

Nobody's Fool: How Not to Get Scammed with Daniel Simons and Christopher Chabris

Daniel Simons: That's really the key idea, is that people who are looking to deceive us, if they are targeting their deception, they're going to aim it at what you find appealing, what you find interesting, what you find attractive, what you think would be good. And one of the things that we come across repeatedly throughout the book is that the people who fall for a lot of these scams are not just rubes.

They're not just gullible or uneducated or unintelligent. Some of the most accomplished people, in the world fall for scams if they're targeted correctly.

Christopher Chabris: we suggest people, uh, ask themselves sometimes, did I predict this? If something seems, like it's exactly what I expected, you know, ask whether you really predicted it. And if so, like is it something you should be checking into more carefully to make sure that you're not being fed something that someone really knows you'll accept without asking questions about it? .

Debbie Sorensen: That was Daniel Simons and Christopher Chabris on Psychologists Off The Clock. We are three clinical psychologists here to bring you cutting edge and science-based ideas from psychology to help you flourish in your relationships, work and health.

I'm Dr. Debbie Sorensen, practicing in Mile High, Denver, Colorado, author of Act Daily Journal, the Act Daily Card Deck, and the upcoming book Act for Burnout.

Yael Schonbrun: I'm Dr. Yael Schonbrun, a Boston-based clinical psychologist, assistant professor at Brown University, and author of the book Work Parent Thrive.

Jill Stoddard: And from Coastal New England. I'm Dr. Jill Stoddard, author of Be Mighty, The Big Book of ACT Metaphors and the upcoming Imposter No More.

Debbie Sorensen: We hope you take what you learn here to build a rich and meaningful life.

Jill Stoddard: Thank you for listening to Psychologists Off the Clock.

Debbie Sorensen: Hi, this is Debbie. We're here today to talk with Daniel Simons and Christopher Chabris about a brand new book that is hot off the presses. It's called Nobody's Fool, why We Get Taken In and What We Can Do about It. And these are two cognitive scientists who understand you know how we think about the world and who have written this book to help us all be aware of potentially getting scammed, duped, cheated, et cetera.

And they give us some really helpful insight and advice about what to look for. And I'm here with Yael today who has listened to the episode. Um, Yael, what are your thoughts?

Yael Schonbrun: Yeah, who has listened to the episode and is a huge fan, and as you mentioned in your conversation with them I looked at our spreadsheet where we track what episodes were preparing for. And I was like, oh my God, you're interviewing the invisible gorilla guys. Cuz I had literally just finished their book, their first book, which is a terrific read.

And I was so excited because this topic is so fascinating to me. This idea of how we process information, how the processes of our minds can cause us to miss important cues, to overvalue certain information and to completely disregard other information that actually would be quite helpful. And so they're talking about it in this domain of, you know, how do we protect ourselves from being taken advantage of?

And that's so important. And, You guys mentioned in your conversation the story of Theranos with Elizabeth Holmes and I went through like an obsessive streak about it. I listened to this entire podcast about it. I watched The Dropout with a Amanda Seyfried.

I just think the whole story is fascinating how this young, brilliant woman convinced so many people to invest in her company, convinced so many patients that she was doing good for the world and taking care of them when like, The evidence was really to the contrary. And yet what's so interesting is there was evidence all along the way that people picked up on that there was something amiss.

And yet by and large, nobody took it very seriously and she kept pushing forward. And the science that they share is so fascinating, both in terms of how that happens and how we can protect ourselves. But one point that I wanted to make, and, the science is clear on this too, is that the answer isn't to get super paranoid that everyone's gonna take advantage of you because by and large people are good and people are not out there to take advantage of other people.

And most people really are trustworthy. There are a few bad eggs and we need to kind of keep our antenna up a little bit so that bad things don't happen to us, really bad things. But it's not the message, the take home message of their work and of your conversation. And I just wanna double down on this, isn't that people are bad and you're gonna be taken advantage of and here's some ways to, you know, really always beyond guard because that actually isn't the way that we should live.

Cause that would be a pretty miserable existence.

Debbie Sorensen: That's true. I think they strike a really nice middle ground with that. It's like, well, here's some things. Here's some signs, here's some ways to be savvy. Things look out for, they also give such fascinating examples throughout the conversation and definitely in the book. So that's kind of interesting and some sad situations too. But they're also, they definitely agree with what you're saying. It's like you wanna be smart, but you also don't wanna go around looking at the world, like constantly people are trying to cheat you and lie to you and rip you off because you do need to have some trust and, and that's actually a good thing.

Yael Schonbrun: Yeah. And trust is warranted for the most part. And I hope people listen all the way to the end because you ask them sort of what are some practical, realistic ways that you can put in some safeguards against people who might take advantage of you. And they offer some really cool strategies that are ones that you can sort of place into your system, but that aren't gonna cause you to just be on paranoid, high alert all the time, which is not what we want. I mean, that isn't the healthy way to have relationships or even to consider new opportunities, right? We do wanna have some, a modicum of awareness that, you know, there is risk attached to every choice and that we should be thoughtful and considerate, but going to the level of feeling like everyone that we encounter is gonna take advantage of us is, is not the take home message.

So it's, it's a great conversation. I'm excited to read the book and I'm really, hoping that I have a chance to talk with them at some point because, I think their work is just so fascinating.

Debbie Sorensen: It is, and if you are intrigued by what Yale was saying earlier about their first, first book, the Invisible Gorilla, and if you're not familiar with the gorilla experiments

Yael Schonbrun: Look it up, YouTube, it, it's, it's bizarre.

Debbie Sorensen: YouTube it. And also about 11 years ago I interviewed Christopher Chare one of our guests today about their previous book, which is called The Invisible Gorilla on a different podcast called New Books Network.

And that's where I got my start as a podcaster. And so we are gonna actually re-release that next week. Um, so definitely listen to that because it's really interesting cognitive psychology experiments that you'll hear about. And it's kind of funny cuz it's old school.

You know I was my, one of my first interviews, so I think I've come a long way. But

Yael Schonbrun: Back from the archives.

Debbie Sorensen: That's right. So we hope you look out for that coming out next week and we hope you enjoy this conversation about nobody's fool.

I am very excited to welcome my two guests here today, and you'll find out why I'm so excited in just a minute. I have Dr. Daniel Simons and Dr. Christopher Chabris here today. Let me start by just saying a couple of words about the two of them. Dr. Daniel Simons is a professor in the Department of Psychology at the University of Illinois, where he directs the visual cognition laboratory.

His work on the limits of visual awareness, change blindness and inattention blindness driving and distraction, et cetera, have been published in top scientific journals and covered in major media outlets. He has won awards for his teaching and mentoring, and his hobbies include biking, juggling, bridge, chess, and wearing gorilla suits in public.

And that will make a lot more sense here in a few minutes. If you don't know what that means, I, I picked that up on your website. Dan, welcome to the podcast

Daniel Simons: Thank you. Glad to be here.

