one thing that's really difficult for ag in general. It's a competitive industry, And you have a lot of different commodity groups. You have a lot of different food manufacturers and have a lot of different food categories.

[00:29:41] All these groups are in competition with one another.

[00:29:43] And, and so, , that's what we get right from burger king or the subway. The examples that, , we were talking about earlier, as long as marketing works, companies are going to make these types of decisions. And perhaps some of it is, , this is something that sometimes difficult to tease out how much of it is really consumer driven,

[00:30:02] Like I'm trying to avoid this list, this ridiculous list that burger king is removing. I forget how many different ingredients are on there 120, 120, So do we believe consumers are worried about those 120 ingredients? And I think that they know what,. So how much of this is actually consumer driven is the market giving consumers what they want and how much of this is the market telling consumers, , this is something you should be fearful about and we're looking out for you.

[00:30:30] And as long as documentaries make money. , , so all that to say, and this is something that Jason and I, , we talked about a lot and a lot of people I think are interested in is how do you make critical thinking sexy? ? And that's difficult, right? Because if you're a critical thinker, you're just going to disagree with people around you.

[00:30:47] At some point, you're going to disagree with everybody around you at some point. And when we have, , there are a lot of incentives not to do that. Right. And it kind of brings me back to this point about social media. , you can have all the fact checking you want, you can have all the professionals on social media.

[00:31:00] Disputing claims all day long, , whatever, whatever resources that can be thrown at it, throw it at it. But that doesn't change the fact that on social

media, I pick my echo chamber. And so, , as long as we think that we're on some team, whether it be political, , how, what our diet is, right?

[00:31:19] Whatever defines us in our groups. As long as we identify with these groups and we find value in these groups. No, we tend to turn a blind eye to a lot of things, especially things like GMOs it, , as an average person, what do I care? And so until you can make critical thinking sexy, but again, that's a big ask.

[00:31:37] You're asking people to spend time thinking about a lot of things and then stand up for it

[00:31:43] and go against their tribe.

[00:31:44] Yeah.

[00:31:45] Yeah. Which is bound to happen. I think Brandon and I share. Much of the skepticism or inevitability, but that's really just from a human nature perspective. I mean, I think, , this is how humans are, we are tribal and, , we are drawn to fast reaction and fast, fast answers.

[00:32:02] That's always going to be the case, but, , throughout history we have developed institutions and practices that help us do better. I mean, science and scientific method did not really always exist. Were not always articulated. Yeah, but how's trust in institutions doing? Well. Yeah, but like new institutions come through and institutions get better.

[00:32:23] I mean, these things can change. I think we're always going to need institutions to help us with this. I mean, your institution of the economics discipline is one that has gotten people focused on measurement, , including measurement of uncertainty. I see opportunity for better systems of communication, of uncertainty, better systems that help us self-reflect on our own uncertainty.

[00:32:50] I mean, imagine if social media just had occasional frequent prompts that asked you how accurate is this information? , like one in a hundred items that comes through your stream, just to ask you for an honest assessment, how accurate is it? I think there's opportunities like that. And in fact, , I didn't invent that one.

[00:33:07] That's an idea that I think came out of the lab of David Rand at MIT. , they showed that people share all kinds of information, whether they think it's true or not. But if you first ask them how accurate is this? They're much less likely to share false information when they take a moment to reflect on it.

[00:33:23] They've gotta be ways that institutions can help individual people do that. , , I think journalists and any communicator also has an opportunity to help people with that by finding, , useful, clear ways to express uncertainties, to help us make trade-offs to help us recognize nuance. So I agree with you.

[00:33:43] Let me backtrack a little bit, cause you just said something, a word that as an economist, of course I love tradeoffs, , so just nuance and context in general, which take time, take time to provide. But I think if people, and as Jason said, , there seems to be some evidence that sometimes with, , issues like GMOs, no matter their benefits, how high they are or low, the cost is still doesn't matter.

[00:34:07] Nevertheless. I do think one, I don't think anything's going to change one person's mind. I think you have little likelihood of changing someone's mind you someone's got to change their own mind obviously. But, so I think the self-awareness has to occur first that somebody might be wrong. And Jason, you were talking about people share something.

[00:34:26] They don't think it's wrong. No, but they shared it because it likely agreed with a prior belief or it was non-intuitive. And they are blown away by this possibility. To come back to the cost and benefits. , that is an issue that I see is that people only think about costs. They don't think about benefits.

[00:34:42] And when there is a cost associated with something, then it's not a good decision. And that's not the case in life, Everything has a cost. Everything has benefits and you have to weigh the costs and benefits of multiple things together to figure out which is the better way to go.

