Foresight in Defense and Security Policy -
Try again. Fail again. Fail better.*

By Stefan Uecker

Warfare, strategy, and the future

The word “strategy” derives from the Greek στρατηγός, meaning military leader or general. Strategy has always been tightly connected with the business of conducting war. War requires strategic planning, and the more complex societies and their war fighting capabilities become, the more planning is required. Strategy is also necessarily connected with theories about future developments, may they be about enemy actions, the onset of winter, or estimates of how fast one's troops might advance in the next days. A decisive characteristic of developing military strategy is, that a lot of uncertainty needs to be factored in, maybe more than in civilian policy making, since military adversaries give an extra effort not to divulge their plans, preparations, and intentions. Levels of uncertainty rise exponentially the further we try to see into the future. This paper addresses how to reduce this uncertainty and analyzes where risks of error and shortcomings prevent foresight from being most effectively used for political and military decision making.

Wrong most of the time

Generals throughout history have tried to eliminate the uncertainty of the future as best as they could. In Greece, oracles like that of Delphi predicted the outcome of battles, mostly in an obscure language that did not make anyone any wiser. In ancient Rome, the auguri and haruspices used to read the future from the flightpath of birds or the intestines of various animals. Conducting crusades on a presumed blessing by the Christian God was as random in its predictive quality as

1 King Croesus consulted the oracle of Delphi before waging war against Cyrus the Great of Persia. The oracle famously answered, that if Croesus attacked the Persians, he would destroy a great empire (ἡν στρατεύσωται ἐπὶ Πέρσας, μεγάλην ἀρχήν μιν καταλύσειν) – in hindsight: his own. In 546 BC, Croesus was defeated.
Allah's will on the other side of the Medieval battles between Christian and Arab armies. Even looking only at the last 100 years, the art of forecasting still has a poor track record. Stalin was as surprised by Hitler's attack in June 1941 as the United States was by Japan's on Pearl Harbor in December of the same year. The D-Day in Normandy came as a shock to Hitler’s high command, which expected the Allied landings to happen in force in Pas de Calais rather than Normandy.\(^2\) Neither the construction nor the fall of the Berlin Wall was foreseen in the West. The Warsaw Pact fell apart faster than memos about it could be written. The Vietnam War ended in an officially unpredicted traumatic quagmire, just like the war in Afghanistan did recently. The Arab Spring happened while a bewildered world watched. Russia annexed Crimea without Western intelligence raising a timely alarm. A million Syrian refugees wandered into the EU in 2015, while millions of British citizens voted to leave in 2016, in both cases without the EU being up to the developments. The COVID-19 pandemic has been meeting one unprepared nation after the other since the beginning of 2020.

**Why not just give up?**

Why not stop here and admit defeat? The future is just unforeseeable. No sense in even trying. Firstly, we have no choice. Every planning decision works with assumptions about future developments. We cannot escape the dilemma of making decisions in the face of uncertainty. Time is an essential factor for every strategy development. Adjusting the course of a consensus-based alliance like NATO in peacetime takes at least years.\(^3\) Procurement and production of modern complex weapon systems can take decades.\(^4\) Most of the time, our own assumptions about future developments in our personal lives are based on emotions like fear or wishful thinking, prior experiences or simple extrapolations of the status quo. This can lead to suboptimal results in our personal life, such as buying nonperforming stocks or picking an insufficient retirement plan. But it might lead to much more disastrous outcomes for multiple people or even nations if military strategic planning rests on less-than-optimal methods of predicting future threats and challenges.

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\(^3\) The last strategic concept of NATO dates from 2010, without even mentioning China. A new one shall be the outcome of NATO's 2030 Reflection Process.

