The Lucky Footprints
Episode 8

Probability vs. Luck

A talk with Dr. Claude Needham

In this talk, Dr. Claude Needham discusses many of the practical aspects of luckiness, starting with the question, "What would happen if you flipped a coin and flipped heads a hundred times in a row?" From there, he takes us into the worlds of research into randomity, the very weird marketplace for randomity, the mindset of pygmies preparing for a dangerous hunt, the secret extreme sports competitors rely on, and what Claude learned about "the truth" during his years working in a quantum physics research team.

Probability and luck, often conflated, are distinct: probability deals with fixed odds unaffected by past outcomes, while luck involves subjective, situational interpretation and human intuition about connected events. Despite mathematical models suggesting randomness, patterns emerge in reality, challenging the notion of pure randomness and highlighting human sensitivity to perceived connections and unlucky or lucky signs in various contexts. This tension underscores the broader human experience of navigating between hard data and the subtleties of lived reality.

"Some folks confuse probability and luck. They're related, but they're very different things.

"Luck is about your connection, about your relationship, to what is. And probability has to do with odds, with probabilities. How probable is something?

"If you have a coin and you flip it, odds are 50% it'll come up heads and 50% it'll come up tails. And every time you flip it, it has the same odds.

"You could flip a coin and flip head a hundred times in a row. The odds when you flip it that hundred and first time, that it will be heads, is still just 50%.

"Probability does not account for memory. Probability does not account for any phenomena that would connect those events.

"Are the events connected? Unknown. Because if you're talking about connected events, you have to talk about something very specific. It's not in general.

"We're just talking about, at the moment, flipping a coin. So in that abstract thought experiment, there's no connection.

"But we know. See, the thing is, get what I'm saying. If you flip a coin, and it comes up heads a hundred times in a row, and you're getting ready to flip it again, nobody in the room thinks that that's just raw probability operating in an empty universe of numbers. There's something going on.

"Some people will be convinced that the next flip has to be a tail, because there's no way that you can keep flipping heads. Somebody else is on the other side of that, saying, 'Oh, no, this is going to be heads again.' Because he's on a roll. This is going to be heads.

"Both of those people, the ones that are betting with you and those that are betting against you, both of them suspect, or are convinced, absolutely convinced, that there's more to the universe than raw numbers.

"That is part of the human condition. We live in a universe of numbers, but that's not our experience.

"Now, some people, that have a particular bent, spend all their time denying the possibility that there can be anything other than numbers. I think that's

a form of blindness.

“Their efforts to suppress other people’s involvement with the prospect that there’s something more than numbers, their desire to squelch that idiocy, in their opinion, leads them to become blind to their own observations.

“This is something that people who do research into randomity—randomity research is actually a full field. It’s a very important field, because there’s certain corporate encryption which depends on finding a truly random number.

“And as people start doing research to find random numbers, the one thing they keep finding is, everywhere they look for full randomity, they don’t find it. They keep finding patterns in the randomity.

“They keep pushing and pushing and pushing, trying to get to randomity. And if you look at the extremes that they go to generate random numbers, if you could find a cheap way, a cheap, easy way to get random numbers, you could make a fortune.

“You could maybe make billions, I don’t know. That marketplace is very weird because of the expense of getting this random number.

“So that demonstrates that there’s stuff going on. Well, what’s going on? There’s some individuals that think, unless you know fully and can put a name to it, and an explanation to what this other thing is that’s going on, then it can’t exist. That’s just crazy talk.

“It’s like people saying, ‘No, no, no, no, no, no. There can’t be a thing called infection caused by mysterious agents, because we can’t see them.’ We couldn’t see bacteria, so bacteria could not be an issue. Well, how stupid is that?

“‘No, I don’t have gangrene, because I can’t see the bacteria with my naked eye.’ Well, stop being an idiot, look at your arm, see it all kind of weird-looking and stinky, you’re gonna have to admit, something’s going on.

“And people’s experience is that something is going on. Precisely what is going on? I don’t know.

“Take the example of a pygmy going out on a hunt. They’re going out on a hunt. They go through all the trouble of having their ‘we’re going on a hunt

tomorrow' dance the night before. They have their 'going out on a hunt' feast the night before.

