

# FUTURE NEWS

TO CONNECT, TO INFORM AND TO INSPIRE

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# How to imagine the future(s) of your business

## CAN SEEING THE FUTURE

(of the economy, your company, the science world)

## BE A SKILL ANYONE CAN LEARN?

BY SANDJAR KOZUBAEV

Let's be honest: Most companies don't spend time gazing into the distant future. But that may be changing. Companies are learning that to stay competitive they must be more strategic and more effective in anticipating important market changes.

Imagining the future is one way to make that happen.

To some, though, becoming a futurist sounds more theoretical than practical, especially in a corporate setting. Producing an action plan based on such thinking sounds even more daunting. But with a few relatively easy techniques, you can quickly turn theory into good business practice and make certain your company doesn't lose sight of the grander scheme of things.

### THINK IN MULTIPLES

To begin, it's important to understand the role of the futurist. It is not, as many might think, to predict the future. Instead, the role is to foster a conversation about plausible, possible futures. That is correct, futures with an "s." It's more effective to think in terms of not one universe, nor one possible

future, but instead of what one might call multiverses. Already you can feel your mind brimming with possibilities.

Being a futurist also means there is no magic involved. Think of futures as your imagination informed by data and science. Armed with that information, you can begin scouting for what futurists describe as "weak signals." Think of these as indicators of change that are so weak you wouldn't even call them an emerging trend. When we imagine a weak signal becoming mainstream, we begin to develop a canvas on which to depict possible future outcomes.

### CREATE DISTANCE

To get your mind ready for futuristic thinking, create sufficient distance between today and the future. In cognitive science this is referred to as psychological distance. Studies have shown that psychological distance, specifically temporal distance, helps us think in more abstract terms and more creatively.

For example, in one study two groups of participants were asked to categorize and group a

pre-populated list of objects one might need for a camping trip. One group was asked to do this for trip in the near future (say next weekend) and the other in a distant future (one year from now). The group planning for a near future created significantly more categories from the list than the group planning for a distant future. That is because the "near future" group tended to think about the trip and the objects more tactically. In other words, they focused more on what the items do. The "distant future" group created more abstract categories for the items. They focused on the bigger why behind these items.

This process works the same way with physical distances. That's why certain artistic work can only be fully appreciated at a particular distance. Many astronauts who returned from space reported an indescribable visceral experience from seeing the Earth below. This is referred to as the "overview effect," a new level of appreciation of Earth, life, and space because of that experience from a great distance. Greater distance truly does help us see things differently.



## What is your Worldview?

In your strategic planning process, rather than looking out a few months or even a few years, try to imagine at least 10 to 20 years in the future. The fact is that if you are looking at a future only a few years out, you are practically thinking about the present because your company already has some planning and budgeting in place for a few years from now.

So try to insert enough distance between today and the future you wish to imagine. This will allow you to see the bigger picture, and when you see a bigger picture you can ask better questions. Also, the further out you think, the more conceptual and creative you become. By utilizing temporal distancing, you have primed your mind to think more abstractly and creatively.

### DEVELOP YOUR FUTURES IN LAYERS

It isn't enough to simply imagine the future. The future should include people with emotional stories. That's what gives it a real-world context. There are many levels of detail you might think about. I recommend at least the following three:

#### WORLD VIEW.

This is where we explain what the world we have imagined would actually look like. These are usually broad generalizations about what the future world is about. Is it utopian? Is it dystopian? Is there peace or war? What is the overall setting and mood of this world?

#### SYSTEM VIEW.

Here, we go even deeper, describing how the future world plays out in terms of political, social, ethnic, religious, and economic systems. It is not enough to just imagine a future world; we need to have some idea, albeit imaginary, of how the world might work in those dimensions.

#### INTERACTION VIEW.

This is the most emotional and personal level. Once we have imagined the world and described how it works, we now need to place a person in that world and tell a story about him. What does that person care about, what objects does he interact with, what does it mean to have a daily routine? For a full effect, create artifacts, sounds, and videos of

what it means for that person to live in that world.

Constructing a functional forward view of the future using these three levels of thinking provides you the mind-set with which to think holistically about the future. It also helps you spot sensitivities, weaknesses, and dependencies with other alternatives, including predictions by others.