\(^4\) In 1983, Italy, Germany, France, the UK, and Spain launched the “Future European Fighter Aircraft” (FEFA) programme. The first serial-produced aircrafts, by then renamed “Eurofighter”, were delivered to the customers in 2003.
Secondly, we get it right at least sometimes. The US intelligence community, for example, foresaw the disintegration of the former Yugoslavia pretty accurately.⁵

**Beyond bipolar clarity**

In the times of the Cold War, the big picture was clear for the military strategists, so forecasting efforts concentrated more on game theory considerations in regard to nuclear threats and assessing and comparing military capabilities. In the 1960's, US system theorist Herman Kahn pioneered the analysis of nuclear conflict scenarios.⁶,⁷ The US created the Office of Net Assessment in the Pentagon in 1973, which had some success in regard to Cold War calculations and less in regard to the Vietnam War.⁸ The Soviets also had some (mostly secret) foresight capabilities, at least part of which are maintained in Russia's Institute of World Economy and International Relations.⁹

With nowadays not a bipolar, but a more complex world with a multitude of simultaneous threats and a rapidly changing environment, the level of complexity enhances the need for and the scope of foresight. We need to make better assumptions about the future to enable better strategies.

**Reconnaissance, forecasts, and strategic foresight**

It is important to clarify, at least analytically, what we talk about when we discuss *reconnaissance*, *forecasts*, and *strategic foresight*. All are important to decision-making but address different levels. All aim at reducing uncertainty, but the range and the methods differ. While *reconnaissance* (and most intelligence operations) aims at reducing uncertainty about the current state of affairs, especially about the capacities, actions and intentions of (potential) adversaries, *forecasts* try to make predictions about what is going to happen in the near future. Neither of these will reduce uncertainty to zero, but they try to present – with differing degrees of confidence – the most probable picture of today's situation or of the near future. *Forecasts* are aimed at anticipating

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⁷ Involuntarily, by stressing the winnability of a nuclear war, he also made himself the historical model for Kubrick's Dr. Strangelove.
specific events. This should not be confused with strategic foresight, which is not about predicting the future. Strategic foresight does not aim to foresee future events precisely but instead to track down longer-term trends.10

**Strategic foresight as a method**

Strategic foresight11 is “a systematic approach to looking beyond current expectations and taking into account a variety of plausible future developments in order to identify implications for policies today.”12 It is a multidisciplinary project. Ideally, strategic foresight draws on multiple fields of expertise: cybernetics, system theory, management science, sociology, data science, cognitive psychology, etc.13, and, hopefully, also substance matter knowledge.

Various methods14 have been developed, from the Delphi method, relying on expert consensus, over megatrends analysis, which explores large scale changes with impacts on the future, to backcasting, which starts backwards in the analysis from an imagined ideal (or undesirable) future state to identify the steps leading to that future state. The foundation of most high value forecasting processes is a thorough horizon scanning: the search for already visible signals and patterns of future changes like a radar picking up echos of relevance amidst unimportant background noise.15 Here lies the difference between magical thinking, horoscopes, etc., and systematic strategic foresight: Strategic foresight reduces speculation to the necessary minimum, and therefore the first step of this “structured and rigorous” process is “to use all available data”.16

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11 The terminology varies in practice and literature. For the purpose of this article the term foresight alone is used in a broader meaning than the term strategic foresight.
14 Strategic Foresight for Better Policies, 2.
16 Ibid.
One of the most common methods to be set up using this prior analysis of data and facts is the development of *scenarios*.\(^{17}\) Scenarios are “thought experiments about what is unknown but possible”\(^{18}\). Rather than predict a probable outcome, scenarios ideally cover the complete range of plausible futures.\(^{19}\) They help provide insight into long-term trends by identifying the “actors” and underlying “drivers”\(^{20}\) of change and by revealing and challenging unspoken assumptions about the future.\(^{21}\) Effective scenarios offer the chance to identify possibilities that otherwise might have been overlooked or discounted. For this reason, well-designed scenarios describe not only one, but multiple possible futures.\(^{22}\) The functions that scenarios fulfill for strategic planning are similar to the functions of wargaming on a more tactical level; the concerted outcome is less important than the way leading to it.

