

IPS-Nathan Lectures

**The Challenges of Governance
in a Complex World**

**Lecture III: The Paradox of Singapore and the
Dialectic of Governance**

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Singapore**

3 May 2017

**Shaw Foundation Alumni House
The National University of Singapore**

Introduction

Few countries today would be classified as sovereign and independent city-states. And rightly so, because their continuing existence is a special challenge.

Cities like Hong Kong are sometimes referred to as city-states because of their high degree of autonomy, but they are neither sovereign nor independent. The consensus is that only Singapore, together with Monaco and Vatican City, are true independent city-states. Even then, only Singapore has all the attributes of a sovereign state, in particular, because it is fully responsible for its own defence. In contrast, Monaco depends on France for its defence, and Vatican City, on Italy.

Looking back in history, there are the famous city-states of antiquity, like Athens, Sparta and Carthage. In medieval times, the standout is Venice. For centuries, the city of Venice was a flourishing centre of trade between Europe and Asia, especially in silk, grain and spices. By the 13th century, Venice had become the second largest city in Europe, after Paris, and its most prosperous.

But as former Foreign Minister George Yeo observed,

“... Venice never felt invulnerable. She never took her success for granted. It was this sense of insecurity which spurred her on, which kept her guards up, her citizens united and her institutions vital.”

Perhaps the central and most obvious *paradox of Singapore* is that its national boundaries coincide perfectly with its city limits. And what is more, the fantasy and glamour of Singapore's global city status often stand in sharp contrast to the insecurities that define its statehood.

Sovereign city-states are anomalies, surviving despite their very small size, without natural resource, and surrounded by much larger neighbours. Their existence is a constant struggle with challenges that larger nations with hinterlands and resources do not worry about. They are a paradox, the exceptions that prove the rule that size matters.

An Accidental Country, an Improbable Nation

Singapore's sudden elevation to the status of sovereign city-state was an accident of history – an unintended consequence of the politics of the time. Singapore was never conceived of

as an independent nation. Our *raison d'être* had been as a service centre for regional trade, and a trading outpost of the British Empire. In 1957, Mr Lee Kuan Yew observed that “island-nations are political jokes.” In 1962, the Singapore government described the merger of Singapore into the Federation of Malaysia as an “*inevitable* historical development”.

Indeed, if things had gone the way Mr Lee and his colleagues had intended, Singapore would still be a part of Malaysia. In an oral history interview in 1982, Mr S Rajaratnam spoke about the Singaporean leaders' conflicted feelings on Separation. He said,

“Emotionally we were still rejecting it. But intellectually, we had no choice ... we ourselves believed that an independent Singapore is not viable. That was not a device just to have merger. But I think it was a genuine basic belief. So now we had to prove that what we believed in, is not necessarily so.”

From Third-World to First

And Singapore soon could make concrete claims to success. GDP jumped from US\$974 million in 1965, to US\$36.2 billion in 1990. After fifty years, GDP stood at US\$292.7 billion. Life expectancy has increased by about ten years every generation, from 64.5 years in 1965, to 75.3 years in 1990, and now, 82.7 years. That Singapore moved from Third World to First within two generations – less than fifty years – is without precedent and nothing short of a modern miracle.

Envy and Admiration: The Little Red Dot

Singapore's success has evoked much admiration. One of the early admirers was the late Deng Xiao Ping, who visited Singapore as Senior Vice-Premier in 1978. He was greatly interested in Singapore's social and economic development experience. Deng saw how Singapore, without natural resources, had been able to provide a good life for its people through good governance, and to create jobs through pragmatic policies aimed at bringing in foreign investment. This inspired Deng to embrace the market economy.

But Singapore has had its share of detractors. In an interview with the *Asian Wall Street Journal* in August 1998, then Indonesian President B J Habibie dismissed Singapore as just “a little red dot”, with only three million people then compared to Indonesia's “sea of green” population of over 200 million.

Instead of being intimidated, Singapore has embraced this disparaging *put-down* as a badge of honour. A few months after Mr Habibie's remarks then Deputy Prime Minister Lee Hsien Loong was quoted in *The Jakarta Post* as saying,

“A little red dot is not an issue, (it's a) geographical fact we are small, without resources (while) the population is small, but we have to make a living.”

