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Review Article

Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable*

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The Black Swan and the owl of Minerva: Nassim Nicholas Taleb and the historians

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Nassim Nicholas Taleb's *The Black Swan*,¹ and some of his other writings, put forward ideas on history. The book is unusual since it is neither a normal academic work nor a popularisation but an attempt to do both at once.² The book's subtitle is *The Impact of the Highly Improbable*. It is a wide-ranging work, more a collection of essays than a unity, and something of a personal manifesto on his view of life as well as an argument. The basic idea is that highly improbable events have a disproportionate influence in life, and that it is dangerously misleading to treat them as exceptions which can be ignored.

Taleb refers to his improbable events as Black Swans. The name comes from an ancient Latin idiom for something fantastically rare, based on the fact that all European swans are white.³ The metaphor is also used in discussing the philosophical problem of induction, but that is not relevant to Taleb's sense. A Black Swan has three attributes. Firstly, rarity: it is an "outlier", something way outside the normal range. Secondly, "extreme impact" in terms of its effect on human events. Thirdly, "despite its outlier status, human nature makes us concoct explanations for its occurrence *after* the fact, making it explainable and predictable".⁴

It is naive, in Taleb's view, to attempt to predict such events. Rather, we should seek to make our lives more robust to them. It should be noted that Black Swans also include cases where something highly probable fails to happen. (Also, there are positive Black Swans, where some unexpected event with a very high payoff occurs.)

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1. N.N. Taleb, *The Black Swan: The Impact of the Highly Improbable*, 2nd ed. (Penguin, London, 2010). Taleb has stated that he considers its genre to be "philosophy of history": F. Salmon, "Lunch with Nassim Nicholas Taleb", *Upstart Business Journal*, 5 April 2007, 12:00am EDT, <http://upstart.bizjournals.com/views/blogs/market-movers/2007/04/05/lunch-with-nassim-nicholas-taleb.html?page=all> Accessed 22 October 2013.
2. N.N. Taleb, "Common Errors in Interpreting the Ideas of the Black Swan and Associated Papers", NYU Poly Institute, 18 October 2009, Electronic copy available at: <http://ssrn.com/abstract=1490769>, p 1.
3. When Europeans arrived in Australia they found black swans.
4. Taleb, *The Black Swan*, xxii.

Several points of clarification should be made at the outset. Firstly, Taleb is not saying that Black Swans are common – they may even be rarer than we think. Rather, he argues that they have more impact than we think.⁵

Secondly, Taleb's concept of randomness (one of his major topics) is one of *opacity*, that is, the quality of what cannot be predicted. The difference between "true" randomness and insufficient knowledge is irrelevant in practice. This connects to Taleb's project of creating a *practical* epistemology. As we shall see, the idea that insufficient knowledge is in practice indistinguishable from randomness has been discussed by historians for some time.

Thirdly, Taleb's work is not significantly connected to chaos theory. For Taleb, chaos, unpredictable outcomes from deterministic systems, is indistinguishable in practice from other kinds of randomness. In particular, the "butterfly effect", by which a small effect may have a large impact on a chaotic system, is not particularly relevant. In addition, Taleb barely mentions quantum uncertainty, and again he considers it to be of minimal relevance.

Taleb identifies two basic models for human circumstances, which he labels Mediocristan and Extremistan. Mediocristan refers to those areas of life where statistical values cluster around a norm, and bell curves apply. For example, although there are some exceptionally tall people, they do not significantly alter the average. Extremistan refers to those areas where a single case may affect the total, such as the sales of *Harry Potter*.⁶ According to Taleb, much of large-scale economic and political life belong to Extremistan, which is the land of the Black Swan, and attempts to predict or model it on the basis of Mediocristan will be dangerously misleading. Much of ordinary life seems to be Mediocristan, though Taleb suggests that if we reflect on our own life histories we will see that a great deal has been determined by Black Swans.

Taleb's work includes a critique of academic history,⁷ although he seems to stop short of the root-and-branch denunciation made of many branches of supposed professional expertise.⁸ History, in his view, is one of the "narrative disciplines"⁹ and subject to a natural but misleading human tendency to create stories which will explain the world.¹⁰ Causal explanations are suspect because we *impose* meaningful stories and structures on sequences of past events. Taleb calls this the "narrative fallacy". Because of this, most of academic history, or at least the parts to which a high status is given by practitioners (such as analysis of causes) is in his view of dubious value. He does however see some value in a more literary and descriptive approach. His advice is to "favour experimentation

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5. Taleb, *The Black Swan*, p 357. As is well known, there are problems in discussing the "probability" of a single event for which there is no frequency. To take a common example, what does it mean to say "the probability that the Big Bang Theory is true is 90%"? The theory is not true nine times out of ten; it is either true or false in one unique case. Taleb favours the "subjective" theory of such probability, that is, the "90%" is simply a report of our opinion.
 6. Taleb, *The Black Swan*, p 33.
 7. Taleb in fact uses the term "history" to refer to sequences of past events more generally, but my interest is in what he says about academic history.
 8. N.N Taleb, *Antifragile: Things that Gain from Disorder* (Penguin, London, 2012), pp 314–315, 331, suggests some positive value.
 9. Taleb, *The Black Swan*, p 75. See below.
 10. Taleb, *The Black Swan*, pp 62 and following pages.

over storytelling, experience over history, and clinical knowledge over theory”.¹¹ In *The Black Swan* the critique is largely philosophical,¹² and it is this which I am mainly discussing; in Taleb’s later *Antifragile* he makes some criticisms of what he sees as faults in historians’ actual practice.

I am not going to attempt a general defence or discussion of all the ways in which historians attempt to establish causes and understand the past, as this would obviously be far too large a topic. Rather, I am responding to the particular issues raised by Taleb in the area of academic history. (I will normally use “history” to mean the academic study of the past, rather than the past itself, or other perceptions of the past.) What follows is based on my own understanding of Taleb, but due to the somewhat unclear structure of his book there could be some dispute on that.

I will make reference to concepts from the philosophy of science, partly because Taleb himself does, but I would note that I do not believe history can be limited by such approaches. There is also a human dimension, not reducible to such scientific schema, and omitting it produces the appearance of rigour at the expense of loss of real understanding of the world. Interestingly, Taleb himself seems to have such a concept, which he refers to as the “texture” of life,¹³ but he does not seem to develop it as part of his writing on history. Also, I am assuming that whether or not historical narrative can be, or should be, neutral or free of purpose, it is nevertheless possible in some ways to assess its validity in terms of an independently existing reality.

