

**Fooled by Belligerence:
Comments on Nassim Taleb's
"The Long Peace is a Statistical Illusion"**

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I was surprised to learn that Nassim Taleb had a problem with my book *The Better Angels of Our Nature*, because its analysis of war and terrorism harmonizes with Taleb's signature themes. The chapter on major war begins with 21 pages on historians' overinterpretation of temporal trends in war and could have been called "Fooled by Randomness." It was followed dozen pages on the thick-tailed distribution of the magnitudes of wars which could have been subtitled "The Black Swan." Yet rather than acknowledging our similar mindsets, Taleb has come out swinging, pummeling away at what he thinks is the message of the book, accompanied by a stream of trash-talk about my statistical competence.

Taleb shows no signs of having read *Better Angels* with the slightest attention to its content. Instead he has merged it in his mind with claims by various fools and knaves whom he believes he has bettered in the past. The confusion begins with his remarkable claim that the thesis in *Better Angels* is "identical" to Ben Bernanke's theory of a moderation in the stock market. Identical! This alone should warn readers that for all of Taleb's prescience about the financial crisis, accurate attribution and careful analysis of other people's ideas are not his strong suits.

Taleb's article implies that *Better Angels* consists of 700 pages of fancy statistical extrapolations which lead to the conclusion that violent catastrophes have become impossible. He mistakenly refers to this as "The Long Peace." In fact "The Long Peace" (the term is John Gaddis's) refers specifically to the well-documented post-1945 decline of wars among great powers and developed states. And the chapter with that title is one of six that describe historical reductions in rates of violence. Another chapter discusses the more tentative but still appreciable declines in civil war and terrorism since the end of the Cold War. The remaining four pertain to other kinds of violence: tribal raiding and feuding, violent personal crime, barbaric practices such as slavery and torture-executions, and violence on smaller scales such as lynching, rape, spousal abuse, spanking, hate crimes, and cruelty to animals. The book makes it clear that these developments obey very different statistical processes than those governing wars and terrorist attacks; not even Taleb, presumably, would expect a sudden, massive, unpredictable jump in human sacrifice, slave auctions, sodomy laws, or debtor's prisons. So even if, as Taleb seems to believe, the danger from major war has not declined, we would have plenty of other declines of violence to explain. It's an open question whether there are any common denominators behind these various declines. *Better Angels* considers some possibilities, while making it clear that these declines do not constitute a single phenomenon.

The book's structure was lost on Taleb, who blends the different chapters and then criticizes his own confusion. He claims that the book "conflates nonscalable Mediocristan (death from encounters with simple weapons) with scalable Extremistan (death from heavy shells and nuclear weapons)," that it uses "statistics of one to make inferences about the other," that it "does not realize the core difference

between scalable/nonscalable,” that it implies that a drop in crime has implications for “casualties from violent conflict,” that it “fails to deal with the notion of temporal homogeneity,” and that it “assumes that the statistics of the 14th century can apply to the 21st.” Every one of these attributions is wrong. The book spends many pages arguing the exact opposite.

Taleb’s other allegations of statistical malfeasance are also products of dyslexia. The book does not claim that the mean of the distribution of war deaths has changed; it explicitly notes that power-law distributions (such as those commonly fitted to war deaths) don’t have calculable means. Like Taleb, the book points out that empirically observed data from the tail of a power-law distribution provide unreliable evidence for its underlying parameters. The survivorship bias, too, is not ignored but rather discussed in some detail. In yet another misreading, Taleb criticizes a claim about the process behind wars “switching from 80/20 to 80/2” (the numbers refer to the proportion of war deaths that are explained by a given proportion of wars, and come from Lewis Richardson’s pioneering study of the statistics of deadly conflict). In fact my summary of Richardson noted that the ratio for wars was 80:2 *rather than* 80:20; it did not say that the ratio had *switched* from 80:20 to 80:2. Finally, Taleb thinks that it is damning that “You can look at the data he presents and actually see a rise in war effects, comparing pre-1914 to post 1914.” Yes, that’s exactly what I point out: great-power wars became steadily more destructive from 1500 through 1945. The turning point that marks the onset the Long Peace was in 1945, not 1914.

As mentioned, from reading Taleb one might think that *Better Angels* misused complex statistics to extrapolate confident predictions about an Age of Aquarius in which major wars are impossible. But the statistics in the book are modest and almost completely descriptive. Aside from a regression or two, they consist of graphs that plot rates of violence over time, which I interpret in the context of the historical developments that might have brought about those changes. The book explicitly, adamantly, and repeatedly denies that major violent shocks cannot happen in the future; this reticence is stated in the book’s opening paragraph and echoed in every summation.

