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EPISODE 5: BAD BUBBLE BEHAVIOR

WILLIAM BERNSTEIN ON MASS MANIAS AND HUMAN NATURE

CARDIFF GARCIA: I'm Cardiff Garcia, welcome to The New Bazaar. Coming up on today's show.

WILLIAM BERNSTEIN: The most compelling story that was ever devised, of course, is the story of the end of the world, and a close second is the story that tells you that you're gonna become fabulously rich without any effort at all.

CG: William Bernstein on how people get swept up in mass manias. Today's guest William Bernstein is a finance theorist. He goes by Bill and he's the author of a few great books, including a couple of my favorites, which were about economic history. But his latest book is something quite different from his earlier ones. It's called *The Delusions of Crowds: Why People Go Mad in Groups*. And it's about some of the famous financial manias of the past, the financial bubbles, where people invested a ton of money, abandoned the sort of prudent time-tested principles of investing, and then lost all their money when the bubbles inevitably burst. But Bill's book is also about famous religious manias and specifically apocalyptic end of days kinds of religious manias. The kinds that often end in tragedy with mass death or mass suicides. And it might seem like a curious choice, right, to pair these two kinds of mass manias. But the book is about how both kinds of manias are driven by the very human tendency to believe and embrace stories, narratives, including stories that are false and dangerous, but also seductive, because of the rewards that these stories promise us if we believe them, and because we see others around us who do believe them.

So in our chat, Bill explains the similarities between financial and religious manias, and we also talk through some of the key differences. And we discuss how we can spot the visible signs of such manias when they arise. A quick word before we start, Bill's book was inspired by an older book first published in 1841 called *Extraordinary Popular Delusions and the Madness of Crowds* by Charles Mackay. Bill and I refer to that earlier book in our chat. Here it is.

CG: William Bernstein. Thanks for being on The New Bazaar.

WB: My pleasure.

CG: I wanna start with a quote from your book, if that's all right. You write early on "Manifestly, man is the ape that imitates, tells stories, seeks status, morally condemns others and yearns for the good old days, all of which guarantee a human future studded with religious and financial mass manias." My first question is why in particular religious and financial mass manias? Because I think on the surface, at least, those would strike people as two quite directionally different kinds of manias, one focused on apocalyptic thinking, destruction, a thinking of negation. The other one, financial manias are, you know, based on optimism, some amount of hope, that bring a lot of terrible behavior and cynical behavior, but that are at least based on, you know, the, this kind of delusion that things are gonna get better and better and better. Uh, so why the connection between those two, uh, in particular?

WB: Well, you just drew the connection between, uh, the two, which is the driving forces. Uh, we are the ape first and foremost that imitates. And so when others around us, uh, become enamored of religious delusions or financial delusions, we tend to imitate them. Uh, we are the ape that tells and likes to listen to stories. The most compelling story, uh, that was ever devised of course, is the story of the end of the world, uh, and a close second is, is the story that tells you that you're gonna become fabulously rich without any effort at all. So that's the compelling narrative part. And seeking of status is obvious. If you're gonna become effortlessly rich, will also acquire status. On the religious angle, what higher status item is there than knowing that the rest of the world is going to go to hell and burn, uh, but you're going to be saved before it all goes down.

And then finally it's the ability to morally condemn others. Uh, so the religious angle in that is obvious. You know, you're condemning sinners, uh, and in the financial side, you're condemning the, the dummies, uh, who just don't get it.

CG: Yeah. And, and also talk a little bit about your predecessor, Charles Mackay, who wrote a book with a similar title. You modeled your book after his. What was the appeal of updating that book for the modern era?

WB: Well, uh, first and foremost, I, I read the Mackay book approximately 25 or 30 years ago, which would've been in the early '90s. And I was, you know, struck by the, the... his description of the financial manias that, that he, that he delved into. But I didn't think they were terribly relevant at the time. The, the capital markets at that point were reasonably well behaved. There was nothing that unusual going on.

CG: In the 1990s, you mean.

WB: Early 1990s, yeah.

CG: Early 1990s, all right.

WB: Yeah, exactly. And you, you just put your finger on it. Within several years, the world went, the financial world and the rest of the world too, went gaga over tech stocks and internet stocks. And lo and behold, I realized that I had read the script and I knew how the movie ended. And I had a lot of experiences that, that mirrored the, the, the experiences of the people in, in Mackay's books, the, the dramatist persona that he, that he described. So that was the first connection with Mackay. And then the second connection, uh, occurred several years ago, w-when like everyone else in the world who was following the news, I was gobsmacked by the ability of the Islamic State to attract adherents from basically around the world, and particularly from prosperous Western countries to one of the worst and deadliest places on earth.

And as I delved into that, I realized that they were deploying an end times narrative that's very similar to what Mackay described. Uh, and also, which is almost identical to the end times narrative that's believed by many evangelical Christians. And so, that was the trigger, uh, for me to start writing the book. I realized that I had to turn out, uh, a modern homage and update it with the necessary neuroscience.

