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Understanding the Nature of the FAT TAIL PHENOMENON

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Fat Tails

Things happen.

The old cow jumped over the blue moon. The Dow rose 200 points. Mother died last night … or was it yesterday?

Despite all the progress in science, no one can predict the future. Even in areas thought to be 100% predictable, the future is never a sure thing. When you heat water to 212 degrees Fahrenheit, for example, you can safely assume that it will boil. Even then, you don't know for sure that it will begin to bubble up when it is supposed to. Scientific theories are never actually proven correct. They are just not yet proven incorrect.

It is like reaching into a jar of candies, says Nicholas Taleb. If you reach in one time and pull out a red candy, you presume there are red candies in the jar. If you do it again, your presumption is reinforced. If you keep doing it time and time again, you form a hypothesis: that there are only red candies in the jar. That hypothesis, or theory, is as good as any scientific theory. But it is never proven correct. Who knows? Maybe the next candy you pull from the jar will be black!

If, instead of an unbroken sequence of red candies, a black one came out every once in a while, an observer would conclude that there were fewer black ones than red ones. If a group of children were to each reach into the jar, the results might be more or less predictable — not for any individual, but for the group. Most would pull out red candies; a few would pull out black ones. If different groups of children were allowed to draw out candies, each group may get a slightly different mix of red and black candies. But taken all together, you'd expect about the same distribution of black and red candies as observed initially. And plotted out on a graph, the distribution of black or red candies per group would take the form of a bell. It would be what is called a "bell curve." At the far left hand, for example, there might be zero groups that pulled out only black candies. At the far right would be the opposite phenomenon, groups that pulled out all red ones. At the center, where the peak of the bell is located, you would expect the largest number of groups — those pulling out a proportion of black and red candies roughly corresponding to the balance in the jar. Most groups would fall into the big hump of the bell curve — just as you would expect. Graded on a curve, the majority would be right.

That is the point of the book by James Surowiecki, *The Wisdom of Crowds*. Take the views of a number of people and put them together; the amalgamated views are likely to be closer to reality than any particular view. That is, if you take a group of people and ask them how hot it is outdoors, some will guess that it is hotter than it actually is. Some will guess that it is cooler than it actually is. If you put the views together, you're likely to come close to the actual temperature, neither too hot nor too cold.

But it is a strange and wondrous world we live in. When scientists actually looked at many of the phenomena that were thought to be randomly distributed according to a regular bell curve pattern, they noticed something funny. Out at the ends of the curve, where the rare events are registered, they found small bumps and bulges. That is, things that were not expected to happen very

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often actually happened more than they thought. “Hundred-year floods,” for example, happened every 88 years. “One in a million” shots hit their mark every 700,000 or so. Statisticians refer to these odd bulges on the extremities of bell-shaped curves as “fat tails.” Instead of tailing off as they are supposed to, the rare events seem to swell up where you don’t expect them.

What has this got to do with copywriting?

Well, as salesmen, what we often find ourselves selling is the unusual. That is, people are loathe to pay money for you to give them something they already have or already know about. So, too, are employers reluctant to pay good money to copywriters in order to encourage people to buy things they already want. Instead, we are frequently employed to do the hard work — to sell things to people that they don’t know about … don’t already have … and don’t necessarily want. Who wanted a telephone when it first came out? No one. Because no one knew what a telephone was. And if they did know, they knew that telephones were (at the time) practically useless. Who were you going to call when almost no one had one? The first phone salesmen faced a challenge. They were offering something new and unexpected … something on the fat tail of human experience.

This is generally true of everything really new … or really different. People are reluctant to take it up. And for a good reason. The nature of human innovations — whether in technology, business, manners, or fashion — is very similar to genetic innovations. Most mutations are unsuccessful. They are dead ends. So, too, are most new products. Most new fashions never catch on. And most new businesses go broke.

We look around and see a world full of innovations … but the ones we see are only the ones that succeeded. For every one of those, there are hundreds or thousands that never quite “took off.”

Selling Older People Things They Didn’t Know They Wanted

Selling to older people is particularly difficult. Because old people resist change … again, for a good reason. It is not that old dogs can’t learn new tricks. The new tricks, of course, are like fat tails — things that are new and unexpected …. in the way that, say, airplanes or WWI were early in the 20th century … or National Socialism in the ‘30s … or television in the ‘50s … or the Internet in the ‘90s. The old mutts have seen enough new tricks to be suspicious. They know some take hold and some do not … but most are not worth learning. That’s why it is so difficult to sell to older people. Offer them something “new” and they will turn up their noses. What they want is the tried and true … the old things they can trust.