The “Long Peace” chapter, in particular, is a descriptive summary of a specific phenomenon of the past two thirds of a century, namely that wars between great powers and developed nations have fallen to historically unprecedented levels. This empirical fact has been repeatedly noted with astonishment by many military historians and international relations scholars. It is a fact about the past, not a prognostication of the future, to say nothing of a claim that major wars are forever impossible. Nonetheless, it is still a fact in need of an explanation. One possibility is the hypothesis that Taleb announces in his title, namely that the Long Peace is a statistical illusion. In other words, the chances that, say, France and Germany will go to war, or that Britain will fight Italy, or that Russia will invade Europe, or that it will launch an ICBM attack on the United States, are the same today as they were in earlier decades and centuries. The 67-year absence of war between France and Germany, according to this hypothesis, is just a freakish streak of luck which could end tomorrow.

That hypothesis is worth considering, though Taleb, despite his cocksure declaration, provides no evidence that is true, or even plausible. I do examine that hypothesis, and review a number of kinds of

evidence (commonly noted by military historians and political scientists) which suggest it is unlikely. They include the fact that the drop in the frequency of wars among great powers and developed states has been so sudden and massive (essentially, to zero) as to suggest a qualitative change; that territorial conquest has similarly all but vanished in the planning and outcomes of wars; that the period without major war has also seen sharp reductions in conscription, length of military service, and per-GDP military expenditures; that it has seen declines in every exogenous variable that are statistically predictive of militarized disputes; and that war rhetoric and war planning have disappeared as live options in the political deliberations of developed states in their dealings with one another. None of these observations were post-hoc, offered at the end of a fortuitously long run that was spuriously deemed improbable in retrospect; many were made more than three decades ago, and their prospective assessments have been strengthened by the passage of time. Of course, none of these phenomena *proves* that a war between developed states is less likely today than it was in the past (to say nothing of its being impossible); past performance is no guarantee of future results. But surely these developments are providing us with information about the state of the world.

Taleb's argument seem to be not about the likelihood of major war between developed countries but about the magnitude of the worst-case war, namely one with the extensive use of weapons of mass destruction. It is certainly true that we cannot put a lower bound on the probability, nor an upper bound on the damage, of a catastrophic war or act of terrorism. For this reason, I agree with Taleb that it is impossible to summarize the expected damage of all future conflict in a single number that aggregates the probability of wars and the damage from wars. The upshot is that each of the following two assertions can be true: (1) the chances of war are lower than they were before, and (2) the damage caused by the most severe imaginable war is greater than it was before. That makes it meaningless—an issue of semantics—to speculate about whether the world is “safer” overall; in one sense it may be safer, in another sense, less safe. That is exactly why *Better Angels* does not claim, contra Taleb, that the world is “safer” across the board.

That having been noted, one can do one's best to assess the likelihood of the worst-case scenarios. *Better Angels* goes out on a limb and speculates that the chances of all-out nuclear Armageddon were higher during the height of the Cold War than they have been since the Cold War ended. Perhaps that is statistically naïve; I don't think so. It also reviews the most careful analyses I could find on the likelihood of catastrophic chemical, biological, or nuclear terrorism, analyses that examine the technical realities rather than repeating science-fiction and disaster-movie scenarios about nuclear bazaars and garage-built bioweapons. These reviews argue that the chances of catastrophic attacks are considerably lower than those in the predictions of various doomsayers, who predicted, for example, that a nuclear terrorist attack was highly probable by 1990, 2000, 2005, and 2010. Of course, no matter how many times predictions of catastrophe fail, worst-case advocates can always say, “Just you wait!,” but that makes their assessments permanently unfalsifiable.

Taleb is surely right to urge us to think about the magnitude of events with non-negligible probabilities, and to caution us about our inability to assess such probabilities with confidence. Yet he does not acknowledge the problems with his own suggestion that “the emphasis should be on the weapon” or

with the implication that if we can imagine a catastrophic outcome we should assume that it is a realistic possibility. Finite resources have to be allocated across many foreseeable risks, and we have no choice but to assess which of them are most worth worrying about. The dangers go both ways; it would be rash to dismantle the military on the assumption that war was no longer possible, but it is just as rash to plan for every improbable catastrophe. The bloated American military budget is notoriously based on black-swan thinking, with its profligate overseas bases and lavish weapons systems that anticipate every military contingency without concern for their likelihoods. Worse-case thinking also may be found behind the Iraq War (“We don’t want the smoking gun to be a mushroom cloud”), the Patriot Act, ballistic missile defense, the Department of Homeland Security, and the current demand for pre-emptive bombing of Iran’s nuclear facilities. Critics of these wasteful and dangerous policies have cited many of the kinds of phenomena that I review in the book. Their arguments should not be blown off as naïve just because catastrophes can still be played out in our imaginations.

The statistical acumen of Nassim Taleb would be put to good use in a evaluation of the risks of war and terrorism in the context of the recent history and current state of the world. This would require a careful reading and fair-minded assessment of the findings of other scholars, which so far Taleb seems unwilling to do.