CG: And Bill, obviously there is a lot of history in this book. It is primarily a work of history. You have some previous works of history. You wrote a history of trade called *The Splendid Exchange*. And another book that was mainly about the history of the modern economy called *The Birth of Plenty*. And I'm wondering how those earlier works, those earlier projects ended up informing your understanding of financial manias and religious manias, the ones that you chronicled in this book.

WB: That's, that's a good question. Uh, and I'm not really sure I know how to, to answer it. Uh, you know, I became interested in writing about history because before writing about history, I wrote about finance. And you very quickly discover when you do that, that you can't do that successfully and in a cogent manner without describing investment history. If you're gonna be a successful investor, uh, you have to know some history. And so, I discovered that I enjoyed writing history. I enjoyed the process. I enjoyed uncovering narratives that were not well known and not well described for a mass audience. And so that's one of the reasons why I've been doing this for the past 20 years.

CG: Yeah. And I, I bring that up because in particular with the societal behaviors that tend to accompany financial manias, we really do see a lot of repetition where you might not spot it either if you don't know the history, or if you're young enough that you hadn't experienced these kinds of behaviors in the past that really do seem to crop up each time. There is a financial mania. So let's talk about that now. What are the kinds of things we should all be attuned to that we might actually see if in fact we're in the presence of a financial mania sweeping the world of investments or, or the economic, uh, landscape?

WB: Well, one of the ways that financial economists try to do it is they try to look for that in the data. And the problem is that it's just not there. People from, you know, Isaac Newton to, uh, Eugene Fama to, uh, William Goetzman who heroically tried to sift through the data and identify bubbles, just failed to, to do so. And I was inspired of course, by Potter Stewart's famous statement in a pornography case, which was that, you know, he didn't know how to define it, but he sure knew it when he saw it. Uh, and it's the same way with financial manias.

So you see four things in financial manias. First and foremost, the object of the speculation, whether it's stocks or real estate or Bitcoin or Beanie Babies becomes a topic of everyday conversation. Back in the '90s, you couldn't go to a party without, you know, having people tell you about the success they were having day trading or investing in whatever the tech stock of the, of the day was, or how they got in early on the Netscape IPO.

Just as today, you can't get into an Uber or a Lyft car without, you know, your driver asking you about cryptocurrency, or telling you about his experiences in cryptocurrency. So that's the first thing. When an object of speculation becomes topic A in a social setting, that's, that's one of the prime things. Uh, the second thing that you see is you see people quitting very good jobs, stable jobs with solid salaries to, to trade. And Mackay described that very well, uh, during the, the South Sea Bubble. And, you know, of course it was described in the '20s as, as well in, in, in very many cases. Artists and actresses, uh, quitting their, their day jobs to fill the apartments with stock charts. Uh, so that's the second thing you see.

CG: Bill, actually, I wanna stay on this second societal behavior for a second, because I think it's a bigger deal than most people recognize. You know, a lot of times when people think of financial manias, they think of the ways in which a lot of investments were sent in the wrong direction, you know. A lot of people pulled their money out of safe retirement funds or index funds or something else and they end up sending that money into like these crazy schemes or these stocks that they really shouldn't be putting their money into or other bad investments. And what you're actually seeing here is that people are changing the entire trajectories of their lives, of their careers. They are leaving jobs that they were trained to do in order to go work in an industry, the hot industry in which they're not trained, and don't have something immediately available to actually offer in exchange for their labor.

It's just that they're attracted to that industry because all of the money's going there because of this financial mania. This seems like a much bigger deal than people realize. It's certainly a much bigger deal than just making a bad investment.

WB: Yeah. And there's another point of congruency also with religious manias, which do exactly the same thing. You know, you've, you've pointed out how people's lives, uh, uh, and career trajectories get altered. Uh, and you're generally talking about uninformed participants, people who really don't know, uh, debenture from their derriere, who suddenly become financial experts.

Uh, but there's another aspect to it, as, as well, which is that you see the best and the brightest people in our society, uh, instead of becoming engineers and physicians, uh, suddenly decide that they want to become hedge fund manager, often a great detriment to the quality of their lives, uh, down the road.

CG: Yeah. Yeah. And so what was the, what was the third societal behavior that we see when there's a financial mania?

WB: Yeah. So the third thing that changes, uh, is the meeting of skepticism with anger. And I saw that most spectacularly during the tech bubble of the '90s, when I tried to help them out and point out, you know, the, you know, the, you know, w-what Mackay had described and how congruent, uh, it was to what we were seeing now. And the mildest reaction I got was to be called in so many words, an idiot. And one or two people, you know, uh, almost insulted my parentage. So it's the, it's the meeting of skepticism with hostility and anger. Why is that? Well, it's very simple. When, you know, you believe, uh, that you're gonna become effortlessly wealthy, uh, you're not happy when someone tries to disabuse you of that rather agreeable prospect.