There are also some traps to avoid on the way to becoming a futurist. One of them is making predictions. Prediction is overrated and ineffective, so don't paint yourself into a corner by making them. Instead, provide your audience with the tools to discover different possibilities of the future.

All of this probably sounds time-consuming, but it doesn't have to be. A good futurist can provoke an imaginative conversation and produce results quickly.

Follow these steps and you will be well on your way to becoming a futurist. In doing so, you can push your company toward making future-gazing a business and strategic planning tool as well as an imaginative activity. It should not be mutually exclusive. Peering into the future can settle anxiety within your company and produce better results in both the short- and long-term.

**Sandjar Kozubaev** is senior manager of strategy and execution at Sparks Grove, the Atlanta-based marketing strategy and creative division of North Highland. He fuses design, economics, and futures to help companies create meaningful experiences that produce business growth.

# Book Review

by Charles Brass – Chair, futures foundation

Alan Greenspan was chair of the US Federal Reserve Board from 1987 to 2006. This is his second book. He wrote it, he says, to help himself and others understand why he and other important people didn't foresee the 2008 Global Financial Crisis (GFC). As he says in his introduction: "my fondest hope for this book is that some of the insights my investigations have yielded will be of some use in bolstering the case for taking action now in the short term, which is in our long term collective self-interest despite the unavoidable short term pain it will bring. The only alternative is incalculably worst pain and human suffering later"(p2).

Greenspan is interested in money and economics, subjects which he notes lack the degree of certainty with which the so-called hard sciences understand the metrics of the physical world. He believes, however, in the power of forecasting: "the more we can anticipate the course of events in the world in which we live, the better prepared we are to react to those events in a manner than can improve our lives"(p2), and he devotes his first chapter to the 'animal spirits' which make it so hard to predict human behaviour. He hopes a study of these human traits might: "substitute a more realistic version of behaviour than the model of the wholly rationality-driven 'economic man' so prominent for so

long in economics courses taught in our universities"(p14).

He bemoans humans lack of complete rationality ("it is true that if people acted at the level of rationality presumed in ....standard economics textbooks...the world's standard of living would be measurably higher"(p14)) but concludes that: "from the perspective of a forecaster, the issue is ...not whether behaviour is rational but whether it is sufficiently repetitive and systematic to be numerically measured and predicted"(p14).

His first chapter names the various 'animal spirits' that he identifies (fear and euphoria, risk aversion, time preference, herd behaviour, inertia, self-interest etc) and he hopes that the emerging field of behavioural economics will provide forecasters with better ways of including these spirits in their equations.

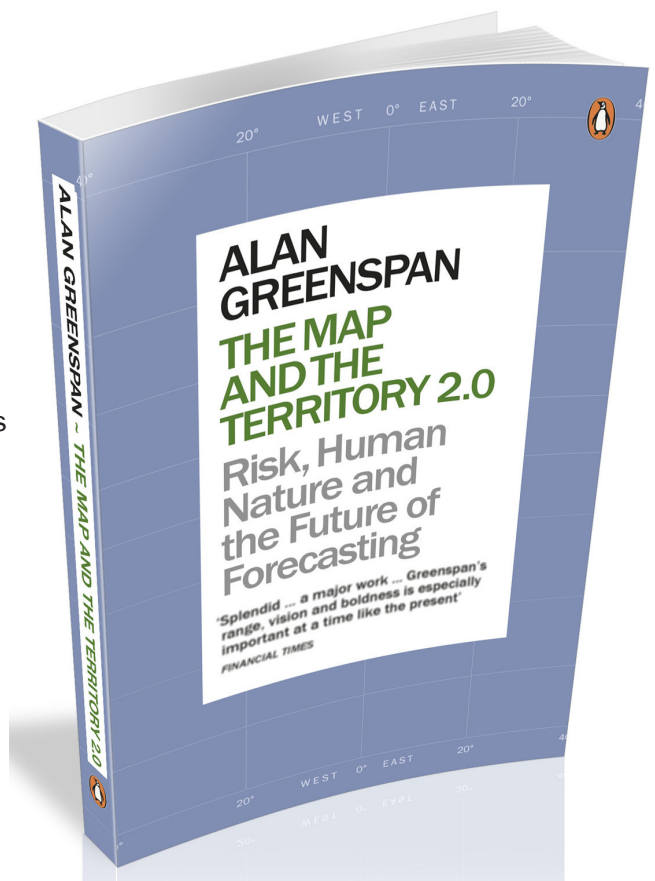
The rest of the book focuses on what we now call the GFC, although it also includes a potted history of previous economic crises; as Greenspan sets out what he believes are the lessons to be learned and the route towards a less uncertain future.