Debbie Sorensen: and Dr. Christopher Chabris is a cognitive scientist who has taught at Union College and Harvard University, and his work has also appeared in leading journals and in major media outlets worldwide.

He is a chess master, is that right, Chris?

Christopher Chabris: Absolutely correct. I'm hanging onto it.

Debbie Sorensen: And he lives in Louisburg, Pennsylvania. Welcome, Chris. It's good to see.

Christopher Chabris: Great to be here. Thanks.

Debbie Sorensen: So we're here to talk about their brand new book that's just out called Nobody's Fool, why We Get Taken In and What We Can Do about It. But I'm excited about having them here for a personal reason. The book's terrific. Um, but I'm also excited because I knew them both back in the day when I was in graduate school at Harvard.

We were all together at the same time in William James Hall. Um, Chris was a grad student a couple years ahead of me, and Dan was a faculty member there. So it feels like kind of a reunion here to see you both. And also, I just wanted to say that their previous book that they wrote together, which is called The Invisible Gorilla, how Our Intuitions Deceive Us.

You might be familiar with the famous Gorilla Study, which is about how sometimes we don't notice even very obvious things that are right in front of us. We'll talk a little bit more about that today. But it's a terrific book as well. And actually, I interviewed Chris about the book many years ago, and we are going to re-release an episode.

It was actually on a different podcast, the New Books Network. But Chris, I think we're both a little scared to, to see what was in that interview. It was probably 10 years ago or something like that. Right.

Christopher Chabris: Uh, it was at least 10 years ago. The book came out in, in 2010, but it is still in print for anyone who wants to get it. And, uh, hopefully I'm better at doing interviews now than I was in 2010. So you, you can be the judge of that, I guess.

Debbie Sorensen: I think I am too. So we'll both, we'll see, we'll see. We'll have to give it an another listen. So in this gorilla study we'll link to a couple things

about it as well as on our show notes today, cuz if you're not familiar with the invisible gorilla, and you're interested in psychology, you really need to check it out.

It's, it's really a interesting study. It's a pretty famous one that's been around for a long time. So, um, we'll, we'll link to that and, and have more on the podcast about that coming up. But about this book, Nobody's Fool, so I cannot wait. I think I have a little trouble actually reigning myself in. I had so many questions I wanna talk about.

So this is a book that's about how we can basically avoid being duped and conned and taken advantage of it. And it's so fun to read because you have examples of people getting cheated, scammed, swindled, you know, you have TV psychics, you have cults, you have, it's just, it's so interesting to read it, but it's also practical, right?

Because you're here to help us all not fall into this trap. Um, and as I read it, I got kind of into some unexpected internet rabbit holes, like watching South Park episodes about TV psychics and conspiracy theories. Like one that the state of Wyoming doesn't exist. That's a real thing. Who knew? So I bet this book was a lot of fun to write.

And I wanna start actually with a question for you, Dan. Um, so I like to think that I, as I read these, you know, examples, I like to think that I'm too smart and savvy, right? That I'm not one of those people that's gonna fall. I'm not a sucker like that, but as I read it, I kind of started to wonder, um, is anybody really, you know, immune from this?

Or do you think that we're all vulnerable to falling for scams?

Daniel Simons: And there's a, there's a huge range in gullibility, right? Some people are more gullible than others. Um, the danger with these sorts of scams and cons is that we see when somebody else fell for it and we say, well, I would never have fallen for that. And you might well be right, right? I mean, most of the people listening to this probably would not send money to somebody promising hidden treasures if they got an email that was filled with typos and other sorts of problems, right?

Most people won't fall for that, but you know, we all know the, the adage, you know, something that's too good to be true probably is. Um, the problem is we don't always recognize when something's too good if it's aimed directly at us.

Debbie Sorensen: Yeah, so we may not be aware of that. We may not catch it. Right, and that, that's really kind of what your book is about.

Daniel Simons: Yeah, that, that's really the key idea, is that people who are looking to deceive us, if they are targeting their deception, they're going to aim it at what you find appealing, what you find interesting, what you find attractive, what you think would be good. And one of the things that we come across repeatedly throughout the book is that the people who fall for a lot of these scams are not just rubes.

They're not just gullible or uneducated or unintelligent. Some of the most accomplished people, uh, in the world fall for scams if they're targeted correctly.

Debbie Sorensen: I mean, I think an example of that, that you go into several times in the book is that startup Theranos, you know, where they had this sort of tech that wasn't really working and some of the people who invested in it are very smart people and they were just, there were certain things they weren't paying attention to.

Right. I mean, I think that, to me, that stands out as a great example of that. These were not like dumb people.

Daniel Simons: Yeah. And that, that's true for most of these scams that, you know, people who are selling faked fine art, right? They're targeting people who know a bit about art and just don't do enough digging or, you know, Bernie Madoff scammed a lot of people who are pretty good investors, and were not dumb people, but he appealed to exactly what, uh, they wanted, what they, what they thought was important, what they found interesting.

He made it just good enough, right, for people to want to invest.

Debbie Sorensen: Right. Yeah. Well, and I think that part of your book is about helping people be a bit more savvy, and I think books like this, your book, definitely, I think I'm gonna be a lot more aware moving forward of some of the ways that, that this could happen to anyone. Um, it actually reminds me, did, I don't know if the two of you have probably read at some point.

Do you know Cialdini's book, Influence: The Psychology of Persuasion, which is about how people kind of market to us and persuade us. And since I've read that book, I'll, I'll catch it sometimes, right? Like, oh, you know, this is the foot in the door technique. I'm not falling for it.

And so I'm thinking, reading your book, and I'm wondering if you both talk about this a little bit, um, can you give some examples of how, when you're writing this book and researching it, maybe you became a little bit more savvy yourselves?

Christopher Chabris: I can't, you know, I can't think of any scams that I haven't fallen into because I haven't fallen into them. Um, so, uh, it's hard to say like, oh, I managed to avoid this one, and if I had just answered that email, I would've lost, you know, all my money or something that, that's, that's a kind of a hard question to answer.

But I do think that having especially looked through, as you mentioned earlier, so many different types of scams and so many different industries and fields and, and, and so on, I, I have a more, a heightened awareness of how to perceive, uh, you know, communications that we get, you know, messages we get, um, News headlines, um, you know, advertisements, uh, all kinds of, all kinds of situations.

And I sort of organized them in my mind in terms of the framework that we develop in the book. And I now think, oh, you know, there's an example of this. In fact, I just texted Dan something yesterday and I said, here's an example of chapter five, or something like that, you know, which just happened yesterday, but not in the book, obviously.

But I'm sort of thinking in those terms now, and I, I think maybe readers will gradually start to see the world in that way, which, which could be useful to sort of, as with Chaldini, sort of see through what's on the surface to what they're trying to present to you that might actually, you know, influence you to, in this case, to, to fall into a con or a scam or a trap, uh, of some, uh, of some sort.

Debbie Sorensen: Yeah, even those low level things like, you know, a sales pitch or a news article, so it doesn't have to be a major Ponzi scheme, but it's like just kind of that critical eye toward what you're reading.

