

Understanding paradox through strategic foresight

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31 March 2011

This paper was prepared by Dr Peter Bishop for the participants of the StrategyNZ: Mapping our Future workshop held in March 2011.

The conference began with a traditional Māori pōwhiri, where I was asked to say a few words. I have rarely been asked to stand up as a white person, as a member of my culture, and speak the truth as I knew it. In fact, I have only done it once before in my life. But it was a privilege to do so here. In that short invocation, I reminded myself and others that the Māori tradition of respect for our ancestors also requires us to take responsibility as the ancestors of future generations. So one way of defining a good life (perhaps even in the Māori tradition) is to strive to be the good ancestors whom future generations will happily respect.

In order to do that, we must first approach the future in an intelligent way. Thankfully our innate human intelligence allows us to observe, interpret and manipulate complex phenomena. The result is that we humans now dominate the planet more than all other species, except perhaps for the lowly bacteria.

However, the way we interpret the world changes because our models of reality change. So we find ourselves in a powerful, yet dangerous position. We may think we know what we are doing when actually we do not. But when we are unsure, when we are confronted by uncertainty, we naturally try to 'figure it out', to discover the answer that will explain reality the way it is. That tendency, however, simply replaces one answer with another. That works sometimes, but I am concerned that it will not work in this case. Any new 'answer' will be subject to the same limitations of linearity and simplicity that are built into our fundamental ways of interpreting reality. The world in which our brains evolved was quite stable over long periods of time and comparatively simple compared to today. It consisted of fairly well-known physical and cultural relationships. But the world has grown beyond the African savannah, to say the least, so that our natural way of interpreting reality may no longer be adequate. On the contrary, it may actually be harmful because we may act with the confidence that we know what is going on when in fact we don't.

So what is the answer? The answer is that there is no answer. The world today is complex and chaotic, which means much more than that it is simply complicated and stochastic (random). We know how to deal with complicated and stochastic. We gather more information, apply better theories, make probability estimates. In short, we have used the tools to deal with complicated and stochastic systems for over a hundred years now.

No, complex and chaotic systems are not just complicated and stochastic. They signify a different type of phenomenon that is impenetrable by the standard methods of scientific research and analysis. Therefore, I propose that we give up the expectation that we will ever comprehend, in any classic sense, the realities we are in and the future that we are facing. After millennia of human progress in understanding the world, not the least of which occurred in the last 200 years, we need to stop believing that we can actually understand the current state of the world. Referring to Paul Cunningham's reference to Lao-Tzu, 'Truth lies in paradox.' Our current situation may be the ultimate paradox, namely that our overwhelming intelligence has allowed us to create a world that we can no longer understand and, even less, control. The alternative is to throw ourselves into the arms of complexity and chaos and not try to understand or control the world in the classic sense.

Futurists divide that work into sectors, referred to as STEEP, which acts like a checklist so we don't leave anything out. The acronym stands for Social, Technological, Economic, Environmental, and Political. These

categories tell us that the world is a complex place. All these areas are changing simultaneously, and they all have an effect on one another. So there is no way of comprehending the whole; only parts of it and that for only a limited time.

The six STEEP categories I use are: **people**, in their habitat (the natural **environment**), use **technology** to manipulate that habitat (and each other!), within an **economic** system that decides which technologies get produced and used and who benefits from them, within a larger system of **governance** that makes collective decisions, and finally within an even larger **cultural** context of language, beliefs, values and norms that allow us to live and work with others in the world. Using STEEP as a starting point, I will try to demonstrate how paradox lies at the heart of the complexity and chaos in today's society.

Starting with **people**, the first paradox is that the explosion of the world's population that has so threatened the planet over the last 60 years was the result of perhaps the greatest technological and humanitarian achievement of the last century, the eradication of disease through the widespread use of antibiotics. Those same antibiotics and other medical achievements have increased life expectancy in developed countries from the 50s to the late 70s; but in the process, we have created societies which have fewer workers and more who are dependent on welfare and medical support from their governments, threatening not only the environment with their affluent lifestyles, but also their ability to sustain their economies.

The second STEEP category, our **environment**, Planet Earth, is the subject of great paradox itself. We have learned to extract its resources at a remarkable pace so that we are living in a time of unprecedented energy and material availability. The resources we are using, such as petroleum and coal, have specific energies – the amount of energy per unit of mass – higher than any other known source except hydrogen and radioactive minerals. We call these resources 'fossil', but we should call them 'ancient sunlight' because they are the product of our sun beaming down and supporting life on the Earth for over billions of years. But we have extracted and used those resources in the span of only a few hundred years by extracting them at a rate that is ten million times the rate at which they were created. We are proud of that achievement; we call that progress. The paradox is that we have been so ingenious in extracting these resources, to fuel the complex and wonderful society we have, but the resource is itself finite. We have built complicated lives and societies based on that resource, but soon we will need to sustain this high consumption society without the high density energy resource that brought it about. I imagine a vine that grows and prospers by drawing its energy and nutrients from the tree that it clings to. But trees do not live forever. Will the vine learn how to live without the tree?