In responding to Taleb, I am not attempting a refutation, although I will argue that some of his arguments are faulty. My contention is that Taleb and the academic historians have useful things to learn from each other, but that an unnecessarily confrontational approach has got in the way of this.¹⁴

Taleb’s critique of historical causation can be described under four main headings. Firstly, he discusses the issue of “confirmation bias” and “silent evidence” (which he also discusses in other contexts). Secondly, he maintains that in general, explanations of historical causation are merely the “narrative fallacy”. Thirdly, he argues that attempting to find historical causes is frustrated by the near-impossibility of “backward process”. Fourthly, he problematises the concept of the “event” in causation. The first and fourth point may be seen as subsidiary to the second; they complicate the study of causation, but do not in themselves necessarily make it impossible.

11. Taleb, *The Black Swan*, p 89.

12. In deference to Taleb, I will not use the term “theoretical” here.

13. Taleb, *The Black Swan*, p 124. This is implicit in an allegory involving a fictional character “Fat Tony”.

14. There has nevertheless been some discussion of Taleb’s work by historians who see potentially useful ideas. See for example D. Edelstein, “Revolutions, Black Swans, and Historians”, *Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts*, Editor’s Blog 15 June 2011, <http://171.64.37.175/journals/rofl/blog/revolutions-black-swans-and-historians>, Accessed 28 October 2013.

It may be useful to mention at this point that Taleb's "histories" include individuals' perceptions of their past. Hence, he refers to psychological and other studies showing the distorting effect of memory, which he sees as a factor in the way causal narratives are created. However, he seems to conflate this with the construction of explanations and narratives in academic history, where *memory* is not really the appropriate category. The construction of an analysis, or indeed a narrative, from sources is very different from its formation in memory. Historians are in fact in agreement with Taleb that the picture of the past derived from ordinary memory is likely to be distorted in various ways.¹⁵

Although Taleb has evidently had some contact with historians, he does not make what these have been as clear as one would like in his writings, meaning that it is sometimes difficult to be sure what he is familiar with. His quoted reading seems not to distinguish practical historians from theoretical writers such as Marx or Hegel. This may be of considerable importance, since Taleb sometimes criticises historians' supposed attempt to find general laws, an attempt which very few practical historians have even considered as valid, let alone attempted. One gets the impression that contacts have not been fruitful. Taleb's style is undeniably abrasive: he himself notes¹⁶ that he used to begin discussions with statisticians by telling them they were wrong, and that it was only after some time that he discovered that a more conciliatory approach led to greater acceptance of his ideas.

Also, it is not clear how far Taleb is familiar with what Collingwood described as the issue of evidence as against testimony.¹⁷ For example, he argues that technological history needs to be written either by those who have been involved in technological development, or observed it, instead of "just reading accounts concerning it".¹⁸ Without dismissing his point, the idea that a historian proceeds by reading *accounts* of events rather than studying *sources* is typical of those without close knowledge of the discipline.

The first thing to note is that Taleb's concept of history is a limited one: he rejects the study of causation, but seems to feel that without this history is merely "an enumeration of accounts".¹⁹ (This residual type of history is not, in his view, without some value.) However, there are many other aspects of history as practised by modern academic historians, linked by a common theme of trying to *understand* the human world of the past. These include for example synchronic analyses of past societies (structural rather than causal) and "thick description" which has some relation to anthropology:

... richly contextualized thick description of past events and phenomena is genuine analytical work even if it yields no obvious causal explanations. For us, the unique particularities that define a given historical moment are as interesting as any broader

15. This does not mean such memory is not a *source*, of course.

16. Taleb, *The Black Swan*, p 364.

17. R.G. Collingwood, *The Idea of History: Revised Edition, with Lectures 1926–1928* [1946] (ed.) J. van der Dussen (Oxford University Press, New Delhi, 2006), pp 256–257, 269–270, 275. For example, suppose a letter states that something has been banned. This ban is the "testimony". The historian can deduce from the letter's "evidence" that the activity was known, and subject to criticism, whether or not the testimony is correct. Historians can thus learn things about the past which contemporaries did not think needed to be stated, or did not know, or even wanted to conceal. Other historians have used varying terminologies.

18. Taleb, *Antifragile*, p 217.

19. Taleb, *The Black Swan*, p 199.

generalizations that might transcend that time and place. Like many other scholars in the humanities, we are as eager to understand the meanings of past times and lives as we are to determine their causes, so interpretation is as important to us as explanation.²⁰

Thus historians often focus on *understanding* past societies, on many levels, not necessarily assigning causes to particular events. Taleb might say that these types of history are indeed avoiding the “theorizing” he dislikes.

Having said that, I will concentrate mainly on the area of Taleb’s interest, namely historical causation.

Confirmation bias

“Confirmation bias” is the tendency to seek or give greater value to evidence confirming one’s existing ideas. The term comes from cognitive psychology. It is closely related to “silent evidence”, which is a recurring theme in *The Black Swan*. This is the fallacy of looking at the evidence – notably that of success – which presents itself, while neglecting the “cemetery” of other evidence. This can be illustrated by the genre of books about successful people supposedly showing the secrets of their success by describing their habits and nature. There are many people who go into business but fail, or at least never become rich, and no biographies are written about them. So how do we know if the explanations in the books are true? Maybe the failures had similar habits. Similarly, Taleb argues that history is written by, or about, the winners, so we attribute causal stories to their success which might be seen as unfounded if we were as well informed about the losers.

E.H. Carr, who Taleb cites more than once and apparently regards as a representative thinker, is a bad representative for historians on this issue, since he did indeed believe in history of the winners. He noted that it was states in decline where theories of historical chance were popular,²¹ and made the famous gibe, “the view that examination results are all a lottery will always be popular among those who have been placed in the third class”.²² Carr did admit that finding a motive was not refutation, but does not seem to have reflected on the converse motive, that the winners in history will tend to attribute the results to necessity or their own virtue. The latter motive is that discussed by Taleb, and I think he has a good case that it is in fact the more prevalent problem, partly because of the “silent evidence” issue.

Carr’s belief in a history of the winners was based on the premise that “History is, by and large, a record of what people did, not of what they failed to do: to this extent it is inevitably a success story”.²³ He believed that “primitive savages”

20. W. Cronon, “Getting Ready to Do History”, *Carnegie Essays on the Doctorate*, p 4. http://www.williamcronon.net/writing/Cronon_Carnegie_Essay_Getting_Ready_to_Do_History_2004.pdf Accessed 27 May 2007.

