

THE END OF RISK

Can Risk Ever Really be Eliminated?

Rebecca D. Costa

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by Rebecca D. Costa

For decades I've been obsessed with the concept of *risk*. It began when I was a college student and had little to risk. And continued into adulthood and retirement when I had everything to risk.

What is risk? What compels most of us to avoid it while others run straight into the fire? Is risk a necessary component of progress? **And more importantly, can risk ever really be eliminated? If so, how?**

In the insurance industry, risk is all about math. Premiums are based on complicated actuarial tables, the cost of medical care, survival rates, the demographics and mix of participants, and so on. Similarly, in times of war, military leaders also rely on statistical analysis to assess risk. They comb over detailed forecasts on the number of soldiers likely to be injured or killed, as well as the costs of munitions, transportation, food, caring for civilians in the aftermath, and every other thing.

When it comes to love and marriage, we weigh the risk of being emotionally hurt, financially devastated, or locked in some purgatory that drags on for months or years. Likewise, when we buy a house we assume the risk property values will go down, or interest rates up. And every day, Americans who rely on pensions or a financial advisor to invest their retirement funds, are exposed to undeterminable amounts of risk.

But what if there was a way to eliminate all risk, forever.

What if the outcome of every decision, as well as all future events, could be known with one-hundred percent certainty?

This is where predictive analytics is headed. And at the rate technologists are moving, it won't be long before risk will become a worry of the past.

Today, Fuzzy Logix is using predictive models to eliminate up to 80 percent of the patients who are predisposed to becoming opioid addicts long before a doctor writes the first prescription for an opioid painkiller. Forget about fixing addiction after-the fact. By analyzing a patient's medical records, behaviors, activities, etc., the company can determine their predisposition to become addicted well in advance of starting down that road.

In 2009, using only publicly available data, Recorded Future, predicted that Yemen was on the verge of a revolution. Within one year that prediction turned out to be true and the origins of The Arab Spring was born.

One year ago, the largest grocer in the United States learned about a study which revealed cows produce less milk as temperatures rise. The retailer began tapping NOAA's meteorological data so they could lock in milk prices *before* shortages began. Imagine the advantage this gave them as competitors attempted to adjust prices in real time as milk supplies constricted. What's more, of the six models used to predict Hurricane Harvey's path inland and then back out to sea and inland again, four predictive models were spot on.

These are just a few examples of how technology is allowing those with actionable foreknowledge to get out ahead.

We are quickly approaching a time when every downside, every danger, can and will be avoided.

And this has empowered leaders with a heretofore unimaginable power.

The power to adapt *before the fact*. To *pre-dapt*. We need no longer wait for change to occur.

But all the foreknowledge in the world isn't helpful if we don't use the information to our advantage. That's where 155 years of research on successful evolution comes into play. **The same principles which produce successful results in nature since life began, can be used by business, government and individuals to pre-dapt!**

Here's a short summary of the 12 principles of adaptation:

1. *Failure is more common than success.*

In any complex, fast-changing environment – such as the one we face today – there are more wrong choices than right ones. What's more, the number of wrong options are exponentially growing by the pico second. So, the odds of making the right decision grow more daunting with time. The best strategy to beat those odds is diversification. *Think about it*. No one in their right mind would invest all their money in a single stock. And no venture capitalist would fund one start-up in a sector. Nor would we accept the opinion and treatment recommended by one doctor if our diagnosis was serious. When faced with a high-failure environment we invest in as many solutions as possible, then vet and eliminate options as more facts become available. In other words, we make an allowance for failure on the front end, and by eliminating the solutions which don't work as we go, get down to a pool that

have a higher probability of succeeding. This is the only strategy that works when we can't call it from the get go.

2. *The greater the magnitude, speed and complexity of change, the higher the rate of failure.*

Scientists estimate that 99.9 percent of all organisms which once inhabited the Earth are now extinct as a result of sudden, extreme events such as the Ice Age, or the Ediacaran period when oxygen levels in water dropped to drastic levels. Similarly, the rapid proliferation of digital photography put Kodak out of business. L.H Rogers and Columbia Ribbon & the Carbon Manufacturing Company met a similar fate when they failed to make a transition from carbon paper to photocopying. And today, governments, businesses and other organizations which are not adopting Big Data and predictive analytics to get in front of disruptive changes will find themselves unable to make respond quickly enough once the changes occur. Adapting after-the-fact is a failing strategy in world where future outcomes, trends and events are known.

3. *Any drive toward singularity is a drive toward extinction.*

There is a reason nature has produced more than 12,000 species of ants and more varieties of fish than ants. When the environment changes, some possess the attributes required to survive, while others do not. Contrary to this principle, the drive to increase operational efficiency causes many organizations to rely on singular processes and methods. While efficiency has many benefits repeatability, reliability, lower costs and effort, etc., singularity also poses great risk when sudden change occurs. In fast-moving environments, waste and failure are necessary ingredients of progress. Removing all the waste and failure is a guarantee there will be no innovation, no forward movement.

4. *Success warrants imitation.*

The Viceroy butterfly is virtually indistinguishable from the Monarch. The reason for this is Monarchs have an unpleasant taste birds avoid. Lacking this defense, Viceroy's does the next best thing. They mimic the Monarch's appearance. Similarly, one of the most effective adaptive strategies is to adopt what is already working. But not only in your industry. Case in point: when the largest produce grower in the world discovered similarities between transporting living fruits and vegetables to grocers and processes used to rush patients to an ER in the best condition possible, they began studying processes and technologies used by today's emergency rooms. In this way, the fastest, surest way to reduce risk and improve the chances of successful adaptation is to borrow what's proven and works!