And yet, we copywriters spend much of our time trying to sell things to older people. Why? Because it is the older people who reliably read their mail. Younger people are often too busy trying new things!

Mainstream vs. Fat Tail

The publishing industry could be divided into two parts.

First, there are the products that need little in the way of copywriting. Some, for example, are already so well known that copywriting is almost unnecessary. All you have to do is make an attractive offer. That is what *The New York Times* and *Reader's Digest* do. They do not waste time and money explaining the benefits and features of their product. People already know what they have to offer. They just want to get a good deal on it. Other products are fairly easy to describe so a customer will readily see if it is of value to him or not — such as a service that merely lists current shipping products … or weather reports.

At the other end of the industry are products that are not only new but different, difficult to explain, and iconoclastic. Here, we find the most engaging challenge for a copywriter — selling products that potential customers have never heard of … with ideas and information they didn't know they wanted and often strongly resist. This is why copywriters who are able to do this also earn a lot of money. They are offering fat tail points of view to older people.

It helps to understand the nature of this fat tail phenomenon. People tend to be comfortable, naturally, with what is. What is not now … yet … or never has been is unsettling. People believe it never will be.

A classic example of a fat tail event happened in New Orleans in the summer of 2005. Everyone knew that a flood was possible. Most serious people believed it was inevitable. Scientists even predicted the event — with startling accuracy. But though the city is in a region known for its seasonal hurricanes … and though much of the city is below sea level … and though it is protected only by earthen dikes that typically give way in severe weather … still, neither public officials nor private citizens had bothered to think deeply about what they would do in case disaster struck.

It is the nature of people that they overrate what is now … what is here … and what is popular. Put another way, they under-price the fat tails.

When a disaster has not occurred for a while, people think it will never happen. After it comes, they expect another one every day. That is why stocks tend to droop after a long bear market … and often puff themselves into a bubble after a multi-year boom. When the ground has been dry for a long time, they turn up their noses at dikes and hip boots right after a 100-year flood … and rush to buy insurance.

Likewise, after a country has had a few good wars … it is eager for more. After it has been on the losing side a few times … it longs for peace. In the early 20th century, for example, European nations bulged with the pride and satisfaction of having subdued almost the entire rest of the world. In Asia, China and Japan were the only major countries to resist. In North America, South America, Australia, the Pacific Islands and Africa, European nations and derivative governments — such as the United States — defeated all the indigenous peoples who stood in their way. But their appetite for military victories only increased with their success. Having beaten the rest of the world, they turned on one another. The result was a fat tail disaster for European civilization.

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After two world wars, Europe lost its taste for war. Its cities were destroyed. Its factories were ruined. Millions of its people were killed. Its central banks and state treasuries were bankrupted.

One country — and one country only — seemed to come out of the two wars with its willingness to wage war intact. America gained market share in both WWI and WWII. It suffered relatively few casualties. Its homeland was never bombed, never attacked, and never invaded. Americans came away from the entire period believing that wars were not such a bad thing; indeed, they could be good for the economy!

Markets make opinions, in other words. When the going is good, people think things normally go well. When the going is bad, people think that is "just the way things are."

Not only does the typical person fail to recognize that "what goes around, comes around," he also systematically under-appreciates the extremes. In other words, he tends to exaggerate the ordinary. He overprices what is in the big hump of the bell

Betting on Snow in July

If an investor could live forever, he could probably make a lot of money betting on snow in July. True, it doesn't happen very often. But it does happen. And most people are so sure that it will never happen, they're willing to give exceptionally favorable odds to the fellow who bets that it will. That is the secret to successful investing, as it is to successful poker playing. You play the hand you are dealt; you have no choice. You cannot control when you will get four aces or when it will snow. But knowing how to play the odds is what makes you money.

Unless the fat tail event has been widely discussed, it is probably a good investment opportunity. Before the attack of 9/11, most Americans probably would have put the risk of being a terrorist victim down near zero. After 9/11, Americans rated the odds of being a victim far, far higher than was actually very likely. In the run-up to the year 2000, they rated the odds of a system-wide computer failure first at zero … and then, after a Y2K failure had been widely discussed in the media, as high as 50%. We don't know what the actual odds were, but they were probably never zero and never 50%.