CG: Yeah. And it's not just anger though. It's also a lot of condescension. This idea of, oh, you just don't get the new thing. You are a traditionalist in your thinking. You've always done something a certain way. Your time is over now because you just don't get these new companies. You don't see their promise. Eventually, they'll make a ton of money. You'll see. You just don't understand. So that if you are somebody who in the 1990s was warning about the internet bubble or somebody who maybe right now is warning about other things, right, you are greeted with a response of you're an old timer. Sorry, that stuff doesn't apply anymore because you're not on the cutting edge, we are. And what seems difficult about this is that for a while, it really might look like that's the case. You know, if you had started raising the alarm bells in 1998, well, you know, for two years, you would've had to see all of these people who were condescending to you be proved right.

Because stocks kept going up, these companies with .com on the end of their names, even if they didn't really have anything to do with the internet, uh, they were attracting tons of investment. And you look like an idiot for a couple of years, if you're raising the alarm bells and meanwhile, all these other people are making money on the bubble. And so it's a very difficult thing to cut against the grain in a situation like that.

WB: Yeah, uh, absolutely. I mean, it's not just a couple of years. Uh, during the 19, uh, 90s, you looked like an idiot. From about 1990, uh, until 2001, really. So that was almost, almost six years. And, and there's another point of congruency, you know, with religious manias. People do not like it either when you tell them that their religious beliefs, uh, lack a certain amount of logic. You... It's why your mother told you never to argue religion with anyone.

And it's the same thing. I mean, if I were to give the same advice, I would say, never argue religion or manias with, with believers.

CG: Yeah. I mean, I-in the religious realm, is the response similar in terms of, oh, you just don't get it. We've had this revelation and you haven't. Sorry, you're on the outside. Now, you're not in the in club or is it anger or is it also some combination of, of those two things?

WB: Well, it, it goes to status, which is, you know, the, the fact that you know you are privy to secret knowledge, whether it's in a religious sphere or whether it's in the financial sphere that you derive status, status and self satisfaction from. So it's the same, it's the same thing. You know, people don't like having their status taken away from, from them either.

CG: Okay. So let me just summarize the first three of these societal behaviors that we would witness. One is that everybody, including people you wouldn't expect to be talking about the financial mania, they are talking about it. Second, people start leaving their jobs to participate in this financial mania. People actually change the course of their lives, of their careers because things have gotten so far because they've gotten so swept up in this mania. And then third, a lot of people who bring up the problems, you know, with this mania end up being greeted with, oh, you just don't get it. They are greeted with, uh, a kind of vehemence, a kind of anger that is really quite stunning and they're shouted down effectively. So those are the first three behaviors. What is the fourth?

WB: I'm glad, I'm glad there's someone who's counting here. Yeah. Uh.

CG: That's my job. You bring the knowledge, I bring the digits to count with.

WB: There we go. The, the fourth characteristic of course is extreme predictions. So it's not just that, you know, the stock market is going to go up by five or 10 or 15 or 20% next year. Uh, it's going to double or triple or add a zero. And so when you start seeing those kinds of predictions about stock prices, or about the price of crypto, uh, whatever your favorite crypto is, you, you know, you're in a mania.

CG: Right. So it's, it's not just the extraordinary gains that we saw at the end of the 1990s, it's people extrapolating from those and saying that even those gains pale in comparison to what comes next. It's a kind of, not just extrapolation of the previous recent trend, but an expected acceleration of that trend, uh, that people talk about.

WB: Yeah. And this is, you know, in, in, in small boar fashion, a, a, an empirical fact that's well known to financial economists, which is that the higher the realized returns, the better the more the recent returns, the more extreme people's predictions, uh, tend to be. So if you, you know, were to look for example, at what 401k participants think that stock returns should be right now, the average small investor would probably tell you somewhere in the range of 12 to 15% per year. If you asked them that same question a year and a half ago, they would've said two or three percent or they would've given you a negative number, because the stock market performed so poorly, uh, you know, 18 months ago when we first got into COVID.

CG: I'm wondering if there's yet another congruency there with what happens in a religious mania, these ideas of these terrible predictions, because as you chronicle in your book, there's a lot of instances is where these predictions of, oh, today's the end of the world, and everybody gets ready to greet the end of the world. And then of course, the world keeps on going. And so, they revise their predictions instead of admitting that they were wrong. Um, I'm wondering if there is another parallel there between financial manias and religious manias.

WB: That is, that is a good question. Uh, it's, it's more easily observable in a religious sphere that when a bubble bursts, uh, what tends to happen is that people simply forget all about their belief system, uh, and it becomes, you know, an unfortunate episode in their, in their lives. They file away into a dark closet. Now, what happens to religious manias that get dis-confirmed is a much more interesting subject.

CG: Yeah. I'd love to hear a little bit more about it. In other words, this idea that there is a concrete falsifiable prediction that is shown not to be true. And yet the belief system, the basic narrative persists in a lot of these religious manias. What do you think that says about either human nature or about like just the, the sheer capacity to ignore information that contradicts what we anticipate or what we believe firmly?