[00:34:56] What's the best decision to make. So I think if we could get people to Really think more on a relative basis. Like, yeah, I understand this. Isn't perfect, but what's the next best option, right? What's the counterfactual what's going to happen if you don't do this. And that's true, even for, , things like inaction,

[00:35:11] Like what's the cost of not doing something, , versus making some kind of action. Yeah. There's a negative consequence likely associated with some costs, but that doesn't mean that the net benefit. It's still not the highest.

And I see that a lot. Now that's called a Nirvana fallacy, right? Where you kind of start with this idea that some perfect world existed or can't exist.

[00:35:31] And then you backtrack from there to see what's wrong with the world around you, Which the world around you still might be the best it possibly can be. Although it's not perfect. And so that's a difficult behavioral thing to get past

[00:35:42] Articulating trade-offs in these very specific and measured ways is what your discipline of economics is so good at doing.

[00:35:49] What I think the discipline of psychology is trying to get better at doing is understanding why it's hard for people to think in trade off terms. But now even more importantly, to get them to think again and try to think in those trade-off terms, how can we get people thinking about Trade-offs and I use that phrase think again for a reason, it's the title of a bestselling book by Adam Grant, perhaps now the world's most famous behavioral scientist.

[00:36:14] It's an absolutely fantastic book. One of the things that he talks about is first, you got to change your own mind. It's not easy to get other people to change their mind, but one of the best tools that we have is a well articulated question, , rather than just throwing information at people, what kinds of questions can we ask them that would help them better think through the trade-offs, , so I hear you on what some of those costs are, but what might be some of the benefits of this technology, , or how are those costs going to play out?

[00:36:44] There are lots of ways of asking people questions that can get them to think again and, and reflect, but it takes time for sure, because we don't change our views on a dime.

[00:36:55] Wow. You guys are. I get to sit here and listen to you all day long. You said so many things that are just like, my brain is exploding, but earlier on, , Brandon, you had said the cost, , and you could use the term risk, but the cost I think is less Negative in a sentence because it's just more factual.

[00:37:15] And that concept explains so much about the food landscape. , I don't care if biotechnology can, , help improve the environment. It's better for the environment. If there's a potential cost or risk to it, I don't care. It doesn't matter. And you can apply that to all of these things, , MSG.

[00:37:38] Oh, it can actually help us reduce our sodium intake. I don't care. Cause if there's some potential risk or cost, I don't care. So it can be applied in all of those situations. It explains so much. And I, yes, the trade-off concept. I love that concept. It's so important. And to answer your question, Dr. Jason, Riis, about making critical thinking sexy.

[00:38:01] I think that we just need to, , really. Show people that the smartest people are the ones that know they're not that smart or that they're willing to, , not be overconfident.

[00:38:17] Yeah, no, that's a great point. I mean, there are ways of being smart that are very subtle and I think that's the best way to be smart.

[00:38:24] It's not arrogant. It's not in your face. It's not showing people up. It's not just, , aggressive myth-busting or sarcasm. It's subtle, it's gentle. It's friendly. And it savvy and communicators know a lot about how to do this well, and we're learning more every month with the new round of publications that come through.

[00:38:43] So there, there is a lot out there. I mean, we've touched on bits and pieces of it, but I do think I'll say it again. Plug the book again, Adam, Grant's think again is a great deep dive into all this nuance and, , some of the ways that we can help our audiences think more critically. Excellent.

[00:38:59] Are there other books or resources that you guys want to share as we're

[00:39:02] wrapping up?

[00:39:03] I might butcher this title, but it's a, but it's something like the power of not being wrong. And the reason I bring that book up to is because actually, Jason, the way you frame that and Melissa, the way you frame the question, it made me think of it. Like how can you get people to be more concerned? About not being wrong than they are about being right.

[00:39:22] That's a great thing about social media, right? Everybody wants to do the hot take. Everybody wants to be right. And that's a different motivation. That's a different that then you become protective, right? When you were very concerned about being right to become protective of that belief. And it's a bit of a different thing to be more concerned about not being wrong.

[00:39:39] Very good. Well, I know you guys have to run, so I think what I'm going to do is, , something a little bit different with this episode, I'm going to share all the resources and links and where people can find more information and follow me on social media. In a separate outro and just really so grateful that you took the time to talk with me today.

[00:40:01] I've been wanting to do this episode for a really long time and also give you an opportunity. Is there anything else you wanted to share before we wrap up?

[00:40:09] Not me. I just appreciate you having us on, Melissa.

[00:40:11] Thank you.

[00:40:12] Yeah, I wish we could talk all afternoon. Thanks to this. Always try chatting with my good friend, Brandon and, , Always good to talk to you Melissa, I think you asked great question.