And Singaporeans do so, as *The Economist* described it in a 2015 report, “with a characteristic mix of pride and paranoia.” Indeed, the criticism of paranoia has been levelled at Singapore many times. In particular, many observers refer to our attitude towards defence and foreign policy as part of a “siege mentality”, or *kiasuism* if you will. But arguably, if Singapore was not *kiasu*, we would likely not have survived to celebrate fifty years of independence in 2015.

Overcoming Our Fundamental Vulnerabilities

At independence, there were huge challenges to overcome: our small size, a heterogeneous and migrant population without any sense of nationhood, lack of natural resources, and a geopolitical vulnerability stemming from the double minority situation, as a Chinese-majority state in a predominantly Malay world.

But struggle is a Darwinian process, in which only the strong – and strong-minded – survive. It was our water scarcity that led us to develop water treatment technologies that we now export to other parts of the world, including the Middle East, Latin America, and Africa. Our shortage of land, poor urban conditions, and severe lack of safe and quality housing led us to develop urban planning solutions, and both high-rise as well as underground space. Our lack of strategic depth impelled us to acquire or develop sophisticated bespoke defence systems, and innovative training models and arrangements with friendly countries to overcome this challenge.

But this does not mean that our fundamental problems have been solved. Our small size and low-lying position make us extremely vulnerable to climate change. Our high global rankings, such as being the world's busiest port by shipping tonnage, are constantly tested by geo-political and geo-economic developments. Even though we have developed new technologies in our water security, as former PUB Chairman Tan Gee Paw once put it, “... our great challenges in water management are climate change and complacency among our populace.”

The Singapore Paradox

Singapore's parlous geo-strategic position has been the driving force for the country to find ways to overcome these challenges. As a result, today, we have the heft to make our way in the world and to wield some influence. But obviously, we cannot assume that we have overcome our vulnerabilities. In that sense, Singapore, more so than most, is a perpetual work-in-progress. With SG50 came a slew of articles examining Singapore's "exceptionalism". *The Economist* summed up our challenges ahead,

"Its leaders hold themselves to high standards. But it is debatable whether the system Mr Lee built can survive in its present form."

All the unfavourable conditions that attended Singapore's unexpected elevation to sovereign city-state still exist today. But our success in overcoming them may well have masked the deep challenges that remain, and remain mostly undiminished. This is the *paradox of Singapore*.

The Little Red Dot or the Apple of Nations?

In 2010, my friend, the futurist Peter Schwartz, described Singapore as the "Apple of Nations". He was not using *apple* in its idiomatic form, but favourably comparing Singapore as a nation to Apple the company, which was then – as now – an inspiring paragon of innovation. Apple is famous for its innovative and revolutionary products. Many think that this year, Apple will become the first trillion-dollar company in terms of market cap.

It was high praise from Schwartz. But of course, it begs the question of whether we can truly be the Apple of Nations, or whether we are in reality just a Little Red Dot. Schwartz, who is no rosy-eyed admirer of Singapore, also warned,

"The difference between Apple and Singapore is that the people of Singapore don't know how good they have it. They don't know just what a remarkable entity has been created here. They don't share yet that sense of passion that the people at Apple do."

This concern was echoed in Prime Minister Lee Hsien Loong's 2016 National Day Rally speech, when he said,

“What I would like to have is that we be blessed with a ‘divine discontent’ – always not quite satisfied with what we have, always driven to do better. At the same time, we have the wisdom to count our blessings so that we know how precious Singapore is and we know how to enjoy it and to protect it.”

Dialectic of Governance

I endeavoured to establish in my first two lectures that our operating environment is a fast-changing and complex one. It is to lead to the fundamental question of how Singapore can survive and succeed as a sovereign and independent city-state.

There are clearly no easy answers. It is very easy to criticise from the side, but it is not at all easy to find the right answers. Each big decision and every major policy is not an exercise in finding the absolute right answer. It is always an exercise in making the right judgment – a balanced one that serves the larger interests of the majority and of the country. And even that judgement must change, because the operating environment is changing, not at the pace of velocity, but at the rate of an acceleration.