In terms of **technology**, the paradox lies in the fact that we have created many labour-saving devices, yet we now work harder than ever before. We have created communication systems and technologies that free us from our offices and homes, but now our work can follow us everywhere. And biotechnology, most likely the next great wave, presents its own great paradox. Our advances may be so great that we may indeed invent ourselves out of existence. In 100 or 150 years, we may not even recognise whoever is here as human, not to mention the intelligent machines that many predict will share the planet with us. Are we smart enough to take control of life itself, to increase the rate of change in the biosphere and in our own germ line by the same orders of magnitude that cultural change accelerated the stately pace of biological evolution? We are now the single largest influence on the physical condition of the planet. Do we want the same responsibility for its life forms as well?

The fourth category is our **economic** system. Every society through history and across cultures has had some form of economy. Of course, the one we operate under today, free market capitalism, is amazingly productive. We have created a world that is unbelievable and miraculous compared to society just 100 years ago, but the paradox is that we still want more. We should be able to relax by now, to kick back and enjoy the fact that we can provide all our needs and some of our wants with a fraction of the labour required in centuries past. But no, we can't relax. This market system requires growth in order to survive. We are like the shark that must keep swimming in order to breathe. We are on a train that has lost its brakes, and simply cannot slow down. We cannot coast. We cannot pause. We are in competition with others and with ourselves. Every year must be an improvement on the last.

The middle income countries are now entering the race. We do not want to deprive them of the affluence that we enjoy, but ‘Hey, it’s a competitive world.’ What they get we don’t get, or at least that’s what many believe. So even though we have already won the race against hunger and disease and insecurity, we keep on running. We will continue to compete against them and all others because the economic system requires it. We still strive for more and more when we already have so much. Is that a paradox or what?

Finally, our **governance** system demonstrates the genius of democracy. The system uses our adversarial nature to control our tendency to dominate others – the famed balance of power. So politicians compete for our votes, and the branches of government compete with each other for power and respect. Power is separated and balanced, creating a situation where there is no one single person or body in charge. This system has served us well, but too much of a good thing can be a harmful thing. The paradox is that we have used the adversarial system to get us this far, but now it is all consuming. The most important thing in today’s political system is not to govern, but simply to acquire power, to maintain power, to stay in office, but for what? Do they ever use the power they acquired for the common good?

It is difficult, even if our leaders wanted to, because the other side will not let them. They might get credit for doing good. ‘How awful! The voters may actually like someone else who does something good, and then we will lose power. So we must prevent them from doing good.’ Paradoxes abound!

The final category is **culture**, which includes language, beliefs, values and norms. As a first-time visitor to New Zealand, I have seen remarkable cultural success in the opportunity for cooperation between Māori and Pākehā. In comparison to the US, also a multicultural nation, but of a very different sort, you may have been helped by the relatively small land mass you occupy, the relatively large proportion of Māori in the population, and the singularity of the Māori way of life. Perhaps because the US is a larger and more heterogeneous country, it has not dealt with culture in the same focused way that New Zealand has. Making a land in which different cultures can live together may be one of New Zealand’s greatest achievements.

But is there a paradox in culture as well? In your case, it may actually be paradox transcended. The paradox of culture is the same as where I began – that only by putting aside our presuppositions can we see more clearly. Culture is the ultimate bundle of presuppositions. Every aspect is ‘obviously’ true, almost by definition, to those socialised into it. It is only when we realise that our original way of seeing and being in the world is not the right way, but only one right way, that we transcend the paradox of culture. So it is heartening to see a people like yourselves so far down that road. Not there yet, I am sure, but making great strides in that direction. So the ultimate paradox about approaching the future in our time is that we can never know for sure how we should proceed. Other societies in other times may have been comprehensible to their inhabitants. I can say with assurance that today ours is not. We are now embroiled in a system of our making, one that is technically complex, not just complicated, and technically chaotic, not just stochastic. In this situation, we must speak in possibilities rather than actualities and act before we know exactly what we should do for sure. As a result, we need to approach the future tentatively and humbly – sensing, learning, discussing, and experimenting. While the bold may have carried the day in the past, it is those who recognise the inherent uncertainty and indeterminacy of the present that will survive.

Nevertheless, I have hope for our future because it is exactly the discussion, the deliberation, the advocacy, the conflict and the disagreement that you will engage in here that is the genius of our system. We should not try to come up with the answer, but rather a range of answers. Not the strategy, but multiple strategies that might work under different circumstances. The one thing we do need in this perilous time, however, is the commitment to work together on the way forward. Just as every success breeds its own failure, every challenge breeds its own success. We are not the victims of the forces around us. Instead we should be inspired to rise to the challenges they present, and ultimately aim to be good ancestors for the generations to come.

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