Nassim Nicholas Taleb: The black swan: the impact of the highly improbable

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Published online: 12 April 2009
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This book has created a lot of attention in the statistical community. Its author is not unknown and has already published a series of articles and a previous book, which became a bestseller. The present book lives from overdoing and over-criticizing. I wonder why so many people are impressed.

Perhaps the multifaceted aspect of a Black Swan (BS) is the secret.

Here is a list of “sample citations”:

“The highly expected not happening is also a BS” (p. xviii)
“…almost no discovery, no technology of note, came from design and planning—they were just Black Swans” (p. xxi)
“…the BS has three attributes: unpredictability, consequences and retrospective ‘explainability’”. (p. 164)

The author, N.N. Taleb, is most entertaining when he obtains his “insights” by free associations. Here are some examples:

“We call this distortion a bias, i.e. the difference between what you see and what is there.” (p. 101)
“… you will never encounter a Gaussian (bell curve) in its purity since it is a Platonic form …” (p. 248)
“… what Mandelbrot and I have in common is wild uncertainty, BSs, and dull … statistical notions” (p. 254)
“Mandelbrot deals with grey swans; I deal with BS. So Mandelbrot domesticated many of my BSs, but not all of them…” (p. 273)
“…there are 2 variety of randomness: … One does not generate BSs, the other does.” (p. 236)
“Wars are fractal in nature.” (p. 271)
“The inability to predict outliers implies the inability to predict the course of history…” (p. xx)
“…Why does reading the newspaper actually decrease your knowledge of the world?” (p. xix)

At the end of the book we find a “glossary”, perhaps the starting point of a new language called Black-Swanish or “Talebish”. Examples are: “Bildungsphilister, Mediocristan, Extremistan”.

Taleb cites a lot of German language authors, like Stefan Zweig (1960), Karl Popper, Friedrich Hajek; Konrad Lorenz and most of all Gauss. We are told that Gauss was at the beginning of all evil of BSs: He invented the bell curve, but the real culprit was Quetelet (p. 241), because he invented the *homme moyen* (the ave-man?). N.N. Taleb does not tell us that Gauss invented the bell curve on purpose because he wanted a simple calculus in such a way that many (and not few!) measurement errors will cancel out in the mean.

Taleb cites David Hume, the first philosopher on empirical induction: the observation of even a million white swans does not justify the statement “all swans are white.” Unfortunately, at this point Taleb misses to cite the “Popper solution” to the induction problem. Because there is no logic on earth which can “prove” an empirical statement, Popper defines the psychological version of Hume’s problem: It makes sense for humans to act as if empirical sentences—like: the sun rises everyday—were true.

The BS is a potpourri of all the in-topics of the last decade: Zipf’s law, intelligent design, serendipity, hurricane Katrina, Nero, Saddam Hussein, Marx, Heisenberg, Popper, Google and googol, globalisation.

The book makes the impression of being scientific. But the reader is fooled because the author is not as precise as he pretends to be, as e.g. his faible for full Christian names (which should be irrelevant for the BS theme, or not?)

So: What explains the success of the book? Certainly the implied prediction of the financial crash 2008 will bring the author lots of believers and consultant fees. Will it change the attitude of people toward statistics? Probably not. Those who always viewed statistics as a party killer will be delighted by this book. Those who want to sell the benefits of statistics, will face some more critical questions of the kind: “what if the bell curve is not correct?”

Clearly, statistics also deals with infrequent events (sometimes called the law of small numbers), but then conclusions and inference become also more uncertain.

Recall the textbook wisdom: The smaller the numbers, the less can be said with certainty. We all know that catastrophes (wars, fire, earthquakes) will happen. But do you want to be reminded or think about it every day? If outliers can be predicted then there will be no outliers any more. Thanks to the progress of science, outliers of today might be no outliers by tomorrow. So, will there be fewer black swans in the future? No! And so there will be more BS books in future.

Randomness is the salt in the evolution that makes life interesting. A view that is contrary to Taleb who sees BSs as a blind spot in statistical reasoning, I appreciate the existence of BSs as a welcome distraction in daily routines. This does not mean that