I shall use the *dialectical* method to try to extract some insights – if not answers – to this question. The *dialectic* is a discourse between two or more people holding different points of view about a subject. Both sides, however, share the same goal of establishing truth through well-reasoned arguments. It is through such discourse that perhaps some answers will emerge about what it takes for Singapore to survive and succeed over the long term.

Big Government versus Small Government

Thrust into an unwelcome and unwanted independence, the Singapore government was in a hurry to turn the precarious situation around, and to transform Singapore into a “modern metropolis”, in the matchless pledge of Mr Lee Kuan Yew in 1965.

So, it is not surprising that in the beginning, governance in Singapore was characterised by *big government* – if you will – through strong regulation, seeking compliance with policy rules, and maintaining as efficient a system as possible, in order to get things moving and to get them done.

Through this approach, the government embarked on a number of major initiatives that helped to lay the foundations for Singapore’s prosperity and stability. These included a massive public housing programme; heavy investments in infrastructure – in public transport,

our port and airport; and an activist, government-led approach to attract foreign investments and build up the capabilities to support higher value-added activities.

In these and many other policy domains, the visible hand of government was as critical as the invisible hand of markets. The government's interventions enabled new markets and industries to develop. They also helped to ensure that economic growth throughout the 1970s and 1980s benefited all segments of the population.

Some see this as the Singapore government as exercising substantial influence not just over traditional areas of policy, like defence, macroeconomics and infrastructure, but also in areas like tree-planting and compulsory savings which are seen as more municipal or personal in other countries. The ban on the sale of chewing gum has been cited by many as an example of a pervasive and intrusive government role.

Mr Lee Kuan Yew made no bones about his belief that government should intervene in a spectrum of issues. He famously said,

“I am often accused of interfering in the private lives of citizens. Yes, if I did not, had I not done that, we wouldn't be here today. And I say without the slightest remorse, that we wouldn't be here, we would not have made economic progress, if we had not intervened on very personal matters – who your neighbour is, how you live, the noise you make, how you spit, or what language you use. We decide what is right. Never mind what the people think.”

Government Spending

But on many significant measures, Singapore's government is not at all big. The Washington think tank, the *Heritage Foundation*, together with the *Wall Street Journal*, compiles an annual “Index of Economic Freedom” measuring several dimensions of a country's economic freedom.

One of these dimensions is the size of government spending, which in Singapore has been very low for a country of our level of development. According to the most recent *Index of Economic Freedom*, total government expenditure in Singapore constituted 18.2% of GDP. This is among the lowest in the world. In comparison, Hong Kong's total government expenditure amounted to 18.3% of GDP, and it does not have to spend on defence. In New

Zealand, which was ranked third behind Hong Kong and Singapore for economic freedom, government expenditure totalled 42.2% of GDP.

Evolution of Government in Singapore

The system of government in Singapore was inherited from the British – actually, from the British East India Company, the pre-eminent global multinational corporation of the day that Sir Stamford Raffles worked for.

So, it is not as if we started from scratch. Because of these antecedents, it is natural that Singapore looks to developments in administrations that are based on the Westminster system of government. It is not surprising that the practice of governance in Singapore has broadly tracked the trajectories of other governments in countries like Australia, Canada and New Zealand, and especially in the United Kingdom, the birthplace of the Westminster system of government. Nevertheless, it has always been to adapt, and not to adopt blindly.

Influence of Thatcherism

Margaret Thatcher became Prime Minister of Great Britain in 1979. She was a strong believer in *small government* – as opposed to big government – and in the ability of the private sector to provide goods and services more efficiently. She believed in reducing the role of the state in the economy. In her worldview, the private sector was often better placed to deliver public services, and market forces should be given a free hand, and entrepreneurial energies unshackled. In taking such a *laissez-faire* approach towards regulating the private sector, it is argued that small government lowers costs and promotes efficiency by allowing the market to determine prices and economic outcomes.

The underlying philosophy of Thatcherism had a huge impact, and influenced governments around the world, including Singapore's. So, in the 1990s, the Singapore government began changing its approach, focused on creating a leaner public administration while delivering better services.