WB: Well, this is what made Leon Festinger in his book *When Prophecy Fails* so famous in so many different academic fields. Uh, what he, what he observed was a flying saucer cult that had a very specific date, I think in 1954, uh, where the flying saucers were going to come and the, and the, and the planet was going to get split asunder. Of course it didn't occur. And when that happened, a lot of the believers did fall away. But the, a lot of believers, the remaining ones, doubled down and they began doing something they hadn't done before, which was to proselytize. Why did they proselytize? Well, they were dealing with the cognitive dissidents, which is another term he, he invented of seeing their prophecy disconfirmed.

And that, that disturbed them. So what better way to, to assuage that pain than to be able to convince other people of what you believed and have them then agree with you. And you see that time and again with religious manias and religious predictions that get falsified. Do you... you, most followers fall away, but a lot of people, uh, double down and that's when they can become really, really dangerous.

That's what I worry about, for example, with, with QAnon. QAnon of course, was a disconfirmable hypothesis. Their main hypothesis, it got disconfirmed at the stroke of noon on this January 20th. Uh, and most people, I think who believed in it fell away, or they, they were somewhat embarrassed by it, but there are people who are doubling down and altering the narrative. And those are the people who are really dangerous because that narrative can turn violent.

CG: Yeah. Yeah. I wanna ask about the very premise of the book, which is man as an imitative being. And it strikes me that, you know, imitation is kind of something we should be ambivalent about. And indeed, I think you are ambivalent about the imitative nature, uh, of people, of, of humans. Um, because imitation of course, makes it possible to build on the successes of earlier generations. We see what works, we imitate it, and we carry forward to come up with something new and, and better. Imitation is also the thing that makes us susceptible to these financial and religious manias. And I'm wondering to what extent this was like a constant source of tension, or maybe even anxiety in your mind as you were working your way through these issues?

WB: A little bit. Uh, and I think it's fairly easily resolved though, which is that in a world without writing and where all knowledge is communicated orally, uh, an ability to imitate is extremely valuable. It's what allows or allowed our forebearers to survive in very hostile, uh, environments, uh, and to basically populate the planet. So in the stone age, uh, it was an extremely valuable characteristic. It is less valuable now, in a postmodern, post industrial service driven economy. The ability to imitate is not nearly as valuable, uh, as the ability to take in and analyze data, which we aren't hardwired to do at all, as, as we both know.

CG: Yeah, you, you make the point that we are something like 300 generations, uh, separated from the stone age, and that's not really very many, if you think about it. You know, in terms of changing, in terms of altering our evolutionary path, there were many, many, many, many more generations than that leading up to that break with the stone age, uh, before, right? I mean, I think, you know, people have been sort of recognizably human for tens of thousands of years, possibly hundreds of thousands of years. I'm not actually not entirely sure myself on, on the pre-history there. We're now just talking about, uh, a span of time that's quite short. And if you think about financial manias in particular, well, something resembling the modern financial system hasn't really existed for very long.

You're talking about an even shorter period of time than you are for religious manias. And so it's gotta make it very difficult, not just to sort of alter, you know, how people behave and how people learn from the recent experiences, but just to analyze how this all works, because we actually don't have a huge sample size relative to what, you know, humanity looked like and resembled for all of history and, and pre-history.

WB: Yeah, Jimmy Buffett put it best, we are cavemen in blue jeans. And, you know, back, back in our stone age, hunter gatherer past our risk horizon might have been as short as a few seconds, and our planning horizon might have been, you know, a week or two going from, from field to field and, and, and ranged to range. Uh, and as we evolved into an agricultural society starting about 10,000 years ago, maybe our time horizon, our planning horizon and our risk horizon length into a growing season or two. Well in modern society, our financial planning horizon is now a half century.

Uh, and we are profoundly maladapted to deal with that. In other words or putting it into plain English, uh, the average person is very psychologically maladapted to save and invest for retirement, which is a, you know, it's a 50 year process.

CG: Yeah. Bill, your book explains how new communications technologies make it easier for these financial manias and religious manias to take hold, to spread. And that's on the one hand, pretty easy to understand, because of course, when you have a new technology, like, I don't know the printing press, you know, it becomes easier to reach more people. The number of people that the mania can reach, uh, is expanded. I'm wondering if there's something different now, because in the last couple of decades, it seems like the whole world has already become connected.

You know, because of the internet, because of digital technologies, it becomes very easy for information or for a story in one part of the world to reach the entire opposite end of the world. Like that, that problem in effect seems like it's solved for the most part, and yet we still have financial manias, we still have religious manias. And I'm wondering if there is something different now about the way that communications and communications technologies work to make these financial manias and, and religious manias happen?