Christopher Chabris: exactly. know, Maybe Dan will have more to say about this, but there's a lot of hype now about artificial intelligence and language models and so on. And I think it, it, you know, having studied all of the ways people try to, you know, get people to fall for things, you sort of see, uh, some of the aspects of, of scams and cons in the way people are promoting this now, obviously there's a lot of interesting reality to new technology and so on, but there's always sort of a, you know, there's always sort of also aspect marketing overclaiming to believe things shouldn't, and so on.

Daniel Simons: Yeah. One of the things I would say is that, you know, just like Cialdini kind of pointed out how the same persuasion techniques show up in many, many contexts. As we were reviewing all of these cons and scams, what's remarkable is how consistent they are, how much they use the same techniques, and how they have done that for, for years and years and years, right?

So there's a sense in which there's nothing new in all of these cons yet. We still don't seem to kind of learn the lessons of them. And partly that's because they come with slight twists each time. So it's never exactly the same thing. It's a new variant of the same thing. And as Chris mentioned, one of the things that's really interesting right now, um, is that there will be new kinds of cons and scams and, and deceit that will still rely on the same sorts of techniques to, to trigger us.

Um, and AI is one of those that has potential. So you, you might have heard of a relatively recent scam in which, uh, people call up somebody's grandparents and say, your grandson or granddaughter has been in a car accident. We need money right away or fake kidnapping calls. None of this is true, but they prey on the desperation to help a family member.

Well, think about what AI can do for this, right? As you can now do voice synthesis, uh, you could actually have that call coming from a what seems like the actual person. So the question is, what do you do to prevent that sort of thing? What, how can you avoid being, um, subject to this? You don't want to question every time you get a call from your kid, or your grandkid, but you want to be able to kind of anticipate where are these problems going to come up and what can we do to prevent them.

So for example, I've been talking with my family about having a code, just a simple code word that says if there's something like this that might be a fraud, just ask for the code word. And if they don't provide it right away, that's a sign that you're being scammed. And that's really important for people who might otherwise want to react immediately, want to jump right in and, and help.

Debbie Sorensen: Wow, that's a good idea. And it is scary to think about, uh, you know, with deep fakes and AI and that kind of thing, it does open whole new worlds, doesn't it? And I mean, but it's the same version of something people have been doing it for a long time where they pretend like the head of accounting is calling and they need you to channel money here or there.

I mean, I used to work at the VA and they would train us on that. If someone calls and tells you to, to look at a patient's records, do not do it. You know, and,

but it's the same thing, but there's maybe more sneaky ways to do it coming our way. So good to be aware of that.

Daniel Simons: Yeah. And there, there are always a variance on these things, and they're always targeting the people who are most likely to be able to provide the information they want or send the money that they want. Right? They're, they're making it seem appealing, right? And or making it seem like normally something you would trust, and then that's when you fall for it.

Debbie Sorensen: Well, speaking of, you're both cognitive scientists, so you're very aware of how the mind works and curious about that and have been researching the human mind for a long time. And there are so many examples of in your book of these thinking patterns and you know, some of them are shortcuts and cognitive shortcuts that we take all the time, and in some circumstances they're actually really helpful to us.

But those very same helpful cognitive strategies can sometimes make us vulnerable. Um, Chris, I was wondering if you could give us an example of, of one of those types of cognitive strategies.

Christopher Chabris: Certainly. So the one that I like to start with, and in fact the book starts with it, is one that we rarely ever even think about, but is ubiquitous in our daily lives and sort of necessary to just be able to carry on functioning at all in the world. And, uh, that's called truth bias. So truth bias is the idea that we're biased to, uh, assume or believe that whatever someone tells us, shows us, you know, says to us is true.

It's, it's really that simple. Uh, this is why when you go down the aisle in the supermarket and you look at the prices on the shelves, you don't say, I wonder if it's really \$5 in 39 cents for that loaf of bread, or if they're gonna charge me something else at the checkout line. This is why when you can have a conversation with someone you don't constantly.

Pause to calculate, are they lying to me right now? Are they lying to me right now? You actually just assume that whatever they're telling you is true. Of course, you can later on analyze it and so on. But just in order to get by moment by moment, you know, through the day, we sort of operate under a truth bias.

And there, there are philosophers and, and psychologists who argue that sort of this is required in order to have a functioning society to coordinate our behavior, we sort of have to not be maximally skeptical. Um, and, you know, imagine going through your day without that kind of bias, you would just get, get

trapped in sort of like the worst kind of parody of obsessive compulsive disorder, always checking everything, checking, checking, checking, and never actually moving forward.

Debbie Sorensen: Yeah, you'd be paranoid, right? You'd be kind of all constantly looking out for Yeah.

Christopher Chabris: Sure. You know, I think the wheels would grind to a halt in a sense because as one says, you can go down a rabbit hole checking and checking and checking and checking. So we sort of make a lot of a constant assumption that what we're seeing is true.

And of course, people who deliberately deceive you are exploiting that bias. You know, first of all. Then there are various other sort of, you know, very important ways that they then sort of like, you know, use the truth, you know, use the truth bias to sort of get you to do things. And that's what a lot of the, a lot of book is about.

But I would say it all sort of starts with truth bias. A a quick example would be, you know, there was a self-driving truck company, or at least that's what they claim to be, which put out a video of a truck appearing to drive and it turns out what it was doing was rolling down a hill and they had tilted the camera to make the ground seem flat instead of a hill.

But when it says, you know, the truck is driving or the truck is in motion, we don't necessarily think, oh, maybe they did something completely different from what they said they did. Um, even though in that case that's what is was, truth bias.

Debbie Sorensen: Yeah. And we'll talk about some of the other examples of that too, that they're just, they took this guess that people weren't gonna even question it, which is often what happens is that they exploit the fact that who's gonna really sit there and think, well I bet that's not r that truck isn't really self-driving.

You just, it wouldn't even occur to you cause you're not paying attention to it. And speaking of paying attention, um, I think that's a really a theme throughout your work. So it's a theme of this book, certainly. And your previous work, you know, the Invisible Gorilla, which again is a terrific book and all the work that you did on that.

And so my co-host Yael Schonbrun, when she heard I was interview you two. She got so excited and she wanted me to ask you some questions related to the invisible gorilla and some of your body of work. Um, and so she wanted me to ask you, and Dan, I'll point this question to you. Why do we so often fail to see something that's right in front of us. Even something that's very obvious, like a person walking by in a gorilla costume.

Daniel Simons: I think that's a great question because it highlights what I think is the more important aspect of that finding, which is that it's shocking, it's surprising. We think we'll notice things that are unexpected that we're not looking for, when in reality we, we often don't. The mechanism for why we miss things is actually much more mon, mundane and less interesting, which is that there's only so much information you can take in.

We have limits in our capacity to take in all of what's around us, so what we mostly take in is whatever we happen to be focusing our attention on. And we're just not aware that we're not taking in all the other stuff. What's interesting about that original demo and some of the much earlier work it was based on by, by Ric Nier from the 1970s was that when you're focusing attention on something, you can miss something that's really obvious.