21. E.H. Carr, *What is History?* (Palgrave, Houndmills, 2001) [1961], pp 93–95.

22. Carr, *What is History?* p 95.

23. Carr, *What is History?* p 120. A.J.P. Taylor noted the disturbing extent of Carr’s tendency to see success as justification. See A.J.P. Taylor, “Moving with the Times” (review of E.H. Carr, *What is History?*) in *The Observer*, 22 October 1961, reprinted in A.J.P. Taylor, *From the Boer War to the Cold War: Essays on Twentieth-Century Europe* (Hamish Hamilton, London, 1995), pp 25–27.

had no history, in the strict sense, until their societies reached a certain level of organisation which permitted the analysis of success.²⁴ However, this has never been the attitude of all historians, and a couple of years after *What is History?* E. P. Thompson famously declared the goal of recovering the stories of the losers from “the enormous condescension of posterity”.²⁵ Since then there has been a steady shift to the view that the *whole* of the human past is at least potentially within the proper study of historians, and the rise of cultural minority history. This does not, however, actually refute Taleb, who would answer that even if historians try to look beyond the winners, it does not follow they will be able to do so, since the survival of information is typically better for the winners.²⁶

Instead of Carr, Taleb might have felt more at home with Arthur Marwick, a historian with some of his own impatience in temperament, and who favoured evidence over theory. Taleb’s preference for phenomenological²⁷ observation over the demand for theory²⁸ will strongly resonate with many historians and could be a point of fruitful contact.

Taleb’s point about “confirmation” has substance, but raises the issues of induction and inference to the best explanation. It has long been a philosophical problem that while we make inductive predictions from repeated observations – for example, the sun has always risen in the east, so we expect it to rise in the east tomorrow – there is no *logical* reason why the next observation could not be different.²⁹ Taleb discusses the issue with the story of a turkey. Each day the turkey is fed, and its confidence that human beings will always care for it increases. But (this is an American turkey) Thanksgiving arrives and the turkey’s experience suddenly changes. The fact that something never happened before does not mean it cannot happen.

While Popper attempted to remove induction from his account of scientific method,³⁰ this has not gained complete acceptance. Historical explanations are often the result of such inference from the data, but this is not necessarily the same thing as seeking confirmation in the way Taleb condemns. Inference will be discussed further below.

Prediction and the “narrative fallacy”

Taleb’s rejection of the study of historical causation is closely connected to his rejection of prediction. He argues throughout the book that in the complex world of

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24. Carr’s remarks on this are for some reason less often cited than the comparable comments of Hugh Trevor-Roper about “barbarous tribes” having no history. See H. Trevor-Roper, “The Rise of Christian Europe”, *The Listener*, 70, 1809, 28 November 1963, p 871; Carr, *What is History?* [1961], p 121.
 25. E.P. Thompson, *The Making of the English Working Class* (Gollancz, London, 1963), p 12.
 26. To some extent this may be offset by the use of evidence rather than testimony.
 27. In the older sense of “the description and classification of ... phenomena rather than causal or theoretical explanation” (OED), rather than the later philosophical sense of Husserl, Heidegger and others.
 28. Taleb, *Antifragile*, p 116.
 29. The question has sometimes been discussed using the example “All crows are black” – no matter how many black crows are observed, the next one might be white.
 30. K.R. Popper, *The Logic of Scientific Discovery* (Science Editions, New York, 1961) [1934 as *Logik der Forschung*], pp 27–34. Popper’s “hypothetico-deductive” model is that a hypothesis is proposed, which is tested by attempts to falsify it. The formation of the hypothesis does not depend on induction or indeed any particular process. Despite problems with the elimination of induction, Popper’s model remains powerful.

human reality, prediction is impossible, and he complains that although we know prediction has not worked in the past we do not learn from this but continue to do it.³¹

Historians generally agree with Taleb on the impossibility, or near-impossibility, of historical prediction. In fact, there are few other branches of scholarship so sceptical about prediction. This suggests that far from being easily persuaded by plausible narratives of spurious predictability, historians learn from their studies that the world is unpredictable. Here again I note the failure of communication: Taleb might have found natural allies among the historians, especially if he had shared his ideas with them less confrontationally than seems (at least on the basis of his own account) to have been the case. Some historians, including Gene Callahan, whose arguments are discussed later, are theoretically determinists, and maintain that we could in principle predict everything if we knew enough, but even Callahan admits that in practice this is not the case.³² Non-determinists usually include unpredictable human behaviour as one source of unpredictable history.

John Lewis Gaddis has argued that the rejection of prediction is related to key distinctions between history and much social science. Rather than reductionism and a search for independent variables, historians think in terms of an ecological system of interdependent variables.³³

When I say that historians typically do not believe in prediction, I should qualify this. It is obvious that predictions about the *immediate* future, one step ahead, can often be made with very high probability. I am referring rather to the prediction of historical events or situations further in the future: it is unfortunately mainly at such a range that predictions are useful and interesting. In such cases, historians may still point out historical factors which alter the probabilities. Sometimes these are relevant to choices. For example, the pattern of long-term hostility which *may* be precipitated into war suggests that *détente* is worthwhile even when it does not solve the long-term problem. However, all this is different from predicting a particular future,³⁴ though it is true that historians sometimes feel there is enough information for a “ballpark” estimate. Beyond this, there is another type of quasi-prediction, as for example where those with historical knowledge of Iraq foresaw problems with the 2003 invasion by the United States and its coalition which were evidently not grasped by others. Further, useful thinking about the future often depends more on the human understanding which emerges from a study of history.³⁵

Historians’ scepticism about prediction is connected with their caution about counterfactuals. For many purposes a cause implies a counterfactual: thus “the window broke because she threw a stone” implies “if she had not thrown a stone

31. Taleb, *The Black Swan*, p 135.

32. G. Callahan, “History is not Historicism”, *Critical Review: A Journal of Politics and Society*, 21, 4, 2009, DOI: 10.1080/08913810903441401, p 473. This was one of several articles on Taleb in this issue.

33. J. Lewis Gaddis, *The Landscape of History* (Oxford University Press, Oxford, 2002), pp 53–70.

34. It is also different from the crude idea of “learning from history” which consists of finding a supposed parallel (Nasser = Hitler, Suez = Rhineland, etc.) and reading off an answer.