WB: Quantitatively yes, but not qualitatively. As you, as you point out, the real revolution in communications technology began with Gutenberg and the inexpensive availability of, of print. Uh, and that's been accelerating, you know, for the past 500 years through steam driven printing presses and the telegraph, uh, and television and radio, and finally, uh, the internet and, and social media. So it's just a constantly accelerating process, but the underlying driver of both financial and, uh, religious manias is still person to person contact. And, uh, you know, the, the mania of, uh, uh, for example, in the South Sea bubble, uh, or with the Mississippi Company bubble almost 300 years ago has almost the same temporal trajectory, uh, as the modern manias. You know, like it basically arose over months and collapsed over months. Uh, and in fact, if anything, the internet bubble was much slower than the South Sea bubble.

So I, I tend to discount the qualitative aspect of it. Now, what is happening today with, with social media is for something, something we've never seen before, which is we're evolving a, an algorithmically-driven epistemic crisis where people really don't know what ends up anymore because of the way that, that the algorithms, uh, and the social media companies, uh, spread, spread, basically fake news. That's, that's something which I think is qualitatively new.

CG: Another element to this could be that with so many people already connected digitally, um, throughout the world, that the way that a word gets spread now, the way that information gets spread is not just through like the sort of normal channels of social media, but also the intensity of the belief in this information now seems to belong increasingly to tribes that form online. So I, I'm thinking specifically of something that happened, you know, uh, within the past year, which is that these groups on Reddit, for example, get together and decide to drive up the stock price of a particular company that they choose, you know, on Reddit. And where they, they get the word out, everybody starts buying up the stock. Then Wall Street sees that this activity's happening. So it wants to get on the trend. This happened most famously with, with GameStop stock in the past year, but it happened with AMC and a few other stocks as well.

And what's interesting to me about this is that, you know, it's not like there was a new communications technology that spread the word more widely, it was that there was this group where a lot of people got together and decided that the intensity of the belief in this would be so strong that it would convince people to make a decision with their actual money, even if they suspected that they would end up losing money to the point where people are bragging sometimes about the money that they lost in these activities that they were partaking in, because it signaled to the rest of their online tribe, that they were a part of it. So qualitatively, that seems to me like something that's a little bit different or, or, or somewhat new as an addendum to the fact that like the world has become more digitally connected, you know, over the last few decades. What do you think?

WB: Yeah, again, I would say that that's more quantitative than qualitative. Joseph P. Kennedy, who ran the great stock pools of the late 1920s, would've had no trouble at all understanding what happened with Reddit and GameStop. All that really changed is that the pool of people who could participate greatly expanded. Okay. I mean, you know, Kennedy had to get them together in a hotel room, uh, stocked with, you know, booze and prostitutes to, to, to accomplish that during the '20s, now it gets done, you know, when you're, when you're on your smartphone.

CG: Yeah. I guess that's the, the other part of this story as well, which is that in addition to communications technology, there was a different kind of technology that ended up making it easier to, to participate in these kinds of trades, right. You know, in the last few years, Robinhood, and then the other smartphone trading apps that have chased Robinhood effectively had, have made, you know, doing these trades incredibly cheap, incredibly easy. They've used behavioral techniques to try to draw people in. And so you now have more people participating. And it's interesting, too, because when I ask a lot of people in finance about this trend, they will sometimes say that there's two ways of looking at it. On the one hand that it democratizes finance, that more people are learning about finance and participating in the markets.

And that this potentially could be a good thing because it means that more people are able to participate in what they hope is a long-term upside appreciation of the capital markets. On the other hand, of course, a lot of people who may not understand the very foundational principles of investing, the lessons that have been learned over the last century or so, are going to make a lot of mistakes and are going to lose a lot of money. So where do you sort of come down on this and, and how does that sort of fit into, to your thesis on financial manias?

WB: Yeah. Uh, uh, if I can be a little cynical here, I mean, the one thing that has astonished me throughout the past se-several episodes in the past several years is the ability of Stanford University, uh, to train its graduates, to rationalize morally dubious enterprises as being in the public interest. And that's what that democratization narrative is. That's what you heard from, for example, from the, the founders of, of Robinhood. Uh, I don't believe it for a minute. I think that for every, for every person who gets interested in investing and then finally learns how to do it, right, they're going to be a hundred people who get burned.

CG: Yeah.

WB: I, I see it as an, almost an entirely, uh, uh, negative phenomenon. A-and the thing that fascinates me about it is that if you, you look at the, the Robinhood app, it looks suspiciously like a gambling machine, a Las Vegas gaming machine. And there's an enormous amount of psychological research that has gone into the development of these machines, to keep in return, it's using the gambling industry’s time on device, all right, to keep them putting their money into the machine. And it's the same thing with Robinhood. It's time on device. It's, you know, earning the payment for, for order flow.

And it's very well described in a book by, uh, Natasha Dow Schüll, who's an anthropologist. I think she's now at NYU. And she doesn't describe at all the financial markets, but you read her description of the gambling machines and the design of these machines. And she's, she's talking about Robinhood.