Naturally and normally, most people spend most of their time in the comfortable and familiar embrace of the ordinary. They are rarely bothered by floods that last four days, let alone 40 days and 40 nights … nor by fire and brimstone … nor by market crashes or world wars. They watch television. They read the newspaper. Except when they are entertained by *War of the Worlds* style fantasies, nothing in their usual media disturbs their sleep.

But in some part of their brain, they know that the future may not go so smoothly and predictably. They know that sometimes things go terribly wrong or wonderfully right. People really do lose all their money … or make 1,000% profit. They die from sudden illness … or are miraculously cured. It happens, just not very often. And while they believe that it probably won't happen, they know it could happen to them. They feel they should at least consider it. Who knows? Maybe they will get lucky and make 1,000% on their investments … or avoid a horrible loss.

curve — the common … the usual … the here and now. And he under-prices the opposite — the uncommon, the extraordinary, and the unusual. Put another way, he tends to underestimate hyperbole. He sees today and guesses that tomorrow will be just the same. He is probably right. But there is always a chance — out there on the fat tail of the bell curve — that it will be different. This chance is actually greater than he thinks.

In August 1929, if you had asked a group of investors what was likely to happen on Wall Street, you would have gotten a range of views. You might even have gotten a "crank" or two who thought the market would crash. But the majority view was nothing like what actually happened. Most people thought stock prices would hold steady or go up. Few people anticipated "Black Monday," with its 30% break in prices. It turned out the cranks were right.

Economists and the press were similarly complacent. Despite the pretensions of both professions, both economists and the financial press are momentum driven. They reflect the common view, that what happened yesterday will probably happen again tomorrow. This is a psychological feature of human beings, based on what appears to be an accurate observation of nature. Usually, what happened yesterday will happen again tomorrow. And usually, the great majority — whose views are reflected in the calculations of economists as well as the newspaper headlines — are right about it. Usually, nothing very extraordinary happens. Usually, you make about 3%-5% on your investments. Usually, it is warm in the summer and cold in the winter. Usually, it rains just enough to maintain current levels of vegetation, neither more nor less. Usually, the stock market goes up and down — but in neither direction very fast.

Copywriting for the Fat Tails

As we have said, many of the industries for which we work as copywriters are in the business of exploring the fat tails. We offer something unusual, extraordinary … and unlikely. "Double Your Money." "Erase Arthritis Pain." "Say goodbye to hiring worries." "Burn off unwanted weight." "Read faster." "Be a better manager." "Speak Spanish Like a Diplomat." "Put away your storage management problems forever!"

The list is long. But the essential point is the same in every one: Here is a fat tail that can benefit you. Of course, you will most likely not lose 15 pounds in 15 days … nor will you buy a stock that goes up 150% in three weeks. These sorts of things happen only at extreme ends of the bell curve. They are unlikely; nevertheless, they are what the reader wants, hopes for, and is willing to pay for.

This is very different from the "mainstream media." It is not, for example, the same thing as offering to keep readers up to date on the news.

The usual news is delivered by the mainstream media — in vast quantities. It is the news that tells readers that the world is as they have imagined it. It is the news that tells them today will be much like yesterday and tomorrow will be much like today. It is like a mainstream economist's projection for the year ahead; it is just what you'd expect.

Typically, in our copywriting assignments, we are asked to sell views, news, and ideas that are alternatives to those you find in the

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mainstream media. We generally offer news with a twist of opinion and a dose of opportunity:

> *"News Flash: Breakthrough in microbiological research reveals secret to younger knees!"*

Is this news? Yes. But it is not news for news' sake. It does not confirm the world you thought you knew. Instead, it offers you a new one — a long-shot, fat tail development that could help your body parts. How likely is it that you will have "younger knees"? Not very. But that is the point. People do not want what they can get easily. They want what is unlikely … they want what is hard to get … they want someone to explore the possibilities of the fat tails of life and report back. That is the industry we are in.