5. *The size of an environment determines growth.*

In nature, the size and resources within an environment dictate how fast a species can grow. This also applies to business. Market size determines the

number of competitors which can be sustained. Using advanced predictive models leaders can now accurately predict the effect new, global competitors will have on price and market share and act to pre-empt new entrants by using tactics such as pre-announcing new products so consumers postpone their purchase, proactively reducing pricing, offering incentives/premiums to lock in distribution channels, and so on. Foresight and knowledge allows leaders to act offensively to protect territory and share.

6. *Nature's defense: quick, cunning and camouflage.*

In 2008, when cereal makers faced skyrocketing gasoline prices they had a decision to make. Raise the price of a mainstay food item at a time when consumer prices were on the rise everywhere, or find another way to make up the increased costs. Fortunately, they arrived at a clever solution. They kept boxes the same size, reducing the contents by 10-20 percent. In this way, the change to their manufacturing line was virtually negligible and consumers had the feeling they were getting the same value as before. It was a form of camouflage used as expertly as nature herself.

7. *Nature's offense: strike first, strike hard. It's a matter of life or death.*

In the natural world offensive strikes are rare and primarily associated with acquiring subsistence or defending territory or the young. The reason attacks are infrequent is because offensive strikes come with a high risk of being wounded or killed. As a result, an offensive strike is a take no prisoner's all out proposition. Similarly, when businesses or nations take an offensive stance there is great advantage in making the first strike. But once made, a sustained no-holds-barred commitment to prevail must be made – lest the strike invite peril.

8. *Incremental adjustments pose less risk.*

When minor adjustments to changes in the environment occur over time, this offsets the impact of any final correction. When we do not adapt along the way, a painful correction is inevitable – one which we may not survive. This is the reason institutionalized thinking and behavior in large, successful companies are dangerous. When organizations overly rely on the products and practices previously responsible for their success, this becomes a barrier to making incremental changes. To this end, organizations which embrace the Japanese concept of “kaizen” – continuous improvement – greatly reduce the need for a radical, life-threatening adjustment later.

9. *Pattern recognition is vital to survival.*

Predators who learn the habits of their prey have an upper hand in nature. Similarly, when governments and businesses using predictive models - based on stringing together millions of variables to identify reliable patterns – they secure an unequalled advantage. This is why retailers are now able to customize marketing messages to the specific interests of consumers. Based on our previous purchases, spending habits, online research, etc. they can

accurately tailor their offerings. Soon governments will also have the ability to head off terrorist attacks using this same technology. Never mind the collapse of a currency, spread of a virus and every other thing.

10. *Compensatory behaviors mitigate shortfalls.*

When adaptation fails, move to mitigation. For example, if you have a sweet tooth and accept the fact that this isn't going to go away, you stop buying sweets at the grocery store and bring them home. You also switch from sugar cane to healthier alternatives such as stevia. You ask the waiter not to bring you the desert menu. It's not a cure. And here has been no change in the environment to warrant adaptation (except maybe the fact that there are more sugary snack available everywhere we go). But conscious mitigations allows us to make corrections and adjustments, anytime, anywhere, at will. Organizations which create "skunk works" to advance innovation and progress outside of day to day operations are taking steps to mitigate against the hazards of institutionalization. Likewise those which hire futurists, or embark on a deliberate plan for acquiring Emerging technology and science companies can also be seen as taking steps to mitigate complacency.

11. *Critical mass is a prerequisite for change.*

Individual thoughts, actions, discoveries, etc. are not sufficient to create change. Successful adaptation requires critical mass. To this end, executives and government leaders must build support for their ideas if they want see them take root. The end of civil rights and the Vietnam War, the adoption of the internet, cell phones, and hybrid vehicles all required critical mass. So did the success of recycling and green packaging. There is no such thing as progress without mass adoption.

12. *Fortune favors the prepared mind.*

There can be no greater advantage than foreknowledge. Not in nature, Not in business. Not in government. To this end, leaders who harness the increasing accuracy of predictive analytics, and the 12 principles of adaptation which have ensured the success of life on earth for more than 3 billion years, will no longer find themselves adapting to changes in the environment. They will change the environment to which others must adapt.

We are in the midst of one of the greatest transitions in human history. To this point we have held to the belief that the future could not be known, and therefore, risk could never be completely eliminated. But as analytics zero in on predictions of future outcomes and events that have an eighty, ninety, one hundred percent probability of occurring, we are reaching *the end of risk* as we know it.

From how insurance, financial and manufacturing industries operate, to how we make decisions about warfare, marriage and investments -every aspect of life will be affected by our growing knowledge of the future.

Are you ready?

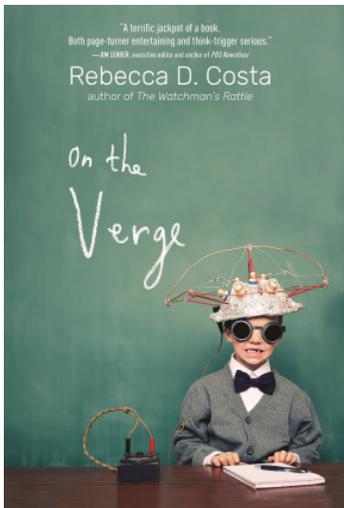


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Rebecca D. Costa is an American sociobiologist, author, and host of the syndicated radio program *The Costa Report*. She is an expert in the field of “fast adaptation.” Costa’s first book, *The Watchman’s Rattle A Radical New Theory of Collapse*, was an international bestseller.

Her follow-on book, titled *On the Verge* was introduced in September 2017 to critical acclaim, shooting to the top of Amazon’s #1 New Business Release. Costa’s work has been featured in The New York Times, Washington Post, USA Today, SF Chronicle, The Guardian, etc.

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