To this end, the government sought to harness the creativity and dynamism of the private sector to deliver public services, and to achieve efficiency gains from the forces of competition. It explored ways in which government could divest its interests and allow for entrepreneurial energies to flourish. The privatisation of our state-owned utilities began with Singapore Telecoms in 1993. This was followed by the liberalisation of the telecommunications sector. In the electricity sector, our own privatisation and liberalisation

experience was also very much influenced by the experience of the British government, particularly in its decision to vertically separate the industry.

Networked Government

But things do not stand still. This is, after all, the Anthropocene and the era of the Great Acceleration. The 1990s also saw another evolution in the thinking about government. The focus shifted towards integrated or joined-up government – one that coordinates efforts across departments, harnesses new information technologies, and partners the private sector to deliver better services.

David Osborne and Ted Gaebler, in their ground-breaking book “Reinventing Government” wrote,

“Governments that steer more and row less are clearly stronger governments. After all, those who steer the boat have far more power over its destination than those who row it.”

The aim was no longer to shrink governments, but to emulate best practices in the corporate world to stay relevant. These would include adopting new technologies, embracing principles of customer-centric design, and giving greater attention to customer experience. The aim instead was to make governments more effective, more efficient, and more focused on delivering better services to their customers in the private and people sectors.

In this context, many services that government provides require agencies to work together. This is often described as “networked government”, which is the synthesis of four trends:

- *Joined-up government* that is aimed at providing integrated service through getting multiple government agencies to join together. The Economic Development Board’s much admired – and copied – concept of the “one-stop shop” is an example of joined-up government. Potential investors only have to deal with a single point of contact, rather than a plethora of approving agencies. Of course, creating a *one-stop shop* requires a lot of coordination in the backroom among various agencies and ministries. It requires them to work together in a networked, coordinated fashion. The alternative is a bloated bureaucracy, slow service and frustrated customers.

- *The digital revolution* in which advances in infocomm technologies are harnessed to enable government agencies to share information, exchange data and collaborate in real time with other government agencies and with external partners to deliver faster and more accurate services to the public.
- *Outsourcing* the use of private firms and non-profit organisations – as opposed to just using government employees – to deliver better services and achieve policy goals.
- *Increasing consumer sophistication* leading to increased citizen demand for more control over their lives and more choice in their public services, to match the customised service provision that already exists in the private sector.

Whole-of-Government

The *Whole-of-Government* approach which I introduced in my first lecture is a natural evolution from networked government. With a mindset of more integrated collaboration already established among government agencies through networked government, Whole-of-Government has emerged in Singapore – at least – as an important response to managing complexity and dealing with wicked problems.

In this approach, instead of breaking down a wicked problem into smaller parts, and then leave it to each agency to make its own, decentralised and bounded decisions, Whole-of-Government promotes not just backroom coordination to provide public services in a more efficient manner. But it also emphasises sharing of information among ministries, statutory boards and other agencies, at the strategic level, in order to take in different ideas and insights. This is so that wicked problems can be viewed in their manifold dimensions, and so that the appropriate policy prescriptions and plans can be developed.

Government *versus* Governance

Today, citizens and businesses alike have far higher expectations of government than before. Access to information has increased dramatically in scope and speed as a result of the Internet revolution. Social networking platforms like *Facebook*, *YouTube* and *Twitter* have empowered citizens to express their views. Virtual communities are beginning to shape the debate and context of public policy issues.

The view that “government knows best” that perhaps characterised the situation in the beginning is increasingly challenged in today’s world, in which citizens and businesses can easily gain access to much of the information that governments used to monopolise and control in the past.

The Future of Government in Singapore

Today, the quality of government in Singapore is routinely listed at the top of a host of global rankings. That Singapore is already operating at the leading edge in many areas of governance means that it is no longer enough for government policymakers just to copy and adapt from elsewhere.

For many of the emergent issues that we have to deal with, Singapore will have to evolve its own strategies and approaches. To achieve real breakthroughs, the government will have to depend more and more on its own innovations.

And as a result, the government will have to assume new levels of entrepreneurship with its attendant risks and uncertainties. A government that explores will also at times have to sacrifice some degree of efficiency in service of discovery. And it will need to become expert at conducting bounded experiments.

Indeed, the emergent, complex issues of the 21st century suggest the need for a new paradigm in governance – one that is Whole-of-Government, networked, innovative, exploratory and resilient in the way it confronts the challenges of our time – challenges rooted in complexity and accelerating change of the Anthropocene.