We recall the mid-1980s. Huge changes were taking place in the world — particularly in the Soviet Union and its satellite states. Our newsletter, *Strategic Investment*, predicted that the Soviet Union would fall apart and that the Berlin Wall would come down. We don't recall a single mainstream magazine, newspaper, or TV station that saw it coming. But our newsletter editors had an idea about the way the world worked … and an opinion that was, at the time, way out on the extreme fat tail of the bell curve. Then, it was new, fresh, and alternative. People would pay for it. Now, it is mainstream. No one would pay for it. It is past tense. It is history. It is what "everybody knows."

Likewise, in the 1990s, a newsletter we published saw a revolution coming in American eating patterns. Dr. Robert Atkins said the diet recommended by the American medical establishment was unhealthy. Instead of eating so much starch and sugar, he said Americans should eat more meat and fat. At the time, this view was far from the center of the bell curve. Instead, it was out in the fat tail area — and Dr. Atkins was labeled a "nut" for having such a kooky opinion.

Dr. Atkins did not live to see it, but *The New York Times* eventually came around to seeing things his way — about 10 years later. Now, the Atkins Diet has become mainstream. It has dozens of imitators, spread out on the shelves of bookstores and supermarkets.

This does not mean that our clients' newsletters, emails, books, reports, supplements, courses, software programs, gadgets, paraphernalia, and whatchamacallits are always "way out there," nor that they are always right about what they will do for customers. But they must always be new and innovative. They cannot be what everyone already knows and expects. They must explore the unknown … the new … the unlikely. That is why good copywriters are needed to sell them. And it is why good copywriters cannot sell them using "mainstream" techniques.

Take newsletters, for example. Per word, they are some of the highest-priced publications in the world. If the circumstances permit, investors may pay as much as $1,000 — or more — for a single word: "Buy!" People do not need to pay those prices to find out what everyone else thinks. They can get the mainstream view much more cheaply. They pay high prices because they value the fat tail opinion and the research and recommendations that go along with it.

Typical investors, for example, are not likely to make more than 3% to 5% on their money. That has been the average return of mainstream investors over hundreds of years. But financial editors and researchers work hard to find ways that investors could make much more. That is why much financial newsletter advertising seems so daring or "in your face" to many people. It offers readers a chance to do something that most people know is unlikely and many think is impossible. And yet, a few investors actually will make a lot of money — far more than the average — but only by taking a bet on a fat tail event.

Why Only Fat Tail Investors Really Make Money

The investment markets deserve our special attention. They illustrate why and how, over time, an investor can make above-average gains only by doing something "outrageous" … and why spending a lot of money on an unorthodox opinion may be money well spent. Obviously, an investor can hope to make more money than other investors only by doing something other investors are not doing. Thus does he find the fat tail investment positions — the ones that are shunned by mainstream investors.

In a typical bull market, all stock market investors make money. As prices rise, more and more investors are attracted to stocks. They buy stocks at higher and higher prices and become more and more confident that they will continue to go up. All investments go up and down in irregular, but inevitable, cycles. Riding the cycles up and down, an investor makes money sometimes and loses it other times; he ends up with about 3% to 5% over the very long term. The only way he can make more is by not following the entire cycle along with other investors. He can ride the upside move … but he has to remember to get out before everyone else. That means he has to do something that seems alarmingly out of the ordinary and "far out." He has to wander out to the extremity of the bell curve … to where investors are few and where they are regarded as a little strange. He has to do something all his friends, neighbors, and family will think is foolish; he has to sell his stocks at the very moment when practically everyone is most sure they'll continue to go up. He has to believe that a direct-mail copywriter is right when he warns of a fat tail event — a "Financial Meltdown!"

Will the financial world really melt down? When will it happen? We can never know. But we know most fat tail bets cannot pay off, simply because they don't happen very often. That's what makes them fat tails.

We mentioned earlier that the fat tails tend to be under-priced. There is a certain momentum in favor of the ordinary that causes people to underestimate the unusual. If it has not rained in a long time, people begin to feel that it will never rain. And here we make a distinction between what they think and what they feel. If you put the question to them directly, people will surely reply that, yes, of course it will rain some time. But emotionally, sentimentally, subconsciously, they throw out their umbrellas. It just doesn't feel like rain. And if they had to bet … they'd give long odds against it.

This is very significant from several points of view. First, it means that the fat tail will be generally ignored by the mainstream press. It sounds "over the top" or just bizarre. If you bring it up, people may think you are flaky or kooky. Consequently, it is rarely

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