## The Map and the Territory 2.0

*Risk, Human Nature and the Future of Forecasting*

BY ALAN GREENSPAN

(Published by Penguin Books, 2014)



He makes very clear that economic crises cannot be entirely avoided or even predicted. A world in which risks are inevitably taken ("that we need to act to obtain food, shelter, and all the necessities of life is evident to all, as is the fact that we can't necessarily know in advance how successful our actions will be" (p18)) is unavoidably uncertain and occasionally (at least) negative consequences will accumulate and really bad things happen. Greenspan does, however, believe that better forecasting models can be developed: "if we appropriately integrate some of the aspects of animal spirit's systematic behaviour....we



should importantly improve our forecasting accuracy” (p292).

Greenspan was a central figure in the US (if not global) financial system for over 30 years, and had access to data, analysis and opinion unavailable to most others. He makes no effort to back away from his role, admitting he got things wrong, was surprised by many things which happened, and could have done things differently himself. Interestingly, all of his self-analysis is rational, he doesn't acknowledge any of his own “animal spirits”.

He comes to conclusions that others have reached about the causes of the GFC (lack of proper understanding of risk, emergence of largely unregulated and poorly understood shadow banking institutions, poor judgement by officials inside rating agencies, failure of regulators to do their jobs, and the excessive amount of debt and leverage in the twenty first century world) but (in contrast to some others) also tries to explore these issues as they happened at the time, not just in hindsight.

Greenspan regrets a number of consequences of the GFC:

- the rise of financial firms deemed ‘too big to fail’: “Banks that become inefficient because they chronically fund inefficient client firms should be allowed to fail. The viability of our economic system demands it”. (p110)
- the bailouts of non-financial institutions such as General Motors, Chrysler and the American Insurance Group: “...because firms designated

as ‘systemically important’ are accorded an implicit government guarantee of their liabilities, investors perceive these firms as near riskless and ....grant them interest rate subsidies..... Savings are being directed to the politically powerful, not the economically efficient”. (p149)

- the emergence of a focus on the short-term: “A deep seated reluctance of business and households to invest in projects with a life expectancy, or durability, of more than twenty years (predominantly buildings) explains virtually all the weakness in business activity and rise in the unemployment rate (since)...September 2008”. (p136)

He also comments on a number of other economic and social issues:

- he includes a whole chapter on the rise of social security expenditure (broadly defined): “...the benefits surge that began in 1965, while clearly a huge political success, appears to have lowered the growth rate of ....GDP by .2 per cent per annum (which cumulatively equates to nearly 10 per cent of current GDP”. (p197)
- the rise of the Euro - which he considers an as yet unproven example of an attempt to merge quite different cultures.
- the increase in income inequality in many countries – which he believes can be significantly wound back by dramatically improving education access and standards.
- the rise of China – where he concludes that its current

form of authoritarian quasi-capitalist regime does not encourage the sort innovation necessary for China to become the world's economic powerhouse.

- lack of investment in public infrastructure – he despairs that continuing budget deficits make improvement in this area unlikely for some time.

Greenspan has little time for increased regulation: “... regulatory punishment of bubble malfeasance, beyond criminal fraud, which of course should be vigorously prosecuted, does little to restore our economy to where we would like it to be. Revenge may be soul satisfying, but it is rarely economically productive”. (p237)

He also discusses the existence (of lack thereof) of buffers – the amount resources we set aside for contingencies. He acknowledges that such buffers require foregoing immediate consumption pleasures, but believes that rich countries have an obligation to “protect their populations against events with extremely low probabilities of occurrence”, (p290) and he hopes that both private firms and governments will devote more attention to the levels of such buffers.

Alan Greenspan has attempted to make this book readable by lay audiences (all the graphs are relegated to appendices, where he also elaborates on some of his more technical arguments). Given his intimate involvement in the financial affairs of the largest economy of the planet, it is well worth reading.

