Boring, ineffective ad campaigns are almost always the result of data-worship.

Nobel Prize-winning physicist Richard Feynman famously said,

“The first principle is that you must not fool yourself and you are the easiest person to fool.”

He was talking about using data to make predictions.

Amos Tversky, one half of the Nobel Prize-winning duo* of Kahneman and Tversky, renowned for their discovery of systematic human cognitive bias (the tendency to fool oneself,) said,

“Man is a deterministic device thrown into a probabilistic universe.”

from Chapter 7: The Rules of Prediction,
in *The Undoing Project* by Michael Lewis.

To understand what Tversky meant, we'll need to probe the terms ‘deterministic’ and ‘probabilistic.’

But before we do, I should warn you that exactly 54.2% of the people in America would be annoyed if they read what I’m about to say.

I sincerely hope you’re not one of them.
When Tversky said, “Man is a deterministic device…” he was referring to the deterministic belief system that underlies Newtonian physics:

“...It is an organized universe.”
“...Everything happens for a reason.”
“...Everything can be known in advance, as long as we have enough data.”
“...If you don’t like the effect, just trace up the causal chain — change the cause — and you will consequently change the effect.”

The deterministic belief system is logical, rational, sequential, deductive reasoning. It is an incontrovertible religion to the 54.2% of the population who believe in it. And there’s nothing wrong with that unless you’re in advertising. Sadly, the majority of advertising professionals cling to deterministic beliefs. I call these people the data worshippers. At the center of their religion is the belief that success is due to “reaching the right people.” Data worshippers make no room for whimsical wit or flights of fancy. They give no place to the mystery of curiosity or the magic of storytelling.

I’ve never seen a business fail due to reaching the wrong people.

1. I believe every person can be “the right person” or knows the right person and has influence over them.
2. I believe in saying the right thing, engaging the imagination and winning the heart, knowing that the mind will follow. The mind creates logic to justify what the heart has already decided.
3. I believe in (probabilistic) bonding with the masses.

This causes deterministic marketers to say to me, “You’re hunting with a shotgun. We’re using a rifle with a scope.” And my reply never changes. “The goal is not to kill, but to capture. And you’re fishing with a hook. I’m using a net.”

When Tversky said mankind had been, “thrown into a probabilistic universe,” he was referring to the probabilistic belief system that underlies quantum mechanics:

“You can suspect what will probably happen, but you can’t know for sure, even when you have total information.”
“You don’t really know until you get there.”

Ninety years ago, at the Solvay conference of 1927, Albert Einstein (a determinist) objected to the theory of quantum mechanics, quipping, “God does not play dice.” Niels Bohr (a probabilist) told Einstein to “stop telling God what to do,” and won the day. (17 of the 29 attendees at that conference were or became Nobel Prize winners.)
Deterministic scientists—and marketers—defend their decisions by pointing to predictive data. Probabilistic scientists—and marketers—defend their decisions through outcomes. In all of science, the two things most known to be true are (deterministic) Newtonian physics and (probabilistic) quantum mechanics.

The odds against Newtonian physics being incorrect are $10^{16}$ to 1. The odds against quantum mechanics being incorrect are $10^{19}$ to 1. But the pair are mutually exclusive. They cannot both be true.

Have you ever heard of “the search for unified theory?” Now you know what scientists are trying to reconcile.

In his 1996 book, *The Nature of Space and Time*, Stephen Hawking (a probabilist) referred to the 1927 Solvay conference when he said, “Not only does God play dice, but he sometimes throws them where they cannot be seen.”

Remember Richard Feynman? He’s the Nobel Prize-winning physicist who said to a group of physicists, “The first principle is that you must not fool yourself and you are the easiest person to fool.” Immediately prior to making that statement, he said, “Physicists like to think that all you have to do is say, ‘these are the conditions, now what happens next?’”

Both men were obviously poking fun at deterministic beliefs. I, however, am not.

In my 38 years of experience, I have noticed that a deterministic system of managing a business leads to operational excellence. The probabilistic system of managing a business creates a country club for employees. But this applies only to operations.

In those same 38 years, I have noticed that every great success in advertising has sprung from probabilistic intuition. But the middling mediocrities of advertising are always staunchly defended by deterministic data-worshippers pointing to “predictive” demographics, psychographics, and gross rating points.

Deterministic beliefs—cause and effect—are the right way to govern the operations of a business. Of this I am certain to a factor of $10^{16}$.

Probabilistic beliefs—whimsical wit and flights of fancy, the mystery of curiosity and the magic of storytelling—are the right way to govern your advertising. Of this I am certain to a factor of $10^{19}$.

Roy H. Williams
Six years after Tversky's death, Kahneman received the 2002 Nobel Prize in Economics for the work he did in collaboration with Amos Tversky. (The prize is not awarded posthumously.) Kahneman told *The New York Times* in an interview soon after receiving the honor: "I feel it is a joint prize. We were twinned for more than a decade."

"Quantum mechanics is just counterintuitive and we just have to suck it up."
– Seth Lloyd, a quantum physicist at MIT

"Quantum mechanics is very successful; nobody's claiming that it's wrong."
– Paul Milewski, the professor of mathematics who devised computer models of bouncing-droplet dynamics