

# Survivorship Bias

## A Common Daily Trap

„Beware of advice from the successful.“

- Banarby James

This lecture will introduce you to the quite common logical error, which pops up in nearly every moment in life when someone talks about the successful. Let it be music, individuals, cars, technology, books and so on. It is called survivorship bias. Wikipedia summarizes the survivorship bias as follows: In survivorship bias, the probability of success is systematically overestimated, since successful persons or conditions are more visible than unsuccessful ones. What does that mean in detail?

Let us look at some examples you most likely know: “Bill Gates dropped out of college.” Another one would be: “The Music in the 70s, 80s and 90s was a lot better than nowadays.” Or the newspaper headline: “A woman who is a chain smoker and drank a glass of wine every evening lived up to the age of 105.“



All these examples and their unconscious corollaries have one thing in common. We see correlation or even causality in stories where luck or coincidence play a major role. Therefore, we tend to lose our view for the bigger picture. Humans love reading and hearing stories about poor individuals that became millionaires against all odds, about young street musicians that became famous music artists, about obese fathers with four kids in their 40s who became professional bodybuilders and many more.

While we only focus on the survivors and the successful, we forgot all who failed during their journey to become successful. We are ignorant about those, who did not make it.

By only looking at Bill Gates, we tend to lose sight of thousands of Americans who dropped out of college, being now homeless and didn't become a founder of a giant tech company. Or thousands who got another job and are now living a "normal" life. By only looking at the Beatles, Queen or AC/DC, we tend to lose sight of thousands of musicians whose songs did not make it through until today and they played for years on the street. By only looking at the 105-years-old chain smoker woman, we tend to lose sight of thousands of people who died of lung cancer or other diseases a lot earlier in their lives.

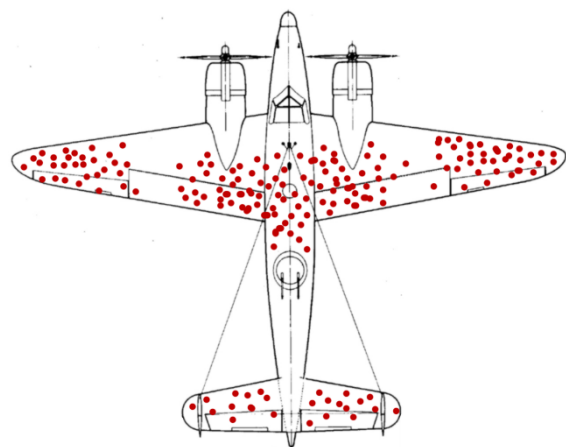
Through media, these stories are thrown at us each and every day. This unconsciously distorts our perception of what is possible and how easily it can be reached. Of course, we should try to be successful, we should try to follow our dreams and our purpose. But we should keep in mind that failure can and will be happen - and it IS the way to success. We should not take success for granted, we should not compare ourselves to those who are successful, but we should encourage each other to try and that it is not a shame if we fail but somehow a gift (assuming we learn from it).

The inspiration to write this lecture came from the YouTube Video [Survivor Bias](#) by Veritasium who had a really interesting example, which I want to introduce in the following:

In the second World War, the British army flew attacks over Germany with their heavy bombers. However, the problem was that the number of bombers returning was much smaller than the number that had started the attack. The idea was now to protect the bombers with armour, so that more would return after the air raid. But because not the whole plane can be equipped with an appropriate protection, because it is simply too heavy, the British had to figure something out. They needed to decide which parts of the bombers should be protected. For this purpose, the bombers that returned were examined for their bullet holes.

Subsequently, the bombers were protected everywhere where they were often hit by bullets from the German anti-aircraft guns. That was on the fuselage and the wings. After the planes were protected, however, the British observed that despite their efforts no more bombers returned from the air raids. The armour protection seemed to be futile. A Hungarian mathematician found out, that they did not take survivorship bias into account...

With the examination of the bullet holes and the followed statistical analysis they only focused on the "survivors" (e.g. the bombers who got hit and did come back) and overlooked all the "dead" (e.g. the bombers who got hit and consequently crashed and did not come back). The planes should have been protected exactly where there were no bullet holes because these damages (e.g. propellers and aircraft nose) obviously caused the crash and the other bullet holes did not.



These days, through the internet and social media, we can often recognize such survivor bias stories. Those are often the “normal” human beings who became pretty much successful (successful in this regard means: having a profit-making business) in their niche overnight. Let it be the so-called fitness, fashion and travel influencers, gamers, YouTubers, bloggers, networking marketing entrepreneurs etc. While some of them are sharing their stories and strategies with others for free, some of them are charging money for their best-practice methods and approaches. I don't want to deny that tips and experiences of others are not helpful, but we should be aware that we are all individuals and also our stories and ways of life are different and therefore not comparable. Therefore, it can be dangerous to trust a strategy of another person blindly and simply apply it unconsciously to yourself. As always listen to the experience of others and let it inspire and help you on your way, but still make your own experiences and keep your senses sharp.

What you exactly do with this lecture we leave up to you. In our eyes there is a lot to get out of it for our practice and life in general. It is nice to realize how often we do not take survivorship bias into account and what is resulting out of it.