# FUTURISTS IN ACTION

## THE FUTURE OF JOBS AND EMPLOYMENT – FOR GIRLS



Many, if not all, of the members of the futures foundation are vitally interested in the future of businesses and jobs. We know this because of the diverse range of invitations we get to help members in this area – from helping organise careers nights at schools to speaking at business lunches organised by local government economic units.

We even offer an enduring service we call: “Creating Individual Futures” through which we work with individuals contemplating career change.

Recently the futures foundation was asked to provide a speaker to talk with the parents of year 8 and 9 students at an all-girls school.

On the surface, the opportunities for girls in the workplace have never been better. Although gender discrimination has by no means been eliminated, girls can enter virtually any profession and expect to steadily advance through corporate hierarchies. Contraceptive options and changes in societal norms also mean they have greater control over their family and lifestyle options.

However, the general uncertainty about economic performance and jobs growth, particularly youth unemployment, is a particular challenge for girls. Just as the world has witnessed a retreat to fundamentalism in many other areas, there is evidence of an increasing tendency to believe that women are ‘stealing’ jobs which rightfully belong to men. This is

a regrettable throwback to attitudes which were prominent two generations ago when affirmative action programs first emerged.

Pleasingly it seems from discussions with this particular group of parents at least that modern young women are assertive enough to ensure they will not meekly surrender the employment gains first enjoyed by their parents and grandparents.

There are also ways in which the opportunities for young women are advanced by current trends in jobs and employment. Increasingly it is employees, not employers, who are responsible for securing the success and durability of their jobs. Where once employers offered jobs to a marketplace of potential candidates, nowadays many more people secure their own work through their personal marketing and networking efforts.

Since it is arguable that young women’s social skills are better developed than their male counterparts, it may be that women entering the workforce over the next few years will have an advantage.

Women are also increasingly demonstrating sophisticated entrepreneurial skills, with the number of female created new businesses either outstripping or closely matching those of males.

Perhaps not surprisingly, this group of year 8 and 9 parents were very focussed on the subject choices their daughters would be making over the next couple of years and were looking for advice on emerging industry trends.

We were able to tell them that there is much written about emerging job trends. The Australian Government even maintains the website – [www.joboutlook.com.au](http://www.joboutlook.com.au) – for this purpose.

However our main advice, given most pundits’ expectation that those entering the workforce today will

change careers multiple times, was to suggest that particular subject content related skills were less important than resiliency, flexibility and a commitment to life-long learning.

We commented, for example, on the spread of what is sometimes called (in Australia) the ‘Melbourne model’ where the first two years of university education is very general, with subject specialisation only occurring in the third and fourth year.

We also talked about an increasing trend towards deferring university entrance for a few years after school ends, both so the young person can first gain some practical job experience and also so they can refine their areas of interest and specialisation.

Young people today are increasingly mobile, happy to travel to new countries to broaden their life experience, their skills and their networks.

In common with many modern schools, those running this particular girls’ school are allowing their students greater control over their educational choices. For those committed to ATAR scores and university entrance, VCE subjects can be studied from year 10. For those more vocationally focussed a wide range of school and work combination options was available at senior school. A local community group providing vocational education to the school’s students had even taken over the running of the school canteen, and others were helping to run the sports program and maintain the school grounds.

The importance of this issue in the minds of parents was highlighted by the attendance of at least one parent of 85% of the years 8 and 9 cohort at the seminar. Their questions and comments after the formal presentation were testament to their commitment to their daughter’s success.

# Signals in the Noise

## Six lessons we can learn from geniuses

Whether it's designing a supersonic vehicle, helping the blind to see or creating space history, what can we learn from the great minds behind these feats?



### Lesson 1 NEW CHALLENGES REQUIRE NEW WAYS OF THINKING

Part car, part jet fighter, part spaceship, Bloodhound SSC aims to be the first land vehicle to break the 1,000mph barrier. One of the key challenges has been to design the wheels. How do you create the fastest wheels in history, make them stable and reliable at supersonic speeds, and with limited resources?

After much deliberation, and devising ideas that pushed the boundaries of material technology, Mark Chapman, chief engineer of the Bloodhound project said the team decided to take a step back and change the way they were trying to solve problems. "There's very little we've actually developed that's new," he says, "what's unique is how we apply technologies."