CG: Yeah. I, I should, uh, list for our listeners who are wondering about Robinhood and maybe haven’t joined up on it themselves, what exactly it is that Robinhood does in terms of taking advantage of behavioral biases. Essentially, one of the things it does is it gives you a running tab of like the most popular stocks, which of course doesn't tell you anything about whether or not these stocks are a good idea to invest in. They're essentially using the mechanism of social proof of saying, look, all these other people are trading in these stocks, therefore you should know about it. And then you might be tempted to think, well, if everybody else is investing in these stocks, then great, maybe I should, I should get in on this too. So to your point, Bill, about imitative behavior, um, it's catering to that. Another thing it does is it sometimes just gives away very small amounts of shares of other stocks.

So if you sign up, you might get a few free shares. It won't be worth a ton of money, uh, and they may not go anywhere, um, but it's enticing to people to do that. Uh, and then it also has like this kind of, um, this kind of celebratory mechanism where, you know, when you buy something, uh, it's celebrated, whereas again, that's completely untethered from the actual wisdom of whether or not it was a good idea to make the specific trade that you just made. So anyways, it employs all these tricks to get people into the markets.

Um, and then once you're there, then you might be susceptible to the kinds of things that, that you're talking about, Bill, in terms of imitative behavior or getting advice from, uh, people who, uh, you know, may or may not, you may not be well advised to listen to. So any, any, any further thoughts on just sort of the modern environment and, and whether or not you see some relationships between the manias that you described in your book and what sort of happened over the last few years, um, and where?

WB: Well, yeah, I mean, you know, just, just to do, you know, to further the gaming analogy, uh, you know, the free shares of stock are the free chicken dinner you get combed at the casino, it's basically the same thing. Yeah. I don't see much change in the behavior. The behavior that I'm seeing now among crypto enthusiasts is exactly the same behavior that I saw 25, uh, years ago. Now, but the one thing that you have to be very careful about calling something mania, uh, or a bubble, is that they're actually pretty darn rare.

Uh I've you know, before, before the, the crypto mania, uh, the, the, the only one that I ever saw was, uh, the one that occurred in late '90s. And before that, uh, really you have to go back to the '20s to see a real stock mania. So they don't occur very often.

CG: Yeah. Th-this is something I actually struggled with quite a bit, which is the sort of the need or the want to be open-minded about things. And, and I'll put this in the context of cryptocurrencies for a second, because I'm not, you know, somebody who totally understands all the technology underlying cryptocurrencies. I mean, I, I follow this in, you know, in the press, in the media, I do a little bit of research, you know, for my job, but this is not something that like, I have a great grasp on, right? And as of right now, I think the problems that crypto evangelists have been saying that crypto will someday solve that simply has not come to pass. Like crypto, it seems unlikely will ever be a replacement for proper fiat currencies.

And in terms of what the blockchain technology might do, right, maybe, maybe it's possible that someday it'll be deployed in a number of different industries and that it will be transformative in those industries. I want to be open-minded about the possibility that that could happen. Right now, since I don't see those problems being solved, it leads me to be quite skeptical of, you know, the, the sort of the run-up in cryptocurrencies and the fact that I think a lot of people who are invested in these currencies also don't have a sort of a story for why it is they're investing in it. They see it as a speculative asset that's made a lot of other people a lot of money. Maybe it's already made them a lot of money and they want to stay in it because they think it'll keep going up.

And so I can't sort of answer those questions yet of just what it is that crypto will solve, but I also don't want to be so close-minded about the possibility that in the future, it really might end up being a transformative technology, similar to how maybe in the past there were moments where, you know, technologies that would in fact prove to be transformative, had a lot of stumbles in the beginning of their lives and, you know, you couldn't answer the question of what they were doing then either. That would come later as a lot of smart people were tinkering with it and working on the technologies and so forth. So what are your thoughts on this idea of taking a skeptical approach of seeing a lot of the similar manias driven behavior that exists now, but also being open-minded about the possibility that you actually could be left with something quite useful here? Um, maybe, maybe not, but not being like completely shut off to that possibility just yet as it's happening.

WB: I can answer that on two levels. Uh, on the first level, you can never be entirely sure with any forecasting exercise. All right. And in fact, uh, I described probably a good half dozen bubbles in the book. One of them, which was the second railroad, English railroad bubble in the 1830s actually did not work out too badly for investors. Now, the bigger point that I make in the book is that, you know, bubbles typically arise in an environment with cheap credit, which we have, and with technological advance. And those technological advances very frequently change the world. It's just not that the companies that initially invest in them, uh, are the ones that make all the money.

And the classic example of that during the tech bubble was Global Crossing. Global Crossing laid what is still probably about 20% of our current under sea, uh, fiber capacity. All right. And you know, you and I are probably benefiting from it right now. It had enormous, an enormous societal payoff. Unfortunately, uh, the shareholders got about a penny on the dollar out of it.