35. For a discussion of history and prediction, see E. Hobsbawm, “Looking Forward: History and the Future”, in E. Hobsbawm, *On History* (The Free Press, New York, 1997), pp 37–55.

the window would not have broken.”³⁶ However, there is the issue of pre-emption: if she had not thrown the stone, someone else might have done so. This is one reason why, as we get further away in time and causal steps, counterfactuals become more uncertain. Confucius once remarked that “But for Guan Zhong, we should now be wearing our hair unbound, and wearing our coats buttoned on the left side”³⁷ – that is, without Guan Zhong’s actions, Chinese culture would have been overrun by that of the “barbarians”. But perhaps there were other possible leaders who would have come to the fore with equal or adequate success. Or perhaps the barbarians would have failed to follow up a victory; or perhaps they would have become sinicised rather than vice versa. Gaddis however argues that in seeking coherence historians *necessarily* consider counterfactuals in mental simulations, though only within limits.³⁸ This would differ from real-world prediction since the projected path is a variant of a known real path.

Taleb states that historical narratives make Black Swans (and, I think he implies, historical events in general) seem less random they were at the time. Taleb is partly right, but this is not due to a defect in causal explanation but rather follows from Taleb’s own definition of randomness. If randomness in practice is simply opacity, the absence of sufficient information, then the situation after the event is different because more information is available, as a result of the event.

A form of this argument has been put forward by Gene Callahan, who (responding to Taleb) argues that unpredictability of an event before it happens does not prevent explanation of the event after it happens. The form in which Callahan makes this argument includes an argument that randomness is excluded from historical analysis, but as we shall see, this is a separable point.

However much what took place was a surprise when it occurred, it really did emerge from what preceded it. The historian’s aim is to explain each unique episode in terms of the actions that led up to it – to find the causes for each effect. By definition, then, concepts such as “randomness”, “chance”, and “improbability”, which imply causelessness, are categorically excluded from the historian’s analysis.³⁹

Callahan notes Taleb’s definition of randomness as what we do not know, but rejects it on two main grounds. Firstly, our knowledge of everything is fallible, but knowledge is not the same as certainty (he chides Taleb for neglecting Popper on this point).⁴⁰ Secondly,

In using evidence to show what caused these effects, the historian is transcending, however imperfectly, the sheer unpredictability that Taleb attributes to the future – because the historian is examining a “future” that has already happened ... The Black Swans of the past have already appeared.⁴¹

36. Such counterfactuals are frequent in legal thinking about responsibility.

37. *Analects* 14.17. The hair and clothing styles were those of the barbarians.

38. Gaddis, *Landscape of History*, pp 65, 101–102. Some historians consider it a useful exercise to project counterfactual worlds beyond such limits, see e.g. N. Ferguson (ed.), *Virtual History: Alternatives and Counterfactuals* (Picador, London, 1997), but others do not.

39. Callahan, “History is not Historicism”, p 470.

40. Callahan, “History is not Historicism”, pp 472–473.

41. Callahan, “History is not Historicism”, p 474. Callahan elsewhere states that “how ‘predictable’ the event was at its time is irrelevant, since for the historian the ‘odds’ of its having happened are 100%!” G. Callahan, Review of Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable, Review of Austrian Economics*, 21, 2008, DOI 10.1007/s11138-008-0051-7, p 363. Taleb refers to Callahan (N.N. Taleb, “Common Errors in Interpreting the Ideas of The Black Swan and Associated Papers”) but does not answer this.

Taleb writes that narratives make Black Swans seem “explainable and predictable”⁴² and give them “retrospective (though not prospective) predictability”.⁴³ But this is based on the converse nature of cause and explanation, that is, the argument that the same facts which explain an event afterwards would predict it in advance. It is dubious whether this applies to history. In practice, historians tend toward an implicitly probabilistic view of causation⁴⁴ in human history – this can be seen from the fact that they are so reluctant to use the word “inevitable” – although this is often combined with an idea that the probability may have been very high. Callahan, a determinist, does seem to think that they are in principle the same, but even he does not suggest that an explained event was predictable in practice. In the case of the 11 September 2001 attacks on New York and Washington (“September 11th”), for example, Callahan would presumably say that if information about the hijackers, information about the state of security and preparedness, and information about other relevant contingent factors had been simultaneously available at the time, the event could have been predicted. However, to have had all these sources of information simultaneously at the time is virtually a *per impossibile* condition. Taleb holds that there is no practical difference between “true” randomness and insufficient knowledge, and since it is not in dispute that knowledge is often insufficient Taleb would seem bound to accept probabilistic causation, which means explanation cannot necessarily be converted to prediction.

The point can be illustrated more simply by examples. Consider again the September 11th attacks in the United States. These constitute an example of a Black Swan event for the American people and government, though not for the hijackers (Taleb notes that there is no such thing as an “*objective* Black Swan”). After the event, however, it was possible to identify the hijackers and to determine something of how the attacks had been planned by a known extremist organisation. It is therefore possible, after the event, to give a causal narrative for the attacks, namely that a terrorist organisation which had a record of mounting attacks on the United States decided on a new type of attack, and successfully carried it out. The attacks were possible, we can now see, because of the absence of certain precautions, and this may also be considered a cause. The causes however were probabilistic: if we re-ran events from (say) 1996, the extremists might have chosen a different target, or their organisation might have broken up, or the hijackers might have been detected in time.⁴⁵

Let me offer two slightly different examples: the sudden destruction of the Air Botswana fleet on 11 October 1999 by Captain Chris Phatswe, and the earthquake in Christchurch, New Zealand on 22 February 2011. Both had significant effects. The 1999 event – which had some parallels to September 11th but was more freakish – was an example of an unpredictable Black Swan for Air Botswana, but the historian, and indeed any ordinary person reflecting on the incident, can say *after* the event that the cause was a decision by Captain

42. Taleb, *The Black Swan*, xxii.

43. Taleb, *The Black Swan*, xxii.

44. That is, a cause changes the probability of a given outcome. Something may make an effect possible, or probable, but not certain.

45. If we say that the causes include the hijackers successfully taking over and flying airliners, then the situation is arguably more determined, but this is at the price of including within the causes part of what would normally be seen as the event.

Phatswe, coupled with presumably inadequate security.⁴⁶ The earthquake was not predicted (they almost never are) but also it was well outside the range of quakes that had previously been thought plausible there. After the event, however, there is nothing odd in saying that it was caused by tectonic stresses we *now* know about. Hence, practical unpredictability before the event does not (in itself) imply that causal explanations are thereby called into question. As with the owl of Minerva, it is only after the event that historical explanation can be brought to bear.⁴⁷

Removing chance from historical explanation involves too great a distortion of our actual data. I would suggest that while chance can be removed as a category according to either Callahan's approach (determinism) or Carr's approach (chance events are meaningless), this is not *useful*. In the case of the September 11th attacks, for example, it seems simplest to include in the narrative, as one of the causes, a relatively improbable chance. (As is sometimes said of terrorists, "they only have to be lucky once".)