They adopted an approach called the design of experiments – a mathematical technique of problem solving through doing lots of little experiments and

then looking at the statistics all glued together. "All of a sudden, where we'd been knocking our head against the wall for maybe two, three, four months, we came up with a wheel design that would hold together and was strong enough," he says.

### Lesson 2 LET EVIDENCE SHAPE YOUR OPINION

Like his peers, geophysicist Steven Jacobsen from Northwestern University believed that water on Earth originated from comets. But by studying rocks, which allow scientists to peer back in time, he discovered water hidden inside ringwoodite, which lies in the Earth's mantle, and which suggests that the oceans gradually made its way out of the planet's interior many centuries ago.

"I had a pretty hard time convincing others," he admits. Yet two key pieces of evidence uncovered this year seem to support his point of view. Time will tell whether the new theories are true, and there may be further twists to the tale. "But thinking about the



# Signals in the Noise

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fact that you may be the first person to see something for the first time doesn't happen very often," he says. "When it does it's thrilling."

### Lesson 3

#### IT REALLY IS 99% PERSPIRATION

Sheila Nirenberg at Cornell University is trying to develop a new prosthetic device for treating blindness. Key to this was **cracking the code** that transmits information from the eye to the brain. "Once I realised this, I couldn't eat, I couldn't sleep – all I wanted to do was work," says Nirenberg.

"Sometimes I'm exhausted and I get burnt out," she adds. "But then I get an email from somebody in crisis or somebody who's getting macular degeneration, and they can't see their own children's faces, and it is like, 'How can I possibly complain?' It gives me the energy to just go back and keep doing it."

### Lesson 4

#### THE ANSWER ISN'T ALWAYS WHAT YOU EXPECT

Sylvia Earle has spent decades trying to see the ocean with new eyes. Her "**dream machine**" is a submarine that could take scientists all the way to the bottom of the deepest ocean floor. What sort of material could best withstand the types of pressure you would encounter thousands of miles below the ocean surface? "It could be steel, it could be titanium, it could be some sort of ceramic, or some kind of aluminium system," says Earle. "But glass is the ultimate material." By her estimates, a glass sphere about four-to-six inches (10-15cm) thick should be able safely explore the ocean depths she dreams of exploring.

Glass is the oldest material known to man and one of the least understood, says Tony Lawson, Earle's engineering director at Deep Ocean and Exploration Research Marine. "It has a higgledy-piggledy molecular structure a bit like a liquid, rather than the ordered

lattices often found in other solids. As a result, when glass is evenly squeezed from all sides – as it would be under the ocean – the molecules cram closer together and form a tighter structure.

### Lesson 5

#### A LITTLE LUCK GOES A LONG WAY

It was hailed as one of the biggest success stories in the history of space exploration – 20 years of planning ended earlier this year with the Philae lander rendezvousing with Comet 67P over 300 million miles (480 million kilometres) away from Earth.

The biggest challenge, says Stephan Ulamec, manager of the Philae lander programme, was how to design a probe to land on a body whose makeup they had little knowledge about. "We had no idea of the size, we had no idea of the day-night cycle, which influences the thermal design, we had no idea of the gravity, so how fast would the lander impact, we had no idea how the surface looked," he says.

They needed to create design parameters that could cope with an extremely wide range of possible comet structures – but banked on the comet being a relatively even potato shape with enough flat surfaces for the probe to land on. Even then, not everything went to plan, and two decades of meticulous planning could have failed within minutes at touchdown. Philae's anchoring harpoons didn't fire as planned, and it bounced off the comet before settling onto its icy surface and successfully beaming data back to its relieved creators.

### Lesson 6

#### GENIUS IS INDEFINABLE

"It's a funny word: the word 'genius'," says Nirenberg. "I just sort of ignore it and just go on with life. You just do what you do independent of whatever label's attached to you. I don't know really how else to explain it."

[http://www.bbc.com/future/story/20141230-six-lessons-geniuses-can-teach-us?ocid=global\\_future\\_rss](http://www.bbc.com/future/story/20141230-six-lessons-geniuses-can-teach-us?ocid=global_future_rss)