Fooled By Randomness

Eight

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TOO MANY MILLIONAIRES NEXT DOOR

Three illustrations of the survivorship bias. Why very few people should live on Park Avenue. The millionaire next door has very flimsy clothes. An overcrowding of experts.

HOW TO STOP THE STING OF FAILURE

Somewhat Happy

Marc lives on Park Avenue in New York City with his wife, Janet, and their three children. He makes $500,000 a year, give or take a boom or a recession—he does not believe that the recent spurt in prosperity is here to last and has not mentally adjusted yet to his recent abrupt rise in income. A rotund man in his late forties, with spongy features that make him look ten years older than his age, he leads the seemingly comfortable (but heckled) life of a New York City lawyer. But he is on the quiet side of Manhattan residents. Marc is clearly not the man one would expect to go bar-hopping or attend late-night Tribeca and SoHo parties. He and his wife have a country house and a rose garden and tend to be concerned, like many people of their age, mentality, and condition, with (in the following order) material comfort, health, and status. Weekdays, he does not come home until at least 9:30 p.m. and, at times, he can be found in the office at close to midnight. By the end of the week, Marc is so fatigued that he falls asleep during their three-hour drive to "the house"; and Marc spends most of Saturday lying in bed recovering and healing.

Marc grew up in a small town in the Midwest, the son of a quiet tax accountant who worked with sharp yellow pencils. His obsession with sharpness was so strong that he carried a sharpener in his pocket at all times. Marc exhibited very early signs of intelligence. He did extremely well in high school. He attended Harvard College, then Yale Law School. Not bad, one would say. Later his career took him to corporate law, where he started working on large cases for a prestigious New York law firm, with barely enough hours left for him to brush his teeth. This is not too much an exaggeration, for he ate almost all of his dinners in the office, accumulating body fat and Brownie points toward his partnership. He later became a partner within the usual seven years, but not without the usual human costs. His first wife (whom he met in college) left him, as she was tired of an absentee lawyer husband and weary of the deterioration in his conversation—but, ironically, she ended up moving in with and later marrying another New York lawyer, probably with a no-less-flat conversation, but who made her happier.

Too Much Work

Marc's body became progressively flabbier, and his bespoke suits needed periodic visits to the tailor, in spite of his occasional crash diets. After he got over the depression of the abandonment, he started dating Janet, his paralegal, and promptly married her. They had three children in quick succession, bought the Park Avenue apartment, and the country house.

Janet's immediate acquaintance is composed of the other parents of the Manhattan private school attended by their children, and their neighbors at the co-operative apartment building where they live. From a materialistic standpoint, they come at the low end of such a set, perhaps even at the exact bottom. They would be the poorest of these circles, as their co-op is inhabited by extremely successful corporate executives, Wall Street traders, and high-flying entrepreneurs. Their children's private school harbors the second set of children of corporate raiders, from their trophy wives—perhaps even the third set, if one takes into account the age discrepancy and the model-like features of the other mothers. By comparison, Marc's wife, Janet, like him, presents a homely country-home-with-a-rose-garden type of appearance.

You're a Failure

Marc's strategy of staying in Manhattan may be rational, as his demanding work hours would make it impossible for him to commute. But the costs on his wife, Janet, are monstrous. Why? Because of their relative nonsuccess—as geographically defined by their Park Avenue neighborhood. Every month or so, Janet has a crisis, giving in to the strains and humiliations of being snubbed by some other mother at the school where she picks up the children, or another woman with larger diamonds by the elevator of the co-op where they live in the smallest type of apartments (the G line). Why isn't her husband so successful? Isn't he smart and hardworking? Didn't he get close to 1600 on the SAT? Why is this Ronald Something, whose wife never even nods to Janet, worth hundreds of millions, when her husband went to Harvard and Yale and has such a high IQ and has hardly any substantial savings?