Um, as long as it's unexpected, right? It's a phenomenon known as inattentional blindness, you're, you're kind of blind to it because your attention's not on it. Um, so we really aren't taking in anywhere close to as much information as we think we are. Um, even information in the periphery, we're not getting any fine detailed information from the periphery.

We're getting detail only from where we're looking. So the fact that we miss things is something we've known forever in cognitive psychology forever, meaning at least back to the 1950s. What that finding, I think helped reveal was that our beliefs about what we'll notice are wrong. Right. We assume that we'll always notice something as salient as a person in a gorilla suit thumping its chest in the middle of the screen because we're not aware of all the times we miss things.

So most of our life, we don't go through, don't go around the world realizing, Hey, I'm not, uh, let me put it this way. If you watch that video and you didn't happen to see a gorilla and I never asked you about a gorilla and nobody else did either, you'd continue to go through life believing that of course you would notice a person in a gorilla suit in this video, right?

Because you're only aware of the times you did notice things. You're not generally aware of the times you didn't. And videos like that one call attention to what you just missed. So it kind of jars you into realizing your intuition was wrong. Um, so I think it's a really interesting question because it's how could we fail to see what's right in front of us?

It's, well, we do that all the time. The interesting thing is why that's an why that question is so compelling to us, and it's because we have the wrong intuitions about how our minds work. And it's related to one of the principles we talk about in in this book, which is that the principle of focus, we tend to kind of pay attention to what's right in front of us and what we're aware of.

And we don't think about all of the information that's not right in front of us. And that failure to think about what's not right in front of us can often be a source for people trying to scam us. They don't have to show you all of the demos that didn't work. They only have to show you the one that they rigged to work well.

Debbie Sorensen: Yeah. And, and throughout the book you have some questions. I think that people who read it can just continually ask themselves when something, you know, their, their radar's up for, okay, is this legit here? And one of those questions is something like, you know, okay, what's missing? Is there information here that I'm not paying attention to?

To just kind of broaden your focus, you know, you use examples like magicians and how they are doing things because they're aware of what you're paying attention to and what you're not paying attention to, and sort of what's in your focus and what's not. And so, you know, there's so many ways in which this happens.

Um, just not seeing what's right there in front of us. And we also often don't question things. I think sometimes when we have an expectation or what we think we're going to see, we just kind of go with that. Right. Just kind of stick with what we expect. And maybe we don't wanna reconsider our assumptions or question the beliefs that we have or the expectations that we have.

Could you talk a little bit about why we do this and maybe how we can avoid falling into that trap?

Christopher Chabris: Sure, yes, sure. I'll take an example from our field, Psychological Science. Uh, and sadly there are a lot of studies published in journals that, um, are really not very solid. They don't replicate when other

researchers try to run them. Or maybe in the extreme they were even just totally fraudulent and someone made up data and, and sent it in and so on, and yet a lot of them get published the field has gotten a lot better about that in the last 10 or 15 years. In the book, we ask why did sort of, so many of these things get published, including by people who were serial fraudsters who, you know, have since retracted like 55 papers. Why'd their papers get published in the first place? And I think one of the main reasons is that the results they presented in their papers were exactly what the reviewers and the editors of the journals and the other people in that field expected to see.

So they were new experiments, but they didn't deliver any results that weren't sort of exactly consistent with what the next logical step would be if all of their underlying theories were correct. you know, We highlight examples from social psychology, but it happens in other fields. It happens in other, uh, areas of psychology and other sciences, uh, as well.

So there's a, a sort of tremendous satisfaction to seeing what you predict you know, come true. Whereas often if what you predicted or what you expected came true, that could be a red flag that someone's trying to supply you exactly what you know, exactly what they know you're looking for and exactly what they know you'll like.

So we ask, we, we suggest people, uh, ask themselves sometimes, did I predict this? If something seems, something, seems like it's exactly what I expected, you know, ask whether you really predicted it. And if so, like is it it something you should be checking into more carefully to make sure that you're not being fed something that someone really knows you'll accept without asking questions about it? .

Debbie Sorensen: I am pretty sure I fall into that one quite often and, and I think it's partly short cause like, cause it's kinda like, okay, that makes sense to me. I'm gonna just go with it. It seems reasonable enough and you know, maybe you should double check on that. But I think, you know, even sometimes people can be presented with evidence that actually this is not, whatever you're doing isn't, you know, isn't effective or something, and they, they'll dismiss it.

It's like, well, I don't care you that they won't believe you.

Christopher Chabris: exactly. And, and you know, one person's expectation is another person's, you know, shocking surprise, right? Depending on what their prior beliefs are. So this sort of gets back to the tailoring of the scam to the

individual. If you know what the individual target is expecting, you can construct something that might work great for them.

But fall completely flat for somebody else. And, you know, a a a background principle of everything we talk about in the book often is that not every scam is intended for every person, right? So often, you know, you'll read these stories of people falling for ridiculous scams. What you don't hear is that they tried that scam on a hundred people and it worked really well on one person, you know, and that's, that's enough to keep them in business, right?

Like, you don't have to scam all the people all the time. You just scam enough, you know to make your money and find the people whose expectations or other background knowledge and so on, become the right victim.

Daniel Simons: I'm Now, just gonna chime in. One of the things about these sorts of predictions that when something meets your predictions, Most of the time, that's fine, right? It, it's, you have to trust that people are being honest brokers, most scientists aren't frauds. They're not trying to pull one over on you.

Most of the time when something, uh, nicely matches an existing theory and rules out a different one, it might just be good science. So it's not necessarily bad that we look for things that are consistent, uh, at least some of the time. It's just that if somebody is trying to deceive you, in those rare cases, that's what they're gonna do.

They're going to make it fit.

Debbie Sorensen: I mean then the example that comes to mind for that is news, right? And how we all probably have our preferred news sources, but they tell us what we wanna hear sometimes. And then we read something from the other news source and we say, well that's obviously wrong because it doesn't fit my belief.

So you can see how maybe it gets us sent into hot water.

Daniel Simons: Yeah. Yeah. We can't constantly counter and challenge everything that meets our predictions, but we probably should do it more than we do, right? When something perfectly matches what we're expecting to see, sometimes that's a sign that, you know, maybe it's not quite right.

Debbie Sorensen: So I wanna do a sort of a fun example. Okay. So Dan, I read this article in the news that there's 106 year old woman, she just turned 106.

And so they interviewed her and I read that she starts each day by eating bacon. And she has two cocktails every evening. And so I think, well, I really would love to live to be 106.

Um, I'm gonna start eating bacon every morning and having two cocktails every night. So, okay, what's wrong with that? What's, what's the problem with that, that assumption I'm making here?

Daniel Simons: Well, so you have to think about what's missing from that story. So how many people did they not interview who also ate bacon and had two cocktails and died when they were 45 of a heart attack, right? What's the rate of success for that strategy. And is it better than the rate of success for people who didn't eat bacon and didn't drink cocktails?