Also NATO has embraced this concept in its foresight enterprises.\(^{23}\) The Alliance's Strategic Foresight Analysis Report from 2017 depicts political, social, technological, economic, and environmental trends and their implications for NATO.\(^{24}\) The next version of the Strategic Foresight Analysis Report was scheduled for publication in late 2021.\(^{25}\)

*The animal kingdom of foresight*

Unchanged since antiquity, contemporary foresight experts still love to use metaphors. When diving deeper in the alchemy of foresight, we encounter black swans, butterflies, pink flamingos, grey rhinos or black elephants, foxes, and hedgehogs.

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17 Strategic Foresight for Better Policies, 2.
21 Weitz, China challenge, 20.
22 Bressan, Looking Ahead, 5.
25 The 2021 report has been announced by NATO for late 2021 on https://www.act.nato.int/futures-work, but has not been published yet.
Many unforeseen events have been labelled as “black swans”. The concept of a black swan was invented by Nassim Nicholas Taleb. Black swans are sudden and unexpected events, abnormal events that fall outside the parameters of standard distribution (some characteristics shared with the black swan’s older relative, the butterfly – as in the “butterfly effect”). In reality, most, if not all, black swans turn out to be grey swans, pink flamingos or dark colored rhinos – essentially all ways of characterizing events as unforeseen but not unforeseeable. One example, labeled an unforeseeable black swan by Taleb himself, are the attacks of 9/11. But actually, there were multiple indicators, which, for different reasons, failed to stimulate effective action before the disaster. In the words of the 9/11 Commission: “The 9/11 attacks were a shock, but they should not have come as a surprise. Islamist extremists had given plenty of warning that they meant to kill Americans indiscriminately and in large numbers.” This is also true for most, if not all, examples of failed preparations mentioned earlier in this essay – as we all now with the benefit of historical hindsight.

On the one hand, in broad daylight, just everything seems to be logical, conclusive, and utterly predictable – after the fact. To be fair, the fog of war is much denser when you are “left of the bang”. On the other hand, all the warning signs, even if discovered post mortem on the autopsy

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28 Chaos theory pioneer Edward Lorenz discovered the effect in 1961 as “Deterministic Nonperiodic Flow”, illustrating it 10 years later with the famous suggestion, the flapping of a butterfly's wings in Brazil could set off a tornado in Texas. This idea has then been quickly transferred from meteorology to other fields, primarily economics but also history. See: Niall Ferguson, *Doom. The Politics of Catastrophe* (London, Dublin: Allen Lane/Penguin Random House UK, 2021), 75-78. I have to add that I do not agree with Ferguson's dismissiveness of long-term causes: In my opinion, “proximate triggers of a crisis“ (ibid., 77) are not usually sufficient explanations.

29 Mazarr, “Hide in Plain Sight.”


31 Ferguson, *Doom*, 74, who also introduces the “Dragon King”, which is meant to describe a major disaster (black swan) with far-reaching consequences (then: dragon king).

32 E.g., Babst, NATO's strategic foresight.


table of commissions, hearings, and war college classrooms, were undeniably visible before they were acknowledged as important.

**How to not to drop the crystal ball**

The first area for a thorough quality check concerns the expert occupation of foresight itself. Studies must always be based on empirical and accurate data, rather than on unfounded assumptions. Artificial Intelligence (AI) will be increasingly helpful. The criteria for assessing a situation, predicting a trend, and developing scenarios must be transparent. There are multiple scanning techniques that can be applied to cover the wide field of factors, which are important for developing a comprehensive picture. Common in the military environment is, e.g., the use of the PMESII-PT scheme. It stands for Political, Military, Economic, Social, Information, Infrastructure, Physical Environment, and Time (the military just loves acronyms). The language used in studies and reports needs to be crystal clear and leave no unnecessary room for interpretations. Facts are facts, unknowns are unknowns and both should be easily recognizable to the reader. Former British GCHQ Director David Omand brings the striking example of how bureaucratic language disguised the estimate that Argentina might go to war over the Falklands to a point where the advice seemed to point out almost the contrary.