We will not get too involved in the Chekhovian dilemmas in the private lives of Marc and Janet, but their case provides a very common illustration of the emotional effect of survivorship bias. Janet feels that her husband is a failure, by comparison, but she is miscomputing the probabilities in a gross manner—she is using the wrong distribution to derive a rank. As compared to the general U.S. population, Marc has done very well, better than 99.5% of his compatriots. As compared to his high school friends, he did extremely well, a fact that he could have verified had he had time to attend the periodic reunions, and he would come at the top. As compared to the other people at Harvard, he did better than 90% of them (financially, of course). As compared to his law school comrades at Yale, he did better than 60% of them. But as compared to his co-op neighbors, he is at the bottom! Why? Because he chose to live among the people who have been successful, in an area that excludes failure. In other words, those who have failed do not show up in the sample, thus making him look as if he were not doing well at all. By living on Park Avenue, one does not have exposure to the losers, one only sees the winners. As we are cut to live in very small communities, it is difficult to assess our situation outside of the narrowly defined geographic confines of our habitat. In the case of Marc and Janet, this leads to considerable emotional distress; here we have a woman who married an extremely successful man but all she can see is comparative failure, for she cannot emotionally compare him to a sample that would do him justice.

Aside from the misperception of one's performance, there is a social treadmill effect: You get rich, move to rich neighborhoods, then become poor again. To that add the psychological treadmill effect; you get used to wealth and revert to a set point of satisfaction. This problem of some people never really getting to feel satisfied by wealth (beyond a given point) has been the subject of technical discussions on happiness.

Someone would rationally say to Janet: "Go read this book Fooled by Randomness by one mathematical trader on the deformations of chance in life; it would give you a statistical sense of perspective and would accordingly make you feel better." As an author, I would like to offer a panacea for $14.95, but I would rather say that in my best hopes it may provide an hour or so of solace. Janet may need something more drastic for relief. I have repeated that becoming more rational, or not feeling emotions of social slights, is not part of the human race, at least not with our current biology. There is no solace to be found from reasoning—as a trader I have learned something about these unfruitful efforts to reason against the grain. I would advise Janet to move out, and go live in some blue-collar neighborhood where they would feel less humiliated by their neighbors and rise in the pecking order beyond their probability of success. They could use the deformation in the opposite direction. If Janet cares about status, then I would even recommend some of these large housing blocks.

DOUBLE SURVIVORSHIP BIASES

More Experts

I recently read a bestseller called The Millionaire Next Door, an extremely misleading (but almost enjoyable) book by two “experts,” in which the authors try to infer some attributes that are common to rich people. They examined a collection of currently wealthy people and found out that these are unlikely to lead lavish lives. They call such people the accumulators; persons ready to postpone consumption in order to amass funds. Most of the appeal of the book comes from the simple but counterintuitive fact that these are less likely to look like very rich people—it clearly costs money to look and behave rich, not to count the time demands of spending money. Leading prosperous lives is time-consuming—shopping for trendy clothes, becoming conversant in Bordeaux wines, getting to know the expensive restaurants. All these activities can put high demands on one’s time and divert the subject from what should be the real preoccupation, namely the accumulation of nominal (and paper) wealth. The moral of the book is that the wealthiest are to be found among those less suspected to be wealthy. On the other hand, those who act and look wealthy subject their net worth to such a drain that they inflict considerable and irreversible damage to their brokerage account.

I will set aside the point that I see no special heroism in accumulating money, particularly if, in addition, the person is foolish enough to not even try to derive any tangible benefit from the wealth (aside from the pleasure of regularly counting the beans). I have no large desire to sacrifice much of my personal habits, intellectual pleasures, and personal standards in order to become a billionaire like Warren Buffett, and I certainly do not see the point of becoming one if I were to adopt Spartan (even miserly) habits and live in my starter house. Something about the praise lavished upon him for living in austerity while being so rich escapes me; if austerity is the end, he should become a monk or a social worker—we should remember that becoming rich is a purely selfish act, not a social one. The virtue of capitalism is that society can take advantage of people’s greed rather than their benevolence, but there is no need to, in addition, extol such greed as a moral (or intellectual) accomplishment (the reader can easily see that, aside from very few exceptions like George Soros, I am not impressed by people with money). Becoming rich is not directly a moral achievement, but that is not where the severe flaw in the book lies.

As we saw, the heroes of The Millionaire Next Door are the accumulators, people who defer spending in order to invest. It is undeniable that such strategy might work; money spent bears no fruit (except the enjoyment of the spender). But the benefits promised in the book seem grossly overstated. A finer read of their thesis reveals that their sample includes a double dose of survivorship bias. In other words, it has two compounding flaws.