What is the appropriate model of governance for Singapore going forward? The coming years will see a growing need for *governance* – which requires collaboration across the public, private and people sectors – rather than *government* acting as the sole, or dominant, player.

Today, the government faces a myriad of complex public policy issues in which the trade-offs are much more difficult to make, because each could lead to unintended consequences and risks. Many of these public policy issues exceed the capacity of government working alone. Instead, they require the active contribution of private and people sectors. A government-centric approach focused on efficiency and productivity will likely give way to a

broader approach that leverages on the collective capacity of non-government actors, in order to achieve results of higher public value and at a lower overall cost for society.

How government interacts with the private and the people sectors will in turn determine how big a role each of these sectors will play. It is often overlooked that the Singapore government has been a world leader in the engagement of the private sector. A succession of five economic reviews – the Economic Committee of 1986, the Committee on Singapore's Competitiveness of 1998, the Economic Review Committee of 2003, the Economic Strategies Committee of 2008, and most recently, the Committee on the Future Economy of 2016 – saw the public and private sectors coming together every few years to produce far-reaching policy recommendations for Singapore's long-term economic competitiveness.

Free Market *versus* Market Intervention

A major factor that determines the size of our government has been our belief that free market forces should determine prices and economic outcomes. This is the approach that is the foundation of small government.

But in Singapore, faith in the market has not been uncritical or absolute. Instead, the government recognises that in certain cases, unfettered market forces can result in excessive volatility, negative externalities and under-provision of merit goods, like education, as well as public goods, like defence.

The economist, Dani Rodrik, outlined a framework that can be usefully applied to understanding how Singapore has chosen to blend the work of markets and the government:

- First, the government has sought to *enable markets*. This includes ensuring rule of law, property rights, and public infrastructure – functions that most governments perform. In Singapore, enabling markets has also included industrial policy and capability development, subjects of some controversy in policy circles around the world, especially among proponents of small government that believe in the *laissez-faire* approach.
- Second, the government has sought to *regulate markets*. This includes supervision of the financial sector, competition regulation, and taxation of negative externalities, such as high charges for car ownership and road usage, and sin taxes on alcohol and tobacco products – and maybe in future, taxes on sugary drinks. But a key

feature of Singapore's approach has been the shift towards lighter regulation accompanied by risk-based supervision, most recently exemplified by MAS' FinTech regulatory sandbox.

- Third, the government has sought to *stabilise markets*. This is the bread-and-butter of macroeconomic management. Singapore's basic approach in monetary and fiscal policy is not far different from global practices. But its efforts to address asset price inflation and credit crises are interesting examples of targeted interventions that harness market forces.
- Fourth, the government has sought to *legitimise markets*. Globalisation, free trade, and open markets lead to significant dislocations. Some of the sharpest debates over the role of governments centre on this: to what extent should governments facilitate adjustments, redistribute incomes, or provide social safety nets, so as to maintain public support for market-oriented policies?

Engaging the People Sector

Complementing government and markets, is the role that society will play in tackling the great challenges and wicked problems of the 21st century.

A key part of this governance process will be growing mutual engagement between the public and people sectors. In his 2011 National Day Rally, Prime Minister Lee Hsien Loong underscored the importance of such engagement, pointing out that the nation needs to "harness diverse views and ideas, put aside personal interest and forge common goals".

This is especially important because people's expectations have changed – and are changing, continuously.

Maslow's Hierarchy

I think that there are a couple of reasons for this development. The first reason is that as government policies lead to improvements, the needs of the people change in tandem. This is explained by Maslow's Hierarchy of Needs. Maslow's proposition was that after the basic physiological needs of a person are met, more complex psychological needs will have to be fulfilled. At the top of this hierarchy of needs are the need for *self-actualisation*, which is to realise the individual's potential, and *transcendence*, which is helping others achieve self-actualisation.

So, if you accept this proposition, then after government has delivered on the basic needs of food, security, shelter, transport and health, expectations of the people are going to change, not in demanding more of the basic needs, but in fulfilling their more psychic needs in the upper reaches of Maslow's hierarchy, including social, emotional and self-actualisation needs.