The second point of concern is the mindset of forecasters and the institutions in which they work. A major reason for errors in forecasts and foresight are psychological biases like hope, fear, and wishful thinking, as well as intellectual inflexibility and lack of imagination. Here the picture of the hedgehog and the fox comes into play, portraying hedgehogs as single-minded prisoners of preconceived explanations and theories, while foxes show flexibility and openness to criticism and

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35 Other acronyms like DIME (Diplomatic, Informational, Military, and Economic) have been used by the military for years to describe the instruments of national power. A broader one is for example MIDFIELD (Military, Informational, Diplomatic, Financial, Intelligence, Economic, Law, and Development), see, e.g., Joint Chiefs of Staff, Joint Doctrine Note 1-18. Strategy, April 25th, 2018, https://www.jcs.mil/Portals/36/Documents/Doctrine/jdn_jg/jdn1_18.pdf. In the civilian sector well known and used for foresight analysis is e.g. the acronym STEEP, standing for Sociological, Technological, Economic, Environmental and Political Change.


37 Omand, How Spies Think, 1-2 and 53.

self-doubt, which lead them to a less biased perception of reality and the consequences for the future.\(^{39}\) This animal metaphor stems from an essay of Isaiah Berlin on Tolstoy’s philosophy of history.\(^{40}\) Empirical research seems to confirm the general direction of the argument.\(^{41}\) At least as important as the individual mindset of the forecaster is the organizational culture: Openness for debate and deviating opinions, a readiness to confront uncomfortable truth, and a willingness to criticize conventional wisdoms are essential in creating a culture in which foresight can be effectively applied. Unfortunately, military culture in particular, with its traditional strict hierarchies, huge apparatuses and need of standardizations, is more prone to foster and promote immaculately dressed hedgehogs over the more agile but less orthodox foxes. To improve strategic foresight, there needs to be an animal rights movement for the foxes in the military that creates safe spaces for unorthodox thinkers.

Lastly, as we have seen, in most cases of unpreparedness the warning signs and often enough the expert warnings were there but were ignored. Many policy makers have a tendency to prefer short-term perspectives over long-term uncertainties. It is becoming increasingly common to blame this on the short election cycles in democracies and the media-driven politics in free societies, while China gets lauded for its substantially more long-term strategic perspective. It is necessary to point out here that historically, dictatorships have not been any more farsighted and successful than democracies. The absence of future-oriented strategic perspectives should not be turned in an anti-democratic argument. On the contrary, open societies that foster free debate are the perfect environment for the development of (strategic) foresight because the exchange of controversial opinions is a core requirement for successful foresight. The challenge is to put foresight on the political agenda by promoting the idea and addressing policy makers in a language and manner that can be used in the everyday business of politics.

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40 Ibid., 4-6: Berlin was inspired by a small fragment of the ancient Greek poet Archilochus of Paros, who had written: “The fox knows many things, but the hedgehog knows one big thing.” (πόλλ’ ὅλ’ ἄλοπτης, ἄλλ’ ἐξήνος ἐν μέγα).
41 Ibid., 8-9, describing Philip Tetlock's groundbreaking study on expert political judgement.
Foresight is not yet strategy – what to prepare for

A word of warning should conclude the essay: Foresight is a precondition for a successful long-term strategy, but it is not yet a strategy itself.\textsuperscript{42} Decision-makers need to assess not only the probabilities of certain scenarios but the risk associated with them in order to determine which warrant preparation. Risk is the probability that an event will occur multiplied by the amount of damage likely to happen. It can be a wise decision to prepare for a (seemingly or actually) improbable scenario, since the consequences might be huge. High quality foresight can contribute substantially to be better prepared for what might come. But it is necessary to recognize that in the face of uncertainty, the future will most probably be different from what we expect now (while it will seem obvious afterwards, of course). Therefore not only more and enduring foresight is required, most importantly, strategists need to keep an open mind and must possess the flexibility to constantly adapt, so that we can fail better.

\textsuperscript{42} Hoffman, “On Anticipating Surprise”.
Bibliography


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