You can't determine that without knowing all of the information that you're missing. And this is a pervasive problem, right? This is something that you see in many business books where the focus is on, Hey, look at this really successful c e o. Here are all the things they did to become successful. Um, you should emulate that.

Like you have to think, okay, how many people tried those things and crashed and burned? How many people tried them and succeeded, and how many people didn't try them and succeeded? How many people didn't try them and crashed and burned unless you know all of those things you have no idea whether what they did caused their success or even contributed to it, it might have actually been the wrong thing to do. So you have to think about the information that you're not being presented. It's like that, that truck demo, you have to think, are there, are there other demos that they tried that just didn't work right?

And that one didn't work either because it was faked. But anytime you see a demo, anytime you see that sort of a, a case of a single example of a success, you have to ask yourself how many failures were there and how many other things were tried that didn't succeed, and how many things weren't tried.

Debbie Sorensen: I am so glad you connected it to those business books. I know exactly what you're talking about, right? It's like, well, this, c e o wakes up at 5:00 AM and takes a cold shower and does a headstand, so you should do that too. Or you know, they, they, there are those unicorns startup companies. There are one in, I mean, how many thousands don't make it, but this one makes it, and so then everybody tries to say, well, what exactly did they do?

And let's do that. And probably so many other companies did the same thing and didn't get off the ground. Right.

Christopher Chabris: And, and, and then the eccentricities of that particular founder or c e o become enshrined as the way to do things. So, you know, for example, there's a famous story about Amazon that Jeff Bezos banned PowerPoint and everybody has to write a six page memo and circulated in advance and everyone reads it in advance and so on.

And I don't know, it sounds appealing to me because I like to read and everyone's annoyed by PowerPoint, but what do you think the chances are that this has more to do with his personality and, you know, maybe some of the people around him and and so on. And you can't just like airlift that practice, into any other organization and expect that suddenly you're gonna be, you know, Well, certainly not as successful as Amazon, but even a 10th as successful just because of of, of that one thing.

Yeah, this is all over the place and there's an assumption we sort of tend to make in encountering this kind of information that what we're being shown is, is not only true but representative, right? So that that 106 year old woman is representative of, of all the 106 year old women, which we'd all like to get to that age, right?

Or that that video that we saw is representative of all the times that you try to use the product or something like that as opposed to the one time that it did something, uh, that actually worked. We go into a lot of this in, in, in more detail in the book and try to give people sort of, uh, some simple tools for thinking about this kind of information filling in the missing data that you don't have. Even if you can't fill it in, just releasing that you don't have it and what its implications could be, is the key I think.

Debbie Sorensen: Yeah, and one of the reasons maybe that we sometimes don't do that extra research or ask more questions is just because it is time consuming, right? And. You know, to, to always question and to, to do research and look into things and check, you know, is this, is this reliable?

Is there more to this? It takes time and sometimes it's most certainly not worth it. And I, the example that I thought of is, you know, you have to read the terms and conditions of everything under the sun. And it's like, yeah, I'm not gonna spend an hour of my time doing that cause I'm just gonna assume that they're not out there scamming me.

You know? Um, but there are times when the stakes are high and it's, it really is a good use of your time to make sure that this is legit. So when the stakes are high, Chris, what are some of the, maybe some of the questions we should be asking or how should we be trying to make sure here that we're not getting cheated.

Christopher Chabris: So this is, this, this is a tough one. It's the, the most important thing is to remember that asking questions is okay, and you can ask them to yourself, or you can even ask them out loud, you know, or in writing or whatever to the people you're, you're dealing with. But I think often there's a pressure to sort of be decisive, act quickly, not, not reveal our lack of confidence or our lack of knowledge or something like that.

And, and certainly, again, going back to the business literature, there are lots of business books that celebrate leaders who were able to make, you know, quick, intuitive decisions. And somehow they were always right all the time. That latter part is survivor bias, right? We're only writing books about them cause they were always right all the time, so Right. They flipped a coin heads 10 times in a row, you know, and therefore they got a book written about them. But in everyday life, especially when you're making a big decision, you know, it is okay to stop and ask questions to take more time and so on. And, and also one thing I like that we just, we described quite a bit in the book is, um, in this particular section, is not to be led astray by, uh, things that pose as answers, but don't really answer your questions.

So, for example, when people say we did our due diligence, that's an answer or a claim that is meant to sort of shut off further investigation, right? When they say that they don't want you to now say what exactly was due diligence? What does that mean for you? Like, can you lay out the steps and so on.

Sometimes they're happy to go through that, but a lot of times they use that phrase as sort of just a, a way of shutting off questions. When people say that things have been vetted or authenticated and and so on. Like those are all sort of vague words, right, that don't really tell you what's really going on.

So I think, what else can you tell me? You know, can you tell me more about that? Those are all reasonable questions and of course, you know, when you download the latest app for your phone, you don't need to read the terms and conditions, which are probably the exactly the same as all the other terms and conditions.

But when you're investing millions of dollars, you know, in a real estate deal or something like that, I think it does pay to read, you know, to read the fine print. We have some examples in the book where some very sophisticated investors didn't read, you know, the contract and lost big, just literally because they didn't read the entire contract.

Um, it's a cliché almost, but asking more questions and sort of holding back the need for efficiency can, can really make a difference.

Daniel Simons: And again, as with most of these, being efficient, you know, being efficient isn't the bad thing. You know, most of the time we want to be efficient and most of the time it works well. It's only when it's a high stakes situation that you really need to be careful. I mean, you can be pretty confident that, you know, the terms and conditions of an app on, on a major company's app store have been vetted by other people already.

Right. Whereas the deal that you're making for the first time, maybe not, or if you say you want to invest all of your savings with some company, if it's a giant company, probably their terms and conditions are established. If it's with somebody you just met and you don't really know that well, maybe you should check them out and ask a little more, a little bit more about what they do and how they've done it and what their credentials are and, and so on.

Debbie Sorensen: Yeah. Yeah. I do think this is one thing I'll take away from your book, probably in my daily life, is that thing about those vague platitudes, like we have validated that it's like, what does that mean exactly? Did you really, what did you do? Because I do think you see those kinds of claims all the time, but how often do you bother to stop and unpack them?

Um, just something to be paying attention to.

Christopher Chabris: Speaking of our days in, in the psychology department, validation was a whole like multi-month topic in research methods. What does it really mean to validate something as simple as a questionnaire that's supposed to tell you whether you might, you know, you might have depression or something like that?

Well, it's not just coming up with a few questions about do you feel sad a lot of the time, right? It's been validated means, you know, should mean something much deeper than the way that phrase is used you know, everyday business practice and so,

Debbie Sorensen: Right. And it's much more complicated than that, and it's not like a yes no thing either

it's like, you know. Yeah. Yeah.