Visibility Winners

The first bias comes from the fact that the rich people selected for their sample are among the lucky monkeys on typewriters. The authors made no attempt to correct their statistics with the fact that they saw only the winners. They make no mention of the “accumulators” who have accumulated the wrong things (members of my family are experts on that; those who accumulated managed to accumulate currencies about to be devalued and stocks of companies that later went bust). Nowhere do we see a mention of the fact that some people were lucky enough to have invested in the winners; these people no doubt would make their way into the book. There is a way to take care of the bias: Lower the wealth of your average millionaire by, say, 50%, on the grounds that the bias causes the average net worth of the observed millionaire to be higher by such amount (it consists in adding the effect of the losers into the pot). It would certainly modify the conclusion.

It’s a Bull Market

As to the second, more serious flaw, I have already discussed the problem of induction. The story focuses on an unusual episode in history; buying its thesis implies accepting that the current returns in asset values are permanent (the sort of belief that prevailed before the great crash that started in 1929). Remember that asset prices have (still at the time of writing) witnessed the greatest bull market in history and that values did compound astronomically during the past two decades. A dollar invested in the average stock would have grown almost twenty-fold since 1982—and that is the average stock. The sample might include people who invested in stocks performing better than average. Virtually all of the subjects became rich from asset price inflation, in other words from the recent inflation in financial paper and assets that started in 1982. An investor who engaged in the same strategy during less august days for the market would certainly have a different story to tell. Imagine the book being written in 1982, after the prolonged erosion of the inflation-adjusted value of the stocks, or in 1935, after the loss of interest in the stock market.

Or consider that the United States stock market is not the only investment vehicle. Consider the fate of those who, in place of spending their money buying expensive toys and paying for ski trips, bought Lebanese lira denominated Treasury bills (as my grandfather did), or junk bonds from Michael Milken (as many of my colleagues in the 1980s did). Go back in history and imagine the accumulator buying Russian Imperial bonds bearing the signature of Czar Nicholas II and trying to accumulate further by cashing them from the Soviet government, or Argentine real estate in the 1930s (as my great-grandfather did).

The mistake of ignoring the survivorship bias is chronic, even (or perhaps especially) among professionals. How? Because we are trained to take advantage of the information that is lying in front of our eyes, ignoring the information that we do not see. At the time of writing, pension funds and insurance companies in the United States and in Europe somehow bought the argument that “in the long term equities always pay off 9%” and back it up with statistics. The statistics are right, but they are past history. My argument is that I can find you a security somewhere among the 40,000 available that went up twice that amount every year without fail. Should we put the social security money into it?

A brief summing up at this point: I showed how we tend to mistake one realization among all possible random histories as the most representative one, forgetting that there may be others. In a nutshell, the survivorship bias implies that the highest performing realization will be the most visible. Why? Because the losers do not show up.

A GURU’S OPINION

The fund management industry is populated with gurus. Clearly, the field is randomness-laden and the guru is going to fall into a trap, particularly if he has no proper training in inference. At the time of writing, there is one such guru who developed the very unfortunate habit of writing books on the subject. Along with one of his peers, he computed the success of a “Robin Hood” policy of investing with the least successful manager in a given population of managers. It consists in switching down by taking money away from the winner and allocating it to the loser. This goes against the prevailing wisdom of investing with a winning manager and taking away money from a losing one. Doing so, their “paper strategy” (i.e., as in a Monopoly game, not executed in real life) derived considerably higher returns than if they stuck to the winning manager. Their hypothetical example seemed to them to prove that one should not stay with the best manager, as we would be inclined to do, but rather switch to the worst manager, or at least such seems to be the point they were attempting to convey.

Their analysis presents one severe hitch that any graduate student should be able to pinpoint at the first reading. Their sample only had survivors. They simply forgot to take into account the managers who went out of business. Such a sample includes managers that were operating during the simulation, and are still operating today. True, their sample included managers who did poorly, but only those managers who did poorly and recovered, without getting out of business. So it would be obvious that investing with those who fared poorly at some point but recovered (with the benefit of hindsight) would yield a positive return! Had they continued to fare poorly, they would be out of business and would not be included in the sample.

How should one conduct the proper simulation? By taking a population of managers in existence, say, five years ago and running the simulation up to today. Clearly, the attributes of those who leave the population are biased toward failure; few successful people in such a lucrative business call it quits because of extreme success. Before we turn to a more technical presentation of these issues, one mention of the much idealized buzzword of optimism. Optimism, it is said, is predictive of success. Predictive? It can also be predictive of failure. Optimistic people certainly take more risks as they are overconfident about the odds; those who win show up among the rich and famous, others fail and disappear from the analyses. Sadly.