CG: This is a great story, by the way, and an important one, because Global Crossing this company, you just described, run by Gary Winnick quite famously who wasn't a very good businessman. Didn't know much about running a company. Didn't even really know that much about telecommunications, but under his watch ended up connecting the world, losing all of their shareholders, all their money, but left us with this genuinely transformative societally beneficial technology, is wonderful in a sense. But again, if you're somebody who had your, your life savings in Global Crossing, uh, if you're somebody who is relying on that money for your retirement, you would have a very different view of this than the rest of us who think, oh, great. Like you left behind like some really useful infrastructure. And it goes to this question again, of ambivalence towards financial bubbles, where they can leave behind something quite useful.

But in the meantime, a lot of people investing their money in the companies that get swept up in this and a lot of investors who themselves get swept up in this are going to feel a lot of pain. There's going to be a lot of damage and destruction on the other side of the bubble when it finally bursts. But that doesn't mean that they are unequivocally a bad thing in every case.

WB: Yeah, you see this time and again, uh, in economic history. You saw it back in the '20s when Samuel Insull built this, uh, enormous empire of power transmission companies or power companies that's, you know, still is an infrastructure that's still there and forms our basic societal infrastructure. He basically destroyed most of his investors. The railroad bubbles of the 1840s, uh, in England and to a lesser extent in the United States transformed the economies of both countries. And in fact, the rest of the world didn't do much for their, for their investors, however. And there's a phrase that I, that I, that I like to use to describe this, which is the tech investors are capitalism's philanthropists. They basically donate their assets for the benefit of the rest of society.

CG: There is an interesting distinction that I thought of as I was reading through some of the examples in your book, which is that in terms of whether or not a bubble actually does end up leaving behind something that is of societal value, the type of innovation that first sparked the bubble, or that was maybe the key ingredient in the bubble might matter. So to take the two simplest examples of the last two bubbles and bursts that we lived through, you know, the innovations of the late 1990s during the tech bubble, you know, they sort of left behind... There was a lot of investment in like some ideas that at least contributed towards the development of things like remote working technology and connecting the world digitally. Uh, and other things that I think have proved to be quite useful over time even if the technology back then was still sort of rudimentary.

Now, if you think about like the mortgage bubble, there was no sort of similar societally useful innovation. The innovation that seems to have happened was all on the financing side. You know, it was in the financial sector, it was through the development of, you know, off balance sheet vehicles and, and, you know, securitization and things of that nature that were extended and intensified to different parts of the financial sector. There wasn't actually an attempt in the non-financial sector to come up with something that was new and societally useful. And I'm wondering if that's a distinction that you've also, uh, thought of, and, and if you think that that idea could hold merit when looking at the bubbles of the past?

WB: Yeah. I mean, there's good investment and there's bad investment. Investment in technology is most often good or it's very frequently good. Investment in real estate rarely is, particularly speculation in real estate is, is never good. And there are a number of reasons for that. But the primary reason is that speculation in real estate, particularly residential, real estate is done with debt for, for the most part, it's done with, with lending. And, you know, if, if the government borrows a truckload of money and can't pay it back, well, at least it can print money. Uh, if a company borrows a truckload of money, maybe they can come up with a new product and, and, uh, and, and get out from under it. But if you, uh, invest in real estate and you have a mortgage that you can't meet, and you're already employed, that's going to be very damaging to the overall economy.

You're just going to stop. You know, when you, when you, when you find yourself underwater and your house gets repossessed, uh, you stop spending, full stop. Uh, and when that happens to millions of people, it's incredibly toxic, which is why the collapse of 2008 and 2009 was so devastating. And why the stock market collapse of 2000 to 2002 was not.

CG: Do you think that the possibility that a financial mania could leave behind something societally useful is the biggest difference between financial manias and religious manias? Because i-it is hard to think of something societally useful that comes from these sorts of apocalyptic end times manias that can arise in the religious sphere. And frankly, quite the opposite. A lot of, a lot of times, this ends I-in a lot of tragedy, and and death and destruction.

WB: Well it’s an interesting general question. When you look around the world and you, you know, catalog the 1,263 societies in the ethnographic Atlas, uh, every single one of them has a religious belief system of some sort. And it's obviously a... it's a method of crowd control. It's a way of preventing free ride, free riding and keep on keeping people cooperating profitably with each other. So you have to be very careful about discounting the value of religion. Uh, on the other hand, uh, you look at, you look at religious manias and they seem to be singularly destructive phenomena. So it's a very, it's a very difficult conundrum in paradox to resolve.

CG: I want to ask about the tronics bubble of the 1950s and '60s, because it was an early example of a phenomenon that we would later see in the tech bubble, and that we're kind of seeing now. Can you tell us about that?

WB: Well, yeah, this was a relatively small bore bubble that didn't much affect the wider stock market. And so there was, uh, you know, William Shockley invented the transistor back in the, uh, the 1950s. And so, you know, we get these nifty little radios that, that had been, you know, a device that, you know, you spent a month’s salary on and, you know, it took up half your living room. Suddenly, you could put one in your, in your pocket and listen to on the bus. And so, it was an exciting new technology that excited people. So all you had to do was to add the name tronics to the name of your company and its value would, would triple.