Callahan asserts that improbability implies causelessness.⁴⁸ But this assumes that causation can only exist in a fully deterministic form. That is, for Callahan, a cause is always something which means the effect *must* follow. But probabilistic causes are part of ordinary thinking about causation, as we have seen. Where information is insufficient for certainty about causation, Callahan can maintain that the event is determined rather than "probable" or "improbable" but he admits we do not know how. It seems more consistent with the normal practise of history to admit the concept of probability, which we can observe in such a case, than to "categorically exclude" it in favour of an unobservable determinism.

In arguing that randomness or chance cannot be a historical category, and rejecting Taleb's definition, Callahan does not speak for all historians, and a concept of chance is compatible with the main thrust of Callahan's argument. (We may, for example, say that Captain Phatswe's actions were a "chance" incident for Air Botswana without saying that we do not know why the aeroplanes were destroyed.) The concept of randomness as equivalent *in practice* to insufficient information is not new.⁴⁹ Carr discussed the idea that the two were equivalent, though he was dubious that it was useful.⁵⁰ Most historians have accepted that chance and accidents⁵¹ play a role in history, though differing in how great a role. Carr, while like Callahan noting that these "accidents" are not causeless, in fact conceded readily that chance events could have a significant impact and that it was not useful to exclude them as a category.⁵² In Carr's view, the reason for not focusing on chance is that the chance event does not help us *understand* history.⁵³

46. "World: Africa Suicide Pilot Destroys Air Botswana Fleet", BBC News online, Monday, 11 October 1999, Published at 17:39 GMT 18:39 United Kingdom, <http://news.bbc.co.uk/2/hi/africa/471568.stm> accessed 25 September 2013.

47. "The owl of Minerva only begins her flight at the fall of dusk." (*Die Eule der Minerva beginnt erst mit der einbrechenden Dämmerung ihren Flug.*), G.W.G. Hegel, *The Philosophy of Right* (1821), Preface. The owl is the symbol of wisdom, and the implication is that philosophy follows reality; in particular that understanding of an era is only possible in hindsight.

48. See above; Callahan, "History is not Historicism", p 470.

49. M. Stanford, *An Introduction to the Philosophy of History* (Blackwell, Oxford, 1998), p 130.

50. Carr, *What is History?* p 96.

51. Accidents may perhaps be defined here as events where causes are both unexpected and of low relevance to the main causes of related events. An example is the sudden death of a leader from natural causes.

52. Carr, *What is History?* p 96; see also xxiii for his later views.

53. Carr, *What is History?* p. 97–98.

(Against the general trend, Carr seems to have thought of historical understanding as having predictive value.) Collingwood argued that the past does not determine the present absolutely, but only the possibilities within which “the present may choose”.⁵⁴

Taleb argues that causal narratives are suspect because multiple narratives could fit the same facts. This viewpoint has previously been expressed by Hayden White, who like Taleb does not dispute that objective “facts” exist but considers narratives about them to be “emplotment”.⁵⁵ The first point to note is that the problem is not peculiar to history or “narrative disciplines”: in the natural sciences, the concept of “inference to the best explanation” has been used to discuss how, given the many possible explanations of the same data, one is selected as the *best*.⁵⁶ However, another and very important response is that made by Marwick to Hayden White, which has in my view been unduly neglected. This is that historians do *not* work by attempting to connect or “emplot” a set of atoms of knowledge called “facts”. Rather, they use *sources* as ways of attempting to *access the past*. His slogan is “Forget facts, foreground sources”.⁵⁷ This does not mean that the past is not factual in the ordinary sense, but Marwick suggests that thinking of a set of “facts”, meaning in effect propositions about the past about which we are supposedly certain, is the wrong way to think about how we use information in accessing the past. This is, incidentally, one of the reasons why much historical research cannot be assimilated to or adequately described by the pattern (often used in social science) in which research leads to “data” which is then “analysed” in a separable process.⁵⁸

However, in historical research the pattern of finding an explanation or narrative for a set of pieces of data is one that does occur, and I will therefore proceed to discuss Taleb’s criticism of this process.

An example of communication problems can be seen with a debate on Taleb’s ideas in *Critical Review*. Callahan argues,⁵⁹ in response to Taleb’s statement that we do not really know the cause of Hannibal’s defeat, that there is on the contrary a good historical theory about this, based on Rome’s ability to

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54. Collingwood, “History as the Understanding of the Present”, in R.G. Collingwood, *The Principles of History and Other Writings in Philosophy of History* (Oxford University Press, New York, 1999), p 142.
 55. H. White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (Johns Hopkins Press, Baltimore, 1975), pp 7–31. Although both see historical narratives as imposed on the facts, their approaches differ. For Taleb, a narrative could in principle be a valid explanation, but such a narrative cannot for various reasons be achieved in practice. For White, narratives are necessarily imposed meanings. Thus, whereas for Taleb the obstacle to understanding is in analysis, for White it is in the role of language.
 56. This was classically stated by G.H. Harman, “The Inference to the Best Explanation”, *The Philosophical Review*, 74, 1, January 1965, pp 88–95. Harman referred (p 89) to being able to reject possible alternatives and establish truth, but both scientists and historians will normally be satisfied with probability. See also M. Fulbrook, *Historical Theory* (Routledge, London and New York, 2002), p 73 on history as puzzle-solving rather than emplotment.
 57. A. Marwick, *The New Nature of History* (Palgrave, Houndmills, 2001), p 152.
 58. On this point see G.R. Elton, *The Practice of History* (Sydney University Press, Sydney, 1967) p 62; and Carr, *What is History?*, p 22 at the practical level; and Collingwood, “History as the Understanding of the Present”, in *The Principles of History*, pp 140–141 at the philosophical.
 59. Callahan, “History is not Historicism”, p 472.

keep her allies. “Mystery resolved” declares Callahan.⁶⁰ But this misses the point. Taleb does not deny that causal narratives and theories based on evidence exist. Rather he is sceptical that we can know whether they are true. If Hannibal had won, then (Taleb argues) some equally convincing explanation would have been offered to explain the outcome *based on the same evidence*. The narratives are created, in his view, to explain events which are actually random.

However, this raises an important point. Taleb is asserting that (following the same historical background) Hannibal might have won, and we would then have found an explanation. Thus, the explanation of either result is a rationalisation. Callahan however would not concede that Hannibal might have won. In his view, effects follow causes deterministically, and since we now know what effect (Hannibal lost) follows from the actual historical situation, it is not possible that Hannibal could have won. Hence, imagining how we would explain his victory tells us little about causal narratives. The problem here is that both begin with an unprovable assertion. Taleb assumes that Hannibal could have won, in the same circumstances. Callahan assumes that he could not. There seems to be something of an impasse.

