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### **Futurist Book Group Discussion**

### ***The Black Swan: The Impact of the Highly Improbable***

*by Nassim Nicholas Taleb*

*400 pages*

*Random House Trade Paperbacks, 2007*

*400 pages*

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*Synopsis of the October 2007 meeting of the Futurist Book Group (Washington DC Chapter);  
summarized and reviewed by Ken Harris*

Interestingly, this is one of a line of recent books we have read that recommend new patterns of thinking, including *The Wisdom of Crowds* by James Surowiecki (October '04 meeting), *Why Most Things Fail* by Paul Ormerod (May '06), and *The Long Tail* by Chris Anderson (January '07).

We were drawn to this book because it directly addresses the question of how much we can really know about the future. The essence of Taleb's argument is that we can know a lot about the future, but what we can know is not very important. He argues that the really important events are "Black Swans," which have the following three characteristics:

- They lie outside the realm of regular expectations because nothing in the past can convincingly point to their possibility.
- They have extreme impacts.
- Human nature makes us concoct explanations for their occurrence after the fact, so that their occurrence is explainable and predictable.

Indeed, in the Prologue after defining Black Swans, he says, "A small number of Black Swans explain almost everything in our world from the success of ideas and religions to the dynamics of human events to elements of our own personal lives." In accord with this theory throughout the book, Taleb is extremely critical of economists', sociologists', historians' and financiers' claims to expertise about how the world really works. He is overly critical of "experts" like college admissions officers who do not practice hard disciplines, saying in effect that they are all charlatans. Yet, surely such people do learn

some things through experience even if they cannot operate under hard rules like the laws of physics. World Future Society members should be concerned about his criticism because modes of studying the future resemble the social science disciplines of which he is so critical. Taleb does not mention futurists or futures studies anywhere in the book, and, no doubt, he would be skeptical of their value if asked for comment. But, if he were told that futurists consider many possible alternative futures, consider the possibility of very beneficial and very harmful wildcard events, and look for weak signals in the present of what may come in the future, he might be more accepting of our discipline and us.

Part 1 considers how humans deal with knowledge. Taleb contrasts “Mediocristan” and “Extremistan.” In Mediocristan, things are predictable. They are predictable because they are amenable to analysis by conventional bell curve statistics. They include things like height, weight, and age of a population. The number of observations is so large that no single observation with an extreme value can shift the value of the entire population very much. On the other hand, phenomena in Extremistan are not amenable to conventional statistical analysis because a single unit can affect the entire population disproportionately. Of course, Taleb argues that Extremistan phenomena are the really important ones. In fact, the world is continually becoming more like Extremistan and thus harder to predict. This contrast between Mediocristan and Extremistan is a very effective way of getting across Taleb’s thesis that we cannot predict things that are really important.

In later chapters of Part 1, Taleb discusses why people make some of the errors they do in trying to explain how things really happen. One is that by “living in Mediocristan” we eliminate Black Swan surprises from our thinking. This in turn leads to the errors of focusing on pre-selected segments of things we see and generalizing from that to things we cannot see. Another is that we have a natural inclination to look for instances that confirm our theory and vision of the world, and in so doing, we may overlook things that are really important. Then, there is what Taleb calls “the narrative fallacy” in which we tend to make up stories to explain what we have seen simply because getting and storing the information we really need for a full explanation is costly and difficult. Another common error, says Taleb, is the ludic fallacy – the false assumption that succeeding in real life is like succeeding in a game of chance in which you know the odds. In reality, you don’t know the odds.

Taleb begins Part 2, “We Just Can’t Predict,” with the statement, “I find it scandalous that in spite of the empirical record we continue to project into the future as if we were good at it using tools and methods that exclude rare events.” Chapter 10 is where he addresses “the expert problem.” He gets to the essence of his problem with experts when he says, “Professions that deal with the future and base their studies on the non-repeatable past have an expert problem (with the exception of the weather and businesses inventing short-term physical processes, not socioeconomic ones)...The problem with experts is that they do not know what they do not know. Lack of knowledge and delusion about the quality of your knowledge come together – the same process that makes you know less also makes you satisfied with your knowledge.” Surely, this is an exaggeration. People who Taleb says are experts who tend not to be experts – for example, college admissions officers, psychiatrists and court judges – learn some valuable lessons from experience that they can and do apply later.

Chapter 11 makes the very good point that the most consequential discoveries are often inadvertent such as Flemming’s discovery of penicillin. He goes on to discuss more generally the problem of predicting the behavior of a system which, like most in real life, has three or more variables. Here he says essentially that the complexity of such systems makes predicting their behavior impossible. However, he neglects the possibility that increasingly powerful computers do permit continually improving modeling of such systems. He further objects to the idea of predicting such multi-variable systems that include humans because humans have free will, and “You cannot predict how people will act.” Many psychiatrists and psychologists would take issue with that statement.

In chapter 13, Taleb expounds a philosophy of life based on the existence of Black Swans and our inability to predict the future. He clarifies that he is really arguing against the idea that predicting the behavior of large systems is impossible. He advises the reader to “be human” and make predictions in running one’s own affairs but not to listen to economic forecasters or predictors in social science. He advises us to “be prepared” for any eventuality. In finance, this means to have both a hyper-conservative and hyper-aggressive strategy in which you put most of your money into very safe investments like Treasury bills and the rest, say 10-15%, into riskier investments. He lists 5 “tricks” for effective dealing with Black Swans in your life:

- Learn to distinguish between activities in which a lack of predictability can be or has been extremely beneficial and those where failure to understand the future can cause harm.
- Work hard to let contingency enter your working life.
- Seize any opportunity or anything that looks like opportunity.
- Let governments predict but do not set much store by what they say.
- Do not waste time fighting forecasters, stock analysts, economists and social scientists except to play pranks on them.

Part 3 deals with the more technical, mathematical aspects of predicting. Curiously, Taleb says these are the more non-essential sections of the book and chapters 15 and 17 and the first half of chapter 16 can be skipped without any serious loss to the thoughtful reader. The most important lesson of this part of the book is understanding the limited usefulness of the Gaussian or bell curve in statistics. Taleb says it useful for limited purposes like analyzing crime and mortality statistics. He is much more supportive of the more powerful Mandelbrotian approach, but his explanation of it is not as clear to the non-statistically trained reader.

This book in a mostly entertaining fashion deals with many subjects, all loosely connected with the notion that we cannot predict truly consequential events the author calls Black Swans and how to live fruitfully with that in mind. Read it to become more careful and thoughtful in your thinking about the future and especially in evaluating what others say about it.

**POINTS FOR THE CLASSROOM** (send comments to [forum@futuretakes.org](mailto:forum@futuretakes.org)):

- *Taleb observes that the world is becoming harder to predict. Will this lead to a resurgence of qualitative methodology and/or the advent of a new methodology – in preference to statistical models and possibly managerial metrics?*
- *Taleb discusses “the expert problem,” specifically, that they do not know what they do not know and that the same process that makes them know less also makes them satisfied with the knowledge that they do have. Considering the limitations of prediction, “information overload” – and the fact that even science and mathematics are proving their own limitations – what will “experts” be in 2025?*
- *Consider the first of Taleb’s “tricks” for effectively dealing with Black Swans. What fundamental characteristics, if any, separate the “wild cards” that can lead to beneficial consequences from those that can lead to harm?*

- Also see related *“Points for the Classroom”* in book review of *Useless Arithmetic*, *this issue*, and *“Cornelia Daheim’s article, “Futures Studies Activities in Germany: Toward a Perspective of Foresight,” Spring 2007 (thematic) issue.*