One of the biases that I think was really interesting is about, um, when we have a sense of recognition and familiarity, and there's a quote from your book that really struck me, um, which says, simply having previously read a statement made people think it was more likely to be true. Dan, can you talk a little bit about that and maybe even connect it to some of the, the conspiracy theories and false information that's out there in the world today?

Daniel Simons: Sure. I mean, this is a phenomenon that's that's known in the literature as the elusory truth effect. Because it doesn't really matter whether the statement actually was true or not. Just the act of repeating it makes people judge it to be more likely to be true. And that is an effect that can last to some degree, even over weeks, um, that you heard a statement once and then you hear it again and you're more likely to believe it's true the next time. In the scientific literature, it's mostly been studied with things that don't matter a whole lot. So kind of obscure trivia that people kind of guess about correctly about half the time. Um, so you get some obscure trivia question and you hear it once and you rate how likely it is to be true and then the next time you see it, even if you don't remember having seen it just kind of familiar, you'll judge it as more likely to be true.

That sort of repetition effect is, it's not, you know, at some level it's not shocking, right? This is the same sort of principle that goes back to at least Orwell's 1984 and to other sorts of ideas that if you present the same things over and over again, people eventually start to accept them as true.

It's kind of the basis of things like gaslighting, right? That it said over and over again, you stop, stop questioning it every single time because it's now familiar or it's the basis of the saying that there's no such thing as bad publicity, right? Because at some point people disconnect all of the repeated news about you from what its valence was, whether it was negative or positive, and they just have this association, it's familiarity that sometimes can be beneficial for the person who wants that publicity.

Um, it's, it's the basis of a lot of advertising, right? Just repeating the same thing over and over again. You become familiar with the brand, you become familiar with the logo, with the music, the jingle. And all of this is tapping into our

tendency to find things that are familiar, to be more likable, uh, more pleasant, more something that's acceptable to us, right?

And there's a good basis for that, right? That in general, things that we've experienced before and have haven't killed us are probably not gonna kill us the next time. And they're things that we're going to, you know, want to experience again. So it's a natural sort of tendency to treat familiarity as a sign of truth, honesty.

It's something we re remember. It's something we recognize. It's familiar, so it's probably something that we knew already. The downside again is people can co-opt that and take advantage of it.

Christopher Chabris: I think a, a really nice example of familiarity being used as a, a weapon or a vector for fraud is the Bernie Madoff, uh, case. You know, he became a well-known and familiar figure in the finance industry. He was the chair of the NASDAQ Stock Exchange. He was on the boards of Jewish philanthropies. He was very well-known to people in a lot of different communities, New York, Florida, and so on.

And that helped him seem like a safe place to put money. All along he was running a Ponzi scheme for most of that time and literally stealing from people. But he seemed familiar, safe, honest, uh, and if he was just some person who came in from the outside and started offering the same deal, it wouldn't have worked, or at least not nearly as well, or would've taken a lot longer to, you know, get to the point of 20 billion worth of of customers money.

Debbie Sorensen: Yeah, and he was around for decades, and so many people probably really fell into that trap. There were actually, that case came up a number of times in your book too, because there were a lot of ways in which that case illustrates like, why did these people fall for this and invest so much of their lifesaving?

And it's super sad because it's fascinating, but it's also, I mean, these are people's lives and Yeah. Yeah. That's a good example.

Daniel Simons: There aren't all that many. I was gonna say, There aren't all that many megas like that, that have been discovered. There might be some still ongoing, but there haven't been that many that are of that scale. Um, and what's interesting about the ones that are that big, right? The, uh, they almost all use multiple tendencies that we have.

So, uh, Madoff relied on our tendency to trust things that are familiar. He also relied on our tendency to like things that are really consistent and predictable. So most big frauds tap into multiple shortcuts that we take.

Debbie Sorensen: It makes you wonder, did he just intuitively know to do that? He must have really understood people in a way to be able to know, to take advantage of that. I just, as I was reading, I thought I, how many of these people are intentional about this, and how many of them just figured out that, Hey, this works.

I don't know. Guess maybe we'll never know.

Christopher Chabris: I think there's a survivor bias in, in gigantic frauds, right? So some, someone who ran a 200 million Ponzi scheme and got caught, maybe they just didn't have time to figure out, you know, a few more tricks that Madoff was able to. And, if you read more about the Bernie Madoff case, many times he was close to getting caught and he got lucky and got away.

Or he came up with one thing that would put the, put people off, you know, the, the scent for another time. Like he engaged in fake demos as well. But for investors and s e c investigators and people like that, you know? So, um, maybe other people got to that point and they couldn't come up with the, the solution or they were asked one too many questions and they didn't have a good answer and they got caught, but he managed to carry on.

Debbie Sorensen: Mm-hmm. Yeah. So one thing back to the familiarity bias, just really quickly that, so this is something I was thinking of. You know, there are certain political figures that will like maybe say retweet somebody's ridiculous claim or an article or a conspiracy theory and they'll say something like, well, I don't know if this is true or not, but it's disturbing if it's, and then that's how, I dunno, I just, I feel like that's one of the things that I would really love for people to be more savvy about is because then I think the familiarity bias comes in because then they see it again later and there's like a familiarity to that idea or that headline or that that person.

And then it seems more credible than it is right? I mean, what do you think?

Christopher Chabris: I think, um, that's a very good observation and merely putting a claim out there more and more exploits this, this familiarity bias, it makes people more likely think it's true. So the more ways you can get it out, the more people you can get to put it out there for you. You can say it yourself. You can retweet someone else saying the same thing.

You can even say things like people are saying that sort of implies that there's a chorus of people who all believe this thing and claim it, but you don't identify who they are really. I completely agree. And, and of course you're also relying on truth bias then, right? Because when people encounter these claims, there's gonna be an ever, you know, so slight.

You know, nudge to first accept them and only then question them later. And you know, if you don't have time to relook into them, if you don't even have time to think about them much more after you scroll to the next thing on Twitter, then you know the truth bias may sort of help those things set in.

Debbie Sorensen: Mm-hmm. So you're both in the research world and read, I'm sure a lot of papers and books. I read a lot for the podcast and for my work. And I think one thing I get tripped up on sometimes is like how to, to both come in to look at research and get ideas and see what's out there, but also to be, to have that awareness that there are people out there who have fraudulent data, who, who overstate their claims and that kinda thing.

So I'm wondering how the two of you manage this, like when you're reading papers and when you're doing your work, how do you find the balance between being not, not assuming that everyone out, there's telling the truth, but also still getting ideas from people's work.

Daniel Simons: So we're, we have the advantage that we have years of training in statistics and methodology, which mean that we can actually look at the original literature and evaluate whether it was done well. And we've also kind of learned to over the last 10 years to question things that seem maybe a little bit too promising to be true.

Most people aren't in the position to be able to do that, right? Most of most people aren't going to go and read the original journal articles, and many of those journal articles are too poorly written for them to read anyway. Most people will get their news from the news, from the media, um, from press releases, um, from promotion materials, and it's hard to kind of filter through that.