Taleb’s criticism is part of his classification of history as a “narrative discipline”, which he defines as one “that consists of fitting a convincing and good-sounding story to the past. Opposed to experimental discipline”.⁶¹ However, there is an increasing awareness that the natural sciences are not all experimental in the physics sense;⁶² disciplines such as geology and palaeontology are better seen as “historical sciences”, a point developed at length by Stephen Jay Gould.⁶³ Narrative is a valid part of analysing causal paths in such sciences, and Taleb’s criticism in principle applies to both equally.

Backward process

Taleb’s next major criticism of the study of causation is that historians fail to grasp a distinction between “forward” and “backward process”, and that the latter is vastly more difficult to analyse. He gives an analogy: if we see an ice cube, we can predict how it will melt, but if we see a puddle it is hardly feasible to work out what the ice cube, if any, was like. Taleb maintains that we cannot “unfry the egg” or “reverse engineer history”.⁶⁴ This point is related to the “narrative fallacy” since it is another way in which Taleb argues that there are too many possible explanations of the past.

Taleb’s point is somewhat ambiguous. The metaphor might describe a perception of historical research as seeking to trace backwards from the present. This does exist, in the form of Marc Bloch’s “retrogressive” method in which the

60. Callahan, “History is not Historicism”, p 472. Hannibal was the memorable Carthaginian commander in the Second Punic War, 218–201 BC, between Rome (the victor) and Carthage. He was ultimately defeated at the Battle of Zama in 202 BC.

61. Taleb, *Antifragile*, p 432.

62. John Lewis Gaddis suggests that for historical sciences mental simulation takes the place of the laboratory experiment. See Gaddis, *The Landscape of History*, p 40.

63. S.J. Gould, *Wonderful Life: The Burgess Shale and the Nature of History* (Norton, New York, 1990), pp 277–282.

64. Taleb, *The Black Swan*, p. 196.

historian makes sense of earlier sources by understanding later periods.⁶⁵ However this is a way of dealing with primary sources (in the metaphor, such a source could be a photograph of the cube) rather than pure deduction from the present.

However, I think Taleb's point is that the puddle stands for the whole present world, the present into which, as Collingwood put it, the past has turned,⁶⁶ and Taleb is denying that we can reconstruct the past world from it. In this reading, the historian's sources would be parts of the puddle. Attempting to deduce the previous state as an ice cube is too difficult.

Firstly, remaining with the metaphor, we may object that it is far too extreme an image: Taleb is attributing far too high a degree of entropy. We are not faced with a puddle which contains almost no information about possible ice cubes in the past but (for example) an old house which has partly fallen down, or an old apple which has gone mouldy: some information can be retrieved, at least in terms of what is more probable.

Given this, is it possible to deduce a past state? Collingwood wrote that the past exists ideally in the present, that is, that the past is an imagined but not arbitrary state implicit in the present: "The past can be, within the limits imposed by present circumstances, critically reconstructed as it must have been."⁶⁷ Taleb's point about backward process is partly that there are multiple possible pasts which would explain the present; that is, there is more than one past ideally implicit in the present. As previously noted, however, comparable issues arise in the natural sciences: although more than one explanation is possible, it is (at least sometimes) possible to infer that one is more likely.⁶⁸

It is possible that this is not a good answer to Taleb's argument on reverse process, but unfortunately he does not give detailed, real historical examples and it is necessary to answer in terms of the analogy used. This is a recurring problem; it would have been easier to engage Taleb in fruitful debate if he had given more examples and analysis from actual historical writing.

Taleb can, it seems to me, claim there is a problem with multiple explanations. However the existence of a problem does not mean that there is no solution. Taleb complains that merely because a narrative fits, that does not prove it is right. However, there is a crucial gap here. As an admirer of Popper,⁶⁹ Taleb should remember his point that the *formation* of a hypothesis is ultimately not the important thing. Rather, the question is what happens to the hypothesis. Popper's

65. M. Bloch, *The Historian's Craft* trans. Peter Putnam (Manchester University Press, Manchester, 1954) [1941], pp 43–46.

66. Collingwood, *The Idea of History: Revised Edition, with Lectures*. Lectures: p. 404, para 59.

67. Collingwood, *The Idea of History: Revised Edition, with Lectures*. Lectures: p 412, para 68. This conception is useful whether or not we accept the view of the past as consisting *only* of such an ideal state.

68. Harman, "The Inference to the Best Explanation".

69. N.N. Taleb, *Foiled by Randomness: The Hidden Role of Chance in Life and in the Markets* 2nd ed. (Random House, New York, 2004), pp 126–128. Taleb also expresses an admiration for Popper's *The Poverty of Historicism* (Routledge, London, 2002) [1957], without noting that Popper discussed how a historical event could be validly explained using narrative. (IV.30, pp 132–136).

scientific theories⁷⁰ are tested by attempting to falsify them. Historical explanations and narratives are tested in various ways, either through new evidence or through new analysis (or both). It is of critical importance here to note the *collective* nature of the practise of history. As Arthur Marwick stressed repeatedly, historical knowledge is developed by a process of discussion and revision. This works in a way not entirely dissimilar to the scientific community. Theories are often *tested* by case study, sometimes in a way analogous to Popper's falsification theory of scientific method.⁷¹ This process of review is linked to historiography in the sense of the current state of an issue into which an investigation is made.

It is worth noting that history is less prone to "schools" of thought, at least in the long term, than some other disciplines. In the short term (which in historical investigation may mean decades) there are indeed often rival schools of thought. But usually some degree of consensus will emerge which convinces most, if not all, and "schools" tend to dissolve. This pattern approximates to that of the sciences, though with a different time scale and more fuzzily. Particular historians can be prone to all sorts of errors, including those attributed to them by Taleb, but the historical community, like the scientific community, is ultimately self-correcting. The parallel is obscured firstly by the time scale – it often takes decades for progress toward consensus – and by the "fuzziness", the fact that in many areas of history conclusions cannot be expressed in simple yes/no or quantitative terms.

This point is also relevant to an issue raised by Taleb in *Antifragile*. Taleb believes there is a pattern of theoreticians falsely claiming credit for empirical innovation in technology, and of historians reinforcing this narrative.⁷² However, in support of this he cites several historical studies which "busted" this myth in particular cases.⁷³ Taleb may be correct about distorted history, but if so his own examples suggest that historical enquiry eventually corrects such errors.

