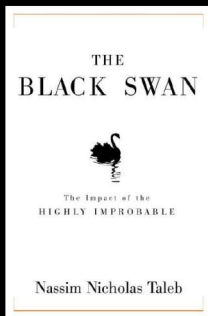


# The Black Swan

Chapter 12 (**Human can't predict**) and  
Chapter 13 (**Go to parties!**)



**NIH BCIG**

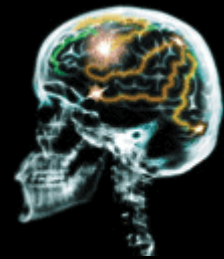
**June 28, 2007**

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# Bio – Melanie Swan

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- Educational background:
  - BA French & Economics, Georgetown University
  - MBA Finance & Accounting, Wharton, Univ. of Pennsylvania
  - Current course work in Physics & Computer Science
- Professional experience
  - Futurist: speaker, researcher, business advisor
  - Hedge Fund Manager: Wall Street, proprietary
- Current projects
  - [OpenBasicResearch.org](http://OpenBasicResearch.org)
  - [del.icio.us](http://del.icio.us) for people
  - Issues in running Historical Simulations
- Interests: science fiction, travel



## Ch 12 Summary: **Humans can't predict**

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- Continued theme of inability to predict, inability to comprehend uncertainty
- The Past has a Past: problems with the past
  - We do not learn from the past
- Future blindness and future autism
- Epistemic arrogance



# Ch 12: The Past has a Past: problems with the past

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- History is not facts, but ex-post narrative
- The past is very difficult to predict
  - Ice cube melting
  - “Butterfly in India” paradigm
  - The Iliad: Helenus
- Humans cannot understand uncertainty
  - Do not learn from the past
  - Cannot understand a future mixed with chance
- Black Swan asymmetry allows confidence in what is wrong
- *“Our problem is not just that we don’t know the future, we don’t know much of the past either...”*



# Ch 12: Future blindness

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- Humans are not natural skeptics
  - Disbelief requires more energy
- No cognitive science research on future blindness
- Happiness research: overestimation of both pleasant and unpleasant events
- Epistemocracy, epistemic arrogance, epistemic humility
  - Advice: skeptical-empiricism like Monsieur de Montaigne



*Michel de Montaigne*

# Ch 12: Why humans can't predict

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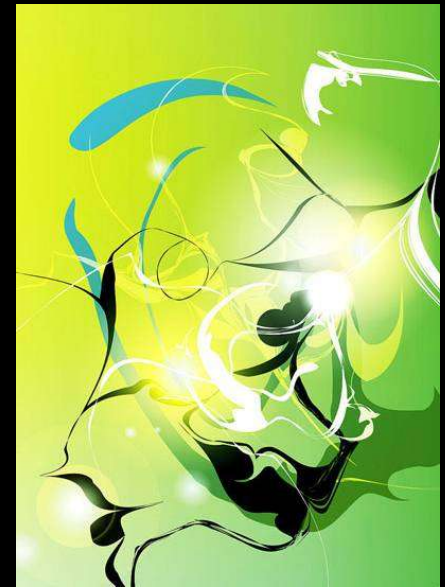
- Epistemic arrogance and corresponding future blindness
- Fooled by reductions
  - Especially told by people wearing neckties
- Flawed tools of inference, especially from Black Swan-free Mediocristan
  - E.g.; perception that the exceptional is inconsequential
- Confirmation bias
- Casnova / survivor bias



## Ch 13 Summary: **Go to parties!**

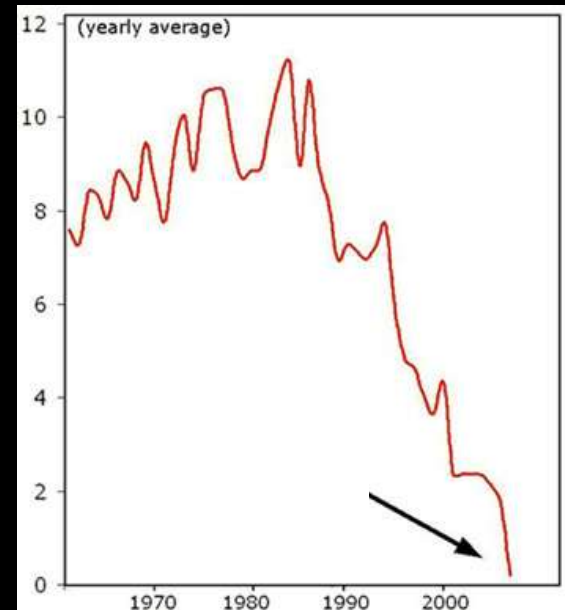
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- Phenomenon: low volatility = high risk
- Action in the face of the Black Swan
  - Be fooled in small matters not large
  - Benefit from unpredictability
    - Embrace trial and error
    - Manage exposure to Black Swans
    - Be prepared and seize opportunity
- Central theme: Asymmetric outcomes
  - Uncertainty: prepare for possible consequences (knowable) vs. the probability of occurrence (unknowable)



# Ch 13: Phenomenon: low volatility = high risk

- People engage in strategies that produce low volatility but have the risk of large loss
  - Long-time corporate employee vs. consultant
  - Seemingly stable dictatorship (Saudi Arabia) vs. democracy
  - Bankers, lenders
- Achilles heel of capitalism: the fittest looking company is the most exposed for a negative Black Swan
  - Enron, IBM, telecoms, etc.



# Ch 13: Manage your Black Swan exposure

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- Distinguish between positive and negative contingencies
- Act against errors in prediction and risk perception
  - Lopsided barbell: increase exposure to positive Black Swans, decrease exposure to negative Black Swans
  - Financial investments: 85-90% in T-bills (safest), 10-15% in as many as possible options/private equity (riskiest)

<b>Positive Black Swan Industries</b>	<b>Negative Black Swan Industries</b>
<ul style="list-style-type: none"><li>▪ Scientific Research</li><li>▪ Biotech</li><li>▪ Movies</li><li>▪ Publishing</li><li>▪ Venture Capital</li></ul>	<ul style="list-style-type: none"><li>▪ Military</li><li>▪ Catastrophe insurance</li><li>▪ Homeland security</li><li>▪ Banking, lending</li></ul>

# Ch 13: Be prepared and seize opportunity

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- Don't look for the precise and the local
  - Pasteur "Chance favors the prepared"
- Seize opportunity
  - Collect non-lottery tickets (open-ended payoffs)
  - Gain exposure to the envelope of serendipity: go to parties
- Beware of forecasters
  - Public and private sector equally bad at forecasting - *"paid forecasters are institutionalized fraud"*



## Ch 12-13 Summary: Don't predict, go to parties

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- Why humans can't predict
  - Epistemic arrogance
  - Fooled by reductions
  - Flawed tools of inference from Mediocristan

Mediocristan	Extremistan
<ul style="list-style-type: none"><li>▪ Gaussian</li><li>▪ Linear (easier to predict)</li><li>▪ Experts</li><li>▪ Exceptional is inconsequential</li></ul>	<ul style="list-style-type: none"><li>▪ Black Swans</li><li>▪ Non-linear (impossible to predict)</li><li>▪ No experts</li><li>▪ Exception matters</li></ul>

- Central theme of the book: Asymmetric outcomes
  - Uncertainty: focus on the consequences (knowable) vs. the probability of occurrence (unknowable)
- Use preparedness and serendipity to manage Black Swan exposure



Thank you

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