There's some keywords that you can look for that should make you wary. Whenever a press release says this is a breakthrough discovery, doubt it be questionable. There are very few breakthrough discoveries and there are almost none that come from a single finding. Discoveries generally take a lot of time to be developed.

You have to understand what their limits are, what their range is. There can be exciting news, but if it seems like, Hey, here's this new finding that's going to revolutionize physics, probably not, right? Here's this new finding that completely changes how we think about depression. Probably not. Um, and it's good to kind of assume that there's going to be a hype cycle for findings that exaggerates what the results actually show.

My, my favorite example of this is um, there's a Twitter account called, uh, just says in mice. Um, and that's all it says. It just says in mice, in all caps. And what it takes are articles that were published in the scientific literature. Say for example, uh, you know, gender differences in drug use, right? Or adolescent drug addiction.

And what it doesn't say is that adolescent rats or mice. Right. And gender differences mean the, the sex differences between male and female mice. It has nothing to do with adolescent humans, right? It's a study in mice, so this is pervasive, right? You'll see media coverage of stories that were from studies in mice and have nothing to do with people, but the way they're framed is a breakthrough in the understanding of how to treat people, right?

That's, that's kind of the most egregious example of this. But things like, it's a discovery. Uh, be careful about that if it, if it's something that, um, one, one thing that I like to do with these sorts of findings that are really radical is if this is such a giant effect, such a big finding, how was it that it wasn't seen before?

Right? How is it brand new? And what would it change about the world if it were true? So take something that's an easy case, right? Let's say that you believe there's a paper published on being able to predict the future. Right. Some form of psychic ability to predict the future. If that were true, wouldn't it have been discovered before?

Wouldn't casinos be going bankrupt? Um, wouldn't somebody be making a ton of money by predicting the stock market by using that? What would we see as evidence if this were true? And a lot of the sort of shaky findings in psychology that we talk about were ones that if they were really true, they would radically change our daily experience.

Yet our daily experience isn't radically that different than, than those findings would predict.

Debbie Sorensen: I think that this actually leads to maybe one of my favorite chapters in the book, which was called Potency. And it's about one of the hooks

that gets us, which is, you know, related really to health and wellness in a sense because, and I think it's especially interested to me, since I'm a mental health clinician, because I think I'm trying to find ways to help my clients get better.

And I wanna be healthy in my life. But I also think that, you know, you see headlines all the time, and I must admit, I often click on these, that are taking that, you know, if you follow the nutrition world as an example, it's like they're all over, you know, one minute, don't eat this one. It's 180 degrees opposite, but they always act like, well, this new study really, now we know what to do.

That's just an area where I feel like claims are really, very frequently overblown. And then people latch onto it. What do you think we should be thinking when we read those? And it's almost like, well, this intervention is being sold to me, but it seems like it's too good to be true.

Any advice about that?

Daniel Simons: Well, you're, you're starting from the right spot. If you're, if you're questioning whether it's too good to be true, then you're already doing the right thing and, and asking that question about it. The danger is that we often don't question whether it's too good to be true. Uh, and everybody wants that quick fix that, that easy solution to solve the complex problem.

And as a general principle, quick fixes for complex things just don't exist, right? They take, they all take work. We've seen this over and over again with, with promises of solving really complex problems. Like, um, hey, just do this brain training program and it will stave off the effects of aging on your ability to think and remember. No, it, it's not going to. There's no quick fix that's going to do that. It's always seeking solutions to problems that we all want to solve. Um, but they're never, they're never that sort of quick fixes. But we find those sort of quick fixes really appealing, right? It, it's just, wouldn't it be great if this could solve the problem?

And people cast around for that, especially when they're desperate for help, um, which makes them open to being a target. They're, they're kind of charging in there without asking the question that you started with. Isn't this too good to be true?

Christopher Chabris: And not surprisingly, if you actually do look into the scientific basis for those claims, you'll find lots of little tiny studies with no control groups that were published in weird journals, uh, or, slightly larger

studies where there were a number of different outcomes that they measured in the study, and they picked the one where they, you know, got the biggest effect.

And now they're generalizing that to all of life and, you know, life satisfaction and aging and, and so on. I hate to sound like a conspiracy theorist, but it's all connected. Also when people make these too good to be true propositions, often they're accompanied with very precise claims because precision lures us in, right?

So let's say like this will, this will five x your productivity if you, if you start using this life hack every morning or something like that. Five x my productivity, not 4.3, you know, or 5.1, and what is my productivity anyhow like, and can I really do five times more stuff in the day than I'm doing already?

Like that, what, what would that even mean? Like you, but it sounds like five x as opposed to this will boost your productivity. This will five x your productivity. Like, I think actually it's pretty easy to train yourself, especially once you see more examples. And we have a lot in book where the, where the boundary of skepticism should be here, right? And then you can start to dig in and really see if there is convincing evidence and so on behind these ideas.

Daniel Simons: When, when you look at companies that promote these sorts of quick fixes, um, they, they share a lot of common traits, right? They'll often will, uh, one, one thing you'll see a lot is that they will list their scientific support and they'll make that list as long as they possibly can, and it makes it look like, Hey, they've got a ton of stuff.

But when one rule of thumb is if they're giving you a count of how many things support them, don't trust that. Because they're just trying to create a big number. And often if you look carefully at the things that they're quoting or citing, they're either not actually research or they're research on things that have nothing to do with their product and whether it will actually help you.

Um, it's just, you know, sort of general papers in that area. They'll cite things that had noth that didn't use their materials at all, and just say, look, this is support for our claim. And it's like, no, it's not. Many of them are conflict conflicted, right? The people they're quoting are connected to their company.

In the same way that whenever you see an endorsement of a product, you should be asking, Hey, were they paid for that endorsement? Do they have a vested interest in endorsing that? Will they benefit by endorsing it in some way if they

would, we know to discount that when we see it in advertising. You know, these are paid endorsements.

We know to say, uh, maybe we shouldn't trust that. But companies get away with this all the time

and

Debbie Sorensen: I sent the two of you an example of that, that I happened to come across. It was a very expensive course. It made all those kinds of claims. It linked to some science. I won't name this, this course, but it, it linked to some science and I clicked on some of it. And it was actually, some of it was not even science.

It was just like a, I don't know, a list of people. And one of the things I noticed is that it did have some people that are familiar, famous people supposedly endorsing it. And there was actually the first time I, I looked at that site, there was someone's name on there that is a person I kind of know in our field.

And that person's name was gone the second time. And I wondered if maybe they did not consent to be named on that that advertisement saw it and told them to take them down because I was like, huh. That's very interesting. I, I dunno if you, the two of you had any thoughts about that website I sent you in addition to?

Christopher Chabris: Uh, well, truth bias again, right? They, you assume that all these people actually said what they said or they gave, you know, they're involved somehow. And they use a lot of big names. I, I noticed sort of familiar people who might have said something tangentially related to the topic area that this company is, is about.