The challenge for governments everywhere is that success in delivering the material goods of life – housing, food and so on – is no guarantee that it can be successful in delivering “the good life”, however defined. I suppose the reverse is true as well, although it is hard to imagine the good life without the basic necessities of liveability

Third Generation Singaporeans

The second reason is what I term the *third generation effect*. Singapore is now 51 years old, and into its third generation of Singaporeans. The first generation of Singaporeans lived through the turbulence and uncertainties of Merger and Separation. The next generation started life on a firmer footing, but at the same time imbibed from their parents a sense of the vulnerabilities. But the third generation of Singaporeans have known only the affluence and success of Singapore. For them, the uncertainties of the 60s and 70s are abstractions from their school history books. When their grandparents speak of the turmoil and danger that they experienced, they shrug their shoulders because it is an experience outside theirs. Of course, they are hardly to blame for this, and they certainly need not apologise for it. Singapore's founding generation made the sacrifices in order that their children and grandchildren would enjoy peace and prosperity.

But clearly, what persuaded their parents and grandparents will not wash with the third generation. But as long as we are all in this together – and I hope that they feel they are in this together – the hopes and dreams of our youth must also appreciate the tough realities that endure. By all means, dream, but dream with your eyes wide open. So, communicating to the third generation will require fresh arguments and different approaches.

People Empowerment

Citizens today feel empowered, because of the social media, and higher levels of educational achievement. Indeed, Singaporeans today are much better educated than their grandparents. In 1965, the cohort participation rate for university education was a miniscule 3%. Today, it is 30%.

The non-profit group, *Ground Up Initiative* (GUI), points precisely to how attitudes are changing in Singapore. GUI operates a 26,000 m² “Kampong Kampus” space in Khatib, with the aim of reconnecting urbanites to the natural environment. The group’s founder, Mr Tay Lai Hock, said,

“I think the top should set the example, but I also believe, you first and foremost, must take responsibility for your own life... Don’t blame anybody. Don’t blame the Government... I have a choice to decide that even though they have made this policy, I don’t want to be a victim of their policies.”

The Bukit Brown Case Study

In 2011, the Land Transport Authority announced plans to construct a road that would cut through Bukit Brown, the oldest cemetery in Singapore. Heritage groups protested, while the government maintained its position on needing land in land-scarce Singapore.

When Bukit Brown Cemetery was placed on the World Monuments Watch in 2013, one member of the group *All Things Bukit Brown* said,

“I hope it shows that we are serious, that we want a seat at the table, just so we can present what we have heard from the community, what we have heard from the people who have encouraged us... you want development, but let’s have a discussion, perhaps.”

The government has to deal with an electorate that feels empowered, demanding, and actively seeks participation. In this regard, *Our Singapore Conversation*, launched in 2013, signalled the government’s commitment to listening to the people’s views.

The Case of the Missing PM2.5

By looking at issues from the perspective of end-users – namely the citizen – the government is able to design better policies than if they were just developed using the usual top-down approach.

During the 2013 haze, experts had advised the government to consider releasing another indicator besides the Pollutant Standards Index (PSI) readings: the PM2.5 readings, which measure particles smaller than 2.5 microns. This is because PM2.5 particles greatly affect people with heart disease, as well as children and the elderly.

When the haze began, the government published the three-hour PSI readings and 24-hour PM2.5. But netizens and doctors pointed out that the PSI did not factor in PM2.5 readings as air quality indicators. Members of the public also expressed concern that the PSI values appeared different from what they had observed. Singaporeans even resorted to taking their own real-time air quality readings with commercial equipment.

The government said at first that it would be confusing for the public to have too many figures to read. But in the end, because of persistence of the public, NEA began providing more information on PM2.5, and from 20 June 2013, publishing the PSI and PM2.5 figures hourly, six days after the haze began. And eventually, from 1 April 2014, Singapore moved to an integrated air quality reporting index, with PM2.5 incorporated into the PSI as its sixth pollutant parameter

Government with You

I have spent some time explaining how and why society in Singapore is evolving, and how government itself has to evolve in tandem. Put simply, it means a shift from the paternalistic and interventionist “government to you” and “government for you”, to “government with you”. The imperative is for government to move towards a collaborative approach to policy-making, and be prepared to connect, consult, and co-create with the people and the private sectors.