Problematising the event

Taleb problematises the concept of an "event" in causation. For example, consider the First World War. Suppose (despite Taleb's doubts) that we identify what caused the outbreak of war. We may say that we have found the cause of the First World War. But a First World War which lasted only a few weeks would have been very different from the real one, which lasted four years, broke up economic systems, bankrupted European states, and destroyed empires. A useful description of cause, for Taleb, would have to explain not only the beginning of the war but its size and impact.⁷⁴

This absence of "typical" event in Extremistan is what makes prediction markets ludicrous, as they make events look binary. Describing an event as "a war" for decision making or analysis purposes is meaningless: you need to estimate its damage – and no damage is typical. Many predicted that the First War would occur – but nobody predicted its magnitude.⁷⁵

70. Taleb correctly notes that Popper remains popular among working scientists, at least physicists.

71. See also Bloch, *Historian's Craft*, p 88, on falsification.

72. Taleb, *Antifragile*, p 217–218.

73. Taleb, *Antifragile*, p 218.

74. Taleb, *The Black Swan*, p 359.

75. Taleb, "Common Errors in Interpreting the Ideas of The Black Swan and Associated Papers", p 4. (Cf. Taleb, *Antifragile*, p 98.)

This is not completely new – historians have long been aware of the need to account for the *nature* of the First World War, for example – but is an interesting and possibly fruitful conceptualisation. Taleb seems to have concluded that historians only consider causes of “events” simply defined, and do not think about the impact as part of this. Historians have in fact often tended, in the case of the First World War, to see the causes of its scale and length in processes which began after the outbreak.⁷⁶

Similarly, historians have problematised the “event” in some other ways. In considering “Why did the Allies win the Second World War?” for example, we must ask ourselves “Which Second World War?” It is worth remembering that for most practical purposes Germany arguably *did* win the war of 1939–40. Britain’s refusal to make peace prevented a conclusion, but it seems doubtful (not impossible) that Germany’s fortunes would have been reversed without some major change (such as the decision made in fact to attack the Soviet Union).

Prediction or explanation without size is not in my view quite as weak as Taleb suggests, however. Consider the Cold War. This situation fitted the pattern, which I have discussed previously, of a long-term cause which might be precipitated into an event (a war), and in this case the situation was probably at the last stage before such precipitation. A nuclear war might possibly have been limited. Nevertheless a contemporary prediction that something would probably start a war would have been very important, to say the least, even if it was uncertain how big a war.

Taleb does seem to have got on, to some extent, with Niall Ferguson, whose non-determinism is famously displayed in *Virtual History*. However, there are many other possibilities for intellectual contact. Richard Overy questions the simplistic cause sometimes offered that the Allies had superior productive capacity. The Axis, he points out, had resources better placed at some crucial stages, and in a short war this, rather than productive capacity, could have been decisive. The Soviet Union came close to defeat, and actually did put out peace feelers, in October 1941.⁷⁷ Callahan would say that we can now (in principle) identify the actual causes; for example, the Soviet Union’s peace feelers were rejected as Germany expected total victory. But in some ways this case does seem to come close to Taleb’s model of an uncertain outcome which could have been plausibly explained either way from the same evidence. I would suggest that probabilistic explanation is the least problematic approach in such cases.

Taleb’s historical theories

A more general issue raised by *The Black Swan* is simply the proposition that Black Swans, highly improbable events, play a large role in shaping history.⁷⁸ History proceeds by jumps, in Taleb’s view. This contrasts with the view of history

76. Including for example the desire to reverse damage already sustained, or the formation of increasingly ambitious war objectives.

77. R. Overy, *Why the Allies Won* (Norton, New York, 1995), pp 2–6, 14, 317. As Overy comments, if the outcome of battles could be predicted with certainty they would not be fought (p 320). The actual plausibility of a German victory in Russia has however been disputed.

78. “I have made the claim that most of history comes from Black Swan events ...” Taleb, *Antifragile*, p 6. The recognition of Black Swans would appear logically to require the possibility of some knowledge of history, and in *Antifragile*, despite some unflattering language about historians (p 220) Taleb does in fact make use of some historical writing.

in which events follow a main stream, directed by large-scale broad historical forces. In this latter view Black Swans are only blips, the influence of which is swallowed by the main current. The view that Black Swans play a large role is quite compatible with a rejection of Taleb's criticism of causation, and indeed is compatible even with determinism: it is merely a question of how many sharp turns dependent on short-term events there are. Historians vary quite considerably in the relative importance they attach to the broad forces and the shocks. Taleb's conceptualisation of the Black Swan is I think a worthwhile one,⁷⁹ but the idea of history proceeding by jumps is not new, or even outside the mainstream.⁸⁰ It parallels the model of "punctuated equilibrium" in evolution. The causes of such jumps would however not necessarily be Black Swans.

Taleb's claim about the major role of Black Swans in history is an empirical one. The question is too large to answer properly here but some examples may be of interest. It is too soon to be sure of the significance of the September 11th attacks: clearly they greatly altered American public opinion and the range of what was politically possible in the United States. Whether as cause or enabling catalyst, it is difficult to believe that American foreign policy would have been the same without them. Hence, September 11th does look like a good candidate for a major historical Black Swan. Historians will differ on their lists, however. (Taleb will have plenty on his list, since he has declared in advance his disbelief in deeper explanations.) A case could be made for the First World War. However the Second World War clearly does not fit in the same way. If the Cuban missile crisis in 1962 had led to nuclear annihilation this would not have been a Black Swan, since it would have been precipitation of an obvious long-term cause (the Cold War) and a foreseen type of event.

Taleb tends to concentrate on the history of events. However, consider demographic history. Taleb does give some attention to the role of large outbreaks of disease. However, let us consider the rise in European population in the eighteenth century. Some data for births and deaths is available, but how to explain it? Is lowered mortality due to better medicine, improved agriculture, or what? In the nineteenth century public health was transformed by the construction of sewers in cities. None of this seems to fit a Black Swan model. Taleb also suggests that science and technology has progressed by unexpected jumps, and downplays the importance of planned research. He certainly has a point, but he goes too far. While the use of the previously unknown atomic bomb by the United States against Japan in 1945 was a shock to the outside world,⁸¹ it was produced by a sustained and highly organised research project. Similarly, the post-war development of computers rested for some time upon massive American defence spending.⁸²

A further point is that while Taleb tends to look for the unexpected in terms of the unexpected Black Swan event, historians often find as much significance in unexpected *consequences* of events or developments. A widely-noted example is

79. For an example of another new conceptualisation in the recent past, consider the "unknown unknowns" popularised (though apparently not invented) by Donald Rumsfeld.