[00:40:21] I know your heads around this. I think, I just think the fact that you've been researching and thinking about this. for so many years shows that it is a difficult problem and all we can do is keep chipping away, but let's not give up the fight.

[00:40:35] Absolutely not. I love this. Like, , I'm pessimistic, I'm optimistic.

[00:40:38] I really think that there's having a curiosity and learning and being a lifelong learner is key to this. So let's try to get more people in that space. So, thank you both for all the work that you're doing. I'll continue to follow you and wish you the best for you. Thank you. And for everybody listening as always enjoy your food with health in mind, and some critical thinking till next time.

Hello. Again, here are the resources and related posts I wanted to share with you as well as some more information and context about today's episode.

During the episode Dr. Riis and Dr. McFadden used MSG and GMOs as examples to illustrate these critical thinking concepts.

However, these failures of critical thinking are not isolated to MSG and GMO. Emotions often inform the attitudes that people have about many foods, beverages, ingredients, and other societal issues, for that matter. Besides MSG

and GMOs, we could have been referring to perceptions of cultural foods, unfamiliar foods, foods that your tribe does not eat or is not familiar with.

We could have also been referring to processed and ultra processed foods or quote unquote artificial sweeteners or those free from foods and clean labels. We also could have been talking about organic or non-GMO, farming and production methods, such as free range chicken, cage-free eggs and grass fed beef. And even buzzwords like plant-based and sustainable.

There's a research summary of the study. Dr. Jason Riis talked about called psychological underpinnings of MSG. Why is MSG shunned when experts say it's safe. So I'll have the link to that PDF in my show notes, if you want to find out more about that particular research, but I want to tell you a story about my three-part podcast series on MSG and NPRs this American life podcast episode on MSG that released the very same week back in February of 2019.

My series was actually on MSG and umami. Umami is one of the five basic tastes it's been described as savory. So you have sweet, salty, bitter, sour, and umami. And the reality is that MSG and umami give us the same taste experience while MSG may have a negative connotation and perception. Umami has a largely positive one, but they actually use the same molecule, the amino acid called glutamate, to activate our taste receptors.

So in my series, I spoke with four different experts to explore the largely untold history of MSG research on the safety, culinary applications and even some potential health benefits and current research approaches. The first episode features Sarah Lohman, a culinary historian and author.

She shares how and why history has influenced our perceptions of MSG. And the xenophobic roots of these negative perceptions. The second episode features registered dietician, Mary Lee chin. She shares insights into MSGs connection to Asian heritage and health topics, including the question of MSG and headaches.

And the third episode features Dr. Tia Rains and chef Chris Koetke. They discussed the past and current research on MSG and the culinary applications of MSG and umami, including research that shows MSG can be used to significantly reduce sodium in recipes. So after I released these three episodes, a colleague reached out to me to tell me that this American life had released a podcast episode that very same week about MSG and that I had to listen to it.

So I did, and I will tell you I was on the edge of my seat the entire time. I don't want to give too much away. So I just highly recommend that you listen to my three-part series and then the, this American life episode, I promise you will find it very interesting, very compelling and very entertaining. I will have the link in my show notes to all four episodes.

Or you can scroll way back in your podcast app about a hundred episodes to number 111, 112 and 113. And then you can just Google this American life MSG. And you'll see a link that says 6 6 8, the long fuse, this American life. And as a bonus, you can get three free continuing education units from my MSG series if you're a registered dietician, diet technician, or certified diabetes care and education specialist.

The other resources I wanted to share with you are Jason's website behavioralize.com and Brandon's website, Brandonmcfadden.org. I'll also have both of their Twitter handles in my show notes. All of these links are in my show notes@soundbitesrd.com.

And then there are some books that we either talked about or that Dr. Riis and Dr. McFadden shared with me to include in the show notes. The first is Thinking fast and slow by Daniel Khaneman. Then there's Think again, the power of knowing what you don't know by Adam Grant, How not to be wrong. The power of mathematical thinking by Jordan Ellenberg and Misbehaving, the making of behavioral economics by Richard Thaler.

I also have some related episodes, either that we mentioned during the interview or once that you might enjoy, if you liked this one. So of course there's episode 108 with Dr. Jason Riis, critical thinking and behavior change, Episode 181, cultural humility and health literacy with Loraina Drago, Number 198

What you should know about processed foods with Dr. Bruce Hammaker and Dr. Tanhia Gonzalez, Number 166 medical humanities, pandemics food shaming, and social science with Dr. Kari Nixon and episode 100 communicating science in a modern media environment.

So that's it for today. Thank you so much for staying on and listening to this bonus content.

And as always, if you like the show, please share it with others. Or give me a shout out on social media till next time. Take care.