But there was a company that manufactured ordinary music, musical instruments, uh, called I think, Guild Musical Instruments, and it added... just changed its name to something, something tronics. And its stock price just absolutely rocketed. And of course you saw the same thing, you know, back in the, uh, uh, the nineties, all you had to do was add .com to the end of your, your company and it juiced the stock price.

And that I think is a phenomenon that was probably, I think, invented back in the early 1960s as you described. I'm, I'm trying to think of examples before then and I, I can't really come up with any.

CG: The reason I bring this up is because your book describes, um, the sort of unlearning of history that tends to happen in some of these manias where we actually have seen instances of something in the past, but we just kind of forget through the generations and we find ways to rationalize why a thing is happening. You know, I'm sure that people who invest in a company that just adds blockchain to its name or whatever, have a, have some thesis for why they're doing that. Um, and it seems to me to be a symptom of a kind of general forgetting that can happen over time.

WB: Yeah, I mean, Einstein is supposed to have said that the most powerful force in the universe was compound interest. Of course that's apocryphal. Uh, but I disagree with it anyway. The most powerful force in the universe is amnesia.

CG: Yeah, last week we had on an economist named Ulrike Malmendier, and one of the points she makes is that an early event, a big event, like living through the Depression or living through more recently, you know, the, the collapse of the internet bubble or the collapse of the mortgage bubble in the late 2000s can leave an effect on your decision-making in the future. And that effectively what happens is that people tend to sort of average out the effects that they've lived through so that if you're very young and you've just lived through a calamity like the Depression, well, for a very long time, you're going to be very wary of investing in the stock market, say. If you had money in the stock market and you lost all your money, you're going to be more cautious about investing in the stock market. Then either people who didn't live through that later on, or people who have just been alive for longer until they've lived through different states of the world. I'm curious to get your thoughts.

WB: Yeah. I mean, I'm a fan of Ulrike's and I, and I listened to that interview. It was a great interview. And I thought about my mother who lived through the Depression. And one of the enduring memories I have of my childhood is watching my mother at a restaurant wrap a, uh, single spear of asparagus in cellophane to take home. You know, I think that that's... But I think that the, her basic thesis that we sort of average over time is, is correct. You know, certainly, investors were devastated by the global financial crisis in 08/09 to just to agree with, with Professor Malmendier, uh, I don't see much evidence that the people have retained that memory very well in their current investing habits.

CG: Yeah. Or, or there's a new generation that didn't live through it and they're now sort of, of the age where they're making a bunch of money and they might just be more aggressive than the people who did have money invested during that time and lost it. But also in the time since, the stock market, you know, I think at this point has almost quadrupled or something from the, from the, the low point, you know. So it's like that event has now essentially been, certainly not eradicated from our memory, because I, I at least I certainly remember it quite well.

Um, but in terms of its effects on us, on how we behave, on how we decide, how we choose, uh, it's been kind of offset by sort of subsequent events, you know. And I, I don't know what the sort of end result of that is going to be, but it certainly is impossible to look back on the last few years and think that like everybody has learned those lessons. Because cer-certainly there are people diving into some ideas now that look a little bit suspicious.

WB: Yeah. I mean, as, as someone who, you know, does investing for a living, but the date March 9th, 2009 lives in my memory, the S&P 500 bottomed, uh, at 666, a great number. Uh, and it's now up by a factor of, of six. Uh, that'll, that'll erase your memory of that event, uh, fairly well, I think.

CG: Yeah, and finally, Bill, I got to say your book ends on a not very hopeful note. It, it essentially ends on a note of things have not changed too much since the days of Charles Mackay. We can just explain things a little bit better than we could back then, but that, because humans are hardwired the way they are, they will probably keep making the same mistakes and they will probably remain vulnerable to these kinds of manias. But, the fact that you wrote the book itself to make people aware of this and to, and to add that better explanation strikes me as, as a signal of possible optimism. Uh, what do you think?

WB: Not much. I mean, Mackay, not so much.

I mean Mackay, Mackay wrote, you know, a, a very similar book 180 years ago, uh, and that didn't seem to help very much. I mean, we are who we are and I, I think I can predict with near 100% certainty that, you know, the coming decades and centuries, we'll see more financial manias, uh, and more religious manias as well. I just don't see any way out of it.

CG: Yeah. Can we make ourselves more robust to manias?

WB: We can, we can try. Uh, we can try, but, I, I, I, again, I don't mean to be such a downer, but I, I just don't see, I just don't see, I just don't see us, I just don't see us succeeding. The only hope that I see is that somehow rather the human species can evolve. It's, you know, it's, it's central nervous system wiring to lose those responses. But short of that, I just don't see how it's going to happen. And maybe brain implant, maybe brain implants, who knows

CG: Uh, we'll rest our hopes on, on the brain implants then, uh. Bill, thanks so much.

WB: My pleasure, sir.

CG: The book is *The Delusions Of Crowds: Why People Go Mad in Groups* by William J. Bernstein. It is now available at your local bookstore or Amazon or wherever you shop.

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