80. P. Pomper, "Historians and Individual Agency", *History and Theory*, 35, 3, October 1996, pp 281–308.

81. Though not entirely: it is notable that the first news reports assumed that readers already understood the term "atomic bomb".

82. See R. Rosenzweig, "Wizards, Bureaucrats, Warriors and Hackers: Writing the History of the Internet", *American Historical Review*, 103, 5, December 1998, p1538.

the use of the electronic computer. It was, reasonably, expected to have a large impact on such things as mechanical systems, business and government information, and so on. The huge impact on forms of social communication was not anticipated.

One of the few specific historical examples that Taleb examines in any detail is that of the First World War. He refers⁸³ to a paper by Niall Ferguson, which showed, by analysis of bond prices, that the business community did not anticipate the First World War.⁸⁴ Taleb argues that this shows historians' accounts of rising tensions and escalating crises before the war to be fallacious. But it has long been known that war was not expected, at least by most of Europe,⁸⁵ *at that moment*. This is quite consistent with the theory of long-term tensions (coupled with a catalyst), a model which as we shall see Taleb himself uses in another context. Such explanations do not necessarily imply that there was any *special* perception of risk immediately before the outbreak, and so they are not falsified by the finding that there was not. Long-term tensions, even acute ones (there are in fact a variety of historical theories about what underlay the First World War) do not always lead to war. Two notable examples are the late nineteenth-century antagonism between Britain and Russia, and the Cold War. The final determinant may often be in the realm of catalyst or chance. However, the point here is that Ferguson's article does not support Taleb's conclusion that the usual explanations of the war must be wrong.

Interestingly, Taleb and Blyth have written a specific analysis of the Egyptian revolution (2011, so it deals with the fall of Hosni Mubarak but not with more recent events).⁸⁶ This proposes an interesting historical explanation. Suppressing volatility means that when the forces of control break down, there is likely to be a large explosion, the nature of which cannot be predicted. (They argue that the United States' long-term policy of supporting authoritarian regimes it considers to be forces for stability in fact pushes, in the long term, toward such explosions.) The actual events which begin the explosion could have been different, and analysis has repeatedly mistaken "catalysts" for causes.

The striking thing about this is how closely it resembles the sort of thing written about revolutions by the historians Taleb has been castigating. A causal explanation is offered, in terms of long-term causes which make some such event likely, and short-term causes or catalysts which begin the process. The particular outcome was not predictable at the start of the revolution – this is a commonplace about 1789 and February 1917. Taleb and Blyth even trace their causation to a longer-term narrative about American suppression of volatility. I have referred to this model of long-term or situational causes, coupled with short-term causes (the latter equating to Taleb's catalysts) repeatedly. It is of long standing; it has been discussed for example by Elton⁸⁷ but goes back to Thucydides.⁸⁸

83. Taleb, *The Black Swan*, p 14n.

84. N. Ferguson, "Political Risk and the International Bond Market between the 1848 Revolution and the Outbreak of the First World War", *Economic History Review*, 59, 2006, pp 70–112.

85. It has of course been argued that the German government, or parts of it, were actively seeking war. But even if this is true, it was certainly not known to the British bond market.

86. N.N. Taleb and M. Blyth, "The Black Swan of Cairo: How Suppressing Volatility Makes the World Less Predictable and More Dangerous", *Foreign Affairs*, 90, 3, May/June 2011.

87. G.R. Elton, *Political History: Principles and Practice* (1970), p 138, quoted in Marwick, *The New Nature of History*, p 202.

Conclusion

Taleb puts his case in terms of an argument that much if not most historical writing is of little use. His first criticism, confirmation bias, reflects a genuine problem, though one which historians are aware of. His second and most important point, that causal explanations are only imposed narratives, I have argued against, especially on the basis of probabilistic causation and a counter to Taleb's argument that explanation implies predictability. His third point comprises "backward process" and the problematic multiplicity of possible pasts. I conclude that while there is an issue here, it is not peculiar to history but also affects natural science, and that possible solutions have been proposed. His fourth point, the problematisation of the event, is in my view a useful one, as is his concept of the Black Swan. I also note that Taleb might find historians natural allies on non-prediction and on the value of phenomenology. All this suggests that while historians will disagree with much of what Taleb writes, there are also points of useful contact, and a more irenic relationship would be desirable.

Abstract

In *The Black Swan*, Nassim Nicholas Taleb considers the importance in human affairs of "Black Swan" events of low probability but high impact. In the process he argues, in a confrontational manner, that historians' causal narratives are mainly invalid on a number of grounds but especially because the unpredictability of Black Swan (or other) events implies that subsequent narratives connecting events are merely "good-sounding stories". This article analyses Taleb's arguments against historical explanation and concludes that they are largely unsatisfactory. It questions Taleb's link between explanation and prediction in the context of history, arguing that Taleb's own concept of randomness as insufficient information implies greater knowledge after an event. However Taleb offers insights which can be of value to historians, and a more irenic relationship would be desirable.

Keywords: Black Swan; chance; randomness; Taleb; probability; causation; narrative; explanation; prediction.

Opsomming

In *The Black Swan*, beskou Nassim Nicholas Taleb die belangrikheid in menslike aangeleenthede van "Black Swan"-episodes as van geringe moontlikheid maar sterk impak. In die proses redeneer hy, op 'n konfronterende wyse, dat geskiedskrywers se oorsaaklike vertellings hoofsaaklik ongeldig is, op 'n hele aantal gronde, maar veral omdat die onvoorspelbaarheid van Black Swan- (of ander) episodes impliseer dat daaropvolgende vertellings wat episodes aan mekaar koppel, bloot "good-sounding stories" is. Hierdie artikel ontleed Taleb se redenasies teen historiese verklaring en kom tot die slotsom dat hulle grootliks onbevredigend is. Dit bevaagteken Taleb se verband tussen verduideliking en voorspelling in die eks van geskiedenis, deurdat hy redeneer dat Taleb se eie konsep van ewekansigheid as synde ontoereikende inligting, meer kennis na 'n

88. Thucydides, *The Peloponnesian War*, trans. Rex Warner (Harmondsworth: Penguin, 1965), book 1 chapter 1, p 25. For a useful discussion of this relationship in terms of revolutions see Edelstein, "Revolutions, Black Swans, and Historians".

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episode impliseer. Taleb bied egter insigte wat waardevol kan wees vir historici, en 'n meer versoenende verhouding sou wensliker gewees het.

Sleutelwoorde: Black Swan; moontlikheid/kans; ewekansigheid; Taleb; waarskynlikheid; oorsaaklikheid; vertelling; verklaring/verduideliking; voorspelling.