"So they get up. They're getting ready to go, and something . . . an unlucky sign is there. Maybe the head hunter steps on a rake and smacks himself in the face with the rake. They don't have rakes, but the pygmy equivalent of stepping on a rake.

"They call the hunt off. Why? Because it was unlucky.

"Well, what if it was just psychological? So? Putting the word 'just' in front of the word 'psychological' to demean it as unimportant and not worthy of having influence on events doesn't make that so.

"Would you go out hunting beasts in a dangerous environment, in which one misstep could break an ankle, which brings about a lifetime crippling condition, if you were feeling unlucky? You're off your edge. So whether you're picking up on the subtle influences of the bibbity-bop, or it's just you off your game, or if it's X, Y, or Z, it doesn't matter.

"Either you're paying attention, or you're not. If you're paying attention and you notice, hmm, not a lucky time, all right. Maybe that's not when you should do things where the edge between success and failure is not so certain.

"If you work in a bottling plant, and you pull the handle down that puts the cork in the bottle, and you've done that a milliion times. Every time you've done it, the cork goes in and everything's fine. All right, that's not something where luck plays a large part of it. It's kind of, pull the handle, the cork goes in. Pull the handle, the cork goes in. That's not something which is readily affected by the vagaries of who-the-heck-knows.

"But there's other activities where that's not the case. There are certain tricks that extreme sports people do not try unless they're feeling 'on.' There's a feeling they have when they say, 'Oh, yeah, I'm feeling on. Yeah, it's feeling good.' Then there's certain tricks they'll try. But there's others they won't, unless they're feeling on, because they know that there are subtleties that enter into it.

"Where do those come from? It doesn't matter.

"If you're surfing, you're out on the water. Having an appreciation for the

various physical influences that create waves, that can be fun, that can be instructive. But it doesn't help you determine which wave coming in is going to be the one to catch.

"Because they don't catch every wave. There are six waves coming in, and they spot that that fifth wave, or the fourth wave, no, no . . . no, the third wave . . . that's the one I want to catch.

"That comes from an intimate relationship in that circumstance. It doesn't come from understanding all of the dynamics of tide and wind and ocean currents. That's not what helps them pick the wave.

"What helps them pick the wave is their relationship in the moment. So, this obsession that some folks have, to suppress and squelch the existence of this other realm, simply because the folks that are operating in it can't point to the exact physics behind it, is stupidity. It's just sheer stupidity.

"If you walk into a restaurant and there's one patron that has a bunch of flies buzzing around their head, you do not need to understand why they have flies buzzing around their head in order to decide to sit somewhere else.

"I mean, that's psychotic, to not act on your own instinct, your own enmeshment, unless you can describe the physics. And it's sure stupid, and it's not consistent. Because you do not, I guarantee, you do not understand why the lights go on when you flip the switch, or when you clap your hands, or whatever you do to make the lights go on. You don't understand why they come on.

"There's folks that will give you explanations, and you may even have one in your head, but that is not the truth. You can't handle the truth.

"And I say that based on the fact that when I was working with my research team in quantum, we would get to the edge of the truth. It was a game we played, all of the scientists in that department.

"We would approach the edge of the truth, but we could never get to the truth. We just got closer, and it was something that we would endeavor at, but we did not get to the truth. We came up with better explanations that won awards, but we didn't get to the truth.

"And if you talk to anyone in the field and they say that they got to the truth, if they say yes, it's because they don't respect you enough to give you

an honest answer, or there's not the time to give you an honest answer.

"Because the honest answer is, 'No, of course not. We just have models that have better predictive value.'

"Up until, what is it, twenty years ago, twenty-five years ago? It was fairly recent. It was an absolute truism that trees did not communicate. There wasn't a botanist on the planet that would agree that trees were communicating and helping each other.

"It's like, what? One tree help another? I don't think so.

"Now, they are working out the exact mechanism how that happens, and they're working out the dynamics, but that was entirely invisible. It was an invisible realm.

"Now, there were people that lived in the forest who could tell you that that's the grandma tree, and that meant something to them when they said that. They knew that tree was watching out for the other trees.

"All of the scientists said, bullshit, there can be no such thing. But the native, meaning the one that was actually in that environment, knew for a fact that, no, no, that tree is watching out for these trees."