And so that's another trick you can use, right? Is sort of pull in like things people actually said, but they weren't about you. Um, you know, that's, that's a, that's a common one. Uh, they really like the use of precision, very precise claims about percentages and, and, and things like that, that you're gonna get. Familiar logos was another one, right? They have like the logos of universities and I bet there are like a hundred companies that have, you know, sites very much just like this. So I, I think that was a classic example. And, you know, One thing that I thought they did well in the sense of trying to draw people in was they didn't say, you can have all this for 99 95.

That is \$99 and 95 cents. It's much more expensive. Kind of just like Bernie Madoff went to people and said, you know, Hey, I have a, I have a minimum like you, you can't just give me like \$10,000 or something like that. This is a, a somewhat of a closed thing, but if you give me enough, you know, you can get in and so on.

And I'm not saying that's what this company is doing, but they're not, they're, they're trying not to make it seem too good to be true in a way. They're trying to make it seem proportional to, you know, to what it's, what it's going cost you, which is maybe a smart tactic on their part. I don't really know much about their business but what we can see on the web.

Daniel Simons: You have to pay a lot of money to multiply your productivity as much as we're gonna do it for you. Yeah.

Debbie Sorensen: Well, I mean, we're back to the Chialdini book influence. One thing they did is they say, apply here, making it seem like it's this exclusive thing and you'll, you're lucky if you get into it. Right. Which is another classic technique for manipulating people.

Daniel Simons: Yeah. Another, another thing to keep in mind, whenever you see one of these sites, the sites can look really profess. Right. And if you think about it, if, if, if they just get one or two customers to buy into this, they have enough money to pay for a really professional website. That's not a big expense. Um, but it can look really good.

And we tend to trust that things that look like professional big corporate websites are somehow more trustworthy. So, um, that, that's a tactic that a lot of sort of really questionable groups use. They have a very professional site and there's no substance behind it.

Debbie Sorensen: And ultimately I think what's sad about some of this is that they're really preying on people's desire. You know, they need help with something, you know, maybe they're feeling unproductive and they're really struggling, or maybe they just really wanna feel better, or they have a health concern they're really worried about.

And so, I mean, to me, that's what's really sad about it. It's they're taking advantage of people who are just desperate for something to help them.

Daniel Simons: Yeah, some of the most kind of egregious examples of this are targeting people who have really complex health problems for which there are

no easy solutions. Um, and they're taking advantage of desperation, right? And whether that's just, you know, all of us aging and wanting to help preserve our memories, or we have parents or grandparents who are aging, you wanna help them to continue to function effectively.

Um, or, you know, you've got a kid who's got a, a disorder and you need to get help for them, and you wanna figure out a way of helping them. It's, it's appealing, it's most appealing to people who don't have options or are trying to find something that will.

Debbie Sorensen: And the last thing you need is to spend money on something that's not really gonna help.

So to kind of wrap up, you know, I know this is a big question to ask in the last couple minutes here, but you know, again, it's back to something we already talked about a little bit, right? Like, we don't wanna be a target. We don't wanna be those, one of those people that they're gonna prey on because we're vulnerable to a scam.

But we also don't wanna be, you know, paranoid, cynical unre to people, untrusting. I mean, that's not really the goal here either. And again, I know this is a big question, but what are your thoughts on how we can ultimately kind of find that balance between accepting and, and you know, the truth bias, and then also being cautious and aware.

Daniel Simons: So everybody's gonna have to find that balance for themselves to some degree. Uh, people vary in how, how tolerant of risk they are. You know, I'm kind of risk averse, so I'm likely to want to check a lot more than most other people will. Other people are gonna be saying, yeah, I'm the, I'm gonna take my chances on this, and that's okay.

I think the real key is thinking about what are the consequences if I'm wrong, right? And, uh, if it's small, Then doing your best not to sweat it and not to think about it too much, um, is, is worthwhile. If you, uh, if you're worried about being scammed by the supermarket and then giving you, you know, changing the prices on the products that you're buying, um, you might spend all of your time checking every price on the register receipt to make sure it's accurate.

If you can afford a mistake of a couple of bucks, either way, probably not worth your time, right? Whereas if you are trying to buy a house, it's probably worth your time to check out the details and make sure you're not being scammed. Um, so finding that middle ground, how much are you willing to risk?

How much are you willing to face the consequences? And thinking through what those consequences might be can help. But I think the, the bigger, uh, solution to this isn't to try and think about when you need to check every single time. It's to try and anticipate what those consequences would be in advance and preempt them.

So, um, take the case for us as researchers. It would be devastating in our lab if it turned out that somebody who was working with us, uh, was making up their data, right? But you also can't go through running a lab questioning every time a student sends you a data set, right? You, you don't want to kind of go through life constantly checking.

So the question is, how can you prevent that without constantly not trusting people you work with and not trusting those around you? And one way to do that is just to build in procedures that eliminate that possibility, or at least make it really unlikely. So, um, you can build in cross-checking in your lab, say, okay, everybody's gonna look at the data and we'll have two people run the analysis just to make sure we don't make any mistakes when we submit it.

Well, that means you've got multiple people looking at the data. It's less likely that you're gonna end up with something that's wrong. All right. Um, thinking about ways of constructively building in checks so that you don't have problems. One thing that we encounter a lot as, as teachers is there's a lot of cheating in classes now, and that's only going to get worse with, with the ability to use things like chat, g p T.

So one thing I did for my statistics class is I created a system so that every student gets a unique data set to analyze, right? So they can't just copy answers from each other because the answers would be badly wrong, right? And that more or less eliminated the obvious cheating that I was finding in other classes.

So I didn't have to check every student. I didn't have to distrust anybody. I set it up so that I didn't have to check. And that, that can really be helpful in maintaining that sort of a balance so that you're not constantly assuming that everybody's out to get you because they're not, most of the time.

The sorts of efficient strategies that we use and the sorts of information that we find appealing is good. It's accurate, it's helpful. So we only wanna be a checking when it really matters.

Christopher Chabris: I would say that it's a lifelong challenge to try to find the right balance between accepting and checking and also adjusting your balance

as you go forward and, and learn more. And as you see, How things are changing. There's no obvious easy answer to this, but just being aware that, you know, you may not be checking enough, you may be accepting too much and, and not checking enough, um, is, is a good start.

And then you can sort of see where you can find the right balance for yourself. Depends on the stakes at which you're dealing, you know, are you leading an organization or just, you know, working for yourself. Those factors all all play into it in, in different situations, but just being aware that your balance might be off to start with is a good place to begin.

Daniel Simons: Yeah.

For most

Debbie Sorensen: I think the best place to begin is to pick up your fabulous book and just be aware, I'm gonna recommend it to quite a few people in my life who I'm hoping never get scammed and cheated. Um, just because I do think, and this is why I'm just grateful for your work and for your book, is that I think just knowing what to pay attention to, having a little bit of awareness can go a long way.

So thank you for writing it and thank you so much for joining us on the podcast today. It's really nice to see you both and great to hear about your work.

Daniel Simons: Thanks for having us on.

Christopher Chabris: Thanks.

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