Order versus Disorder

The bureaucratic propensity is to create order and consistency, both in the external environment and domestically. In Singapore, the inclination to manage extends even to our wildlife.

The recent case of chicken culling in Sin Ming is one example. Ms Natalia Huang, an ecologist at an environment consultancy *Ecology Matters*, recently suggested in *The Straits Times* that since Singapore is land scarce, even regulating the number of cars on the road, wildlife should likewise be regulated. With scientific research on how much space to allow wildlife density growth, we could ensure that wildlife in Singapore is sustainable.

Reducing Complexity versus Catalysing Complexity

But while governments and people try to reduce the complexity out there by coming up with all kinds of regulatory systems, there is a limit to how much order we can – or should – produce in a complex environment. It is both an aesthetic as well as an economic issue.

Literacy, political structures, levels of industrialisation, and per capita income, are conventional indicators of economic health. However, economists like Ricardo Hausmann, César Hidalgo, and Luciano Pietronero, have suggested that the most important predictor of growth is economic complexity, or the diversity of products that an economy possesses.

Countries with the most natural resources tend to have simple economies, as they do not produce unique goods. Thus, economies that are dependent on a particular kind of export – for example, oil or timber – may do well when demand for these products are high, but fail in the long run because they are not diversified enough and cannot compete in other sectors.

The ability to produce unique goods and services depends on the amount of “productive knowledge” in an economy. This is the kind of knowledge derived from experience and exposure to different sectors and domains of production. Invention and innovation occurs when these bits of productive knowledge are connected. Improvements to economic growth can be achieved either by harnessing existing capabilities in new combinations, or by accruing new capabilities to expand the productive potential of the country. It is an important outcome of economic complexity.

So, governance of a city-state like Singapore is not all about reducing complexity – far from it. Instead, in some cases, it should catalyse complexity, by creating more networks to connect multiple economic domains.

The Rise, Fall, and Rise, of Boston

The Harvard economist, Professor Edward Glaeser, tells of how Boston, in the 17th and 18th centuries, was the leading port in America. It thrived as a conduit of goods between the old world and the new. But by the mid-18th century, Boston as a port had been eclipsed, first by Philadelphia, then by New York.

What saved Boston from the fate of other New England ports was a large population of Irish immigrants. By the late 19th century, Boston had transformed itself into a centre of manufacturing built on immigrant labour, and it prospered on the back of America’s industrialisation.

But Boston’s heady period of growth was over by 1920. Population growth slowed and even began to shrink after 1950. However, in the last two decades of the 20th century, Boston again re-invented itself, this time from an industrial city in decline into a high-tech, service-

based economy. Its population grew rapidly between 1980 and 2000, reversing 50 years of stagnation and shrinkage.

Boston is now a centre of the information economy. Today, education is the dominant factor in Boston's economy. Boston ranks highly in its share of employees in managerial and professional jobs. Its top four export industries today are all skills-based: technology, finance, education and healthcare.

Lessons from Boston

Using the lens of economic complexity, the Boston case shows us that the ability to re-orientate and create new value hinges on economic complexity. From its earliest days, Boston was never just a port. Artisans manufactured some of the goods traded on Bostonian ships. Boston had banks, brokers and insurers from its seafaring days because shipping needed financial services. Education was always valued in the colony – Harvard University was founded in 1636 with government money.

Its rich, complex strengths and competencies enabled Boston to reach within itself to find new connections and value propositions. These enabled Boston to re-invent itself time and again when other more brittle, less economically complex cities like Detroit, which was heavily dependent on manufacturing – especially of automobiles – went into terminal decline.

Can Singapore rely on our position as a global transshipment hub, or will we have to confront the possibility, in the future, that changes in technology, logistics patterns, and geo-political shifts, that our pre-eminence as global port will decline? And then – like Boston – will we be able to reinvent ourselves?

Paralysis by Analysis versus Acts of Faith

When a government becomes bogged down by the *minutiae* of day-to-day operations, the risk is that it will not be making the big decisions needed to take the country forward in a timely fashion. Arguably, the modern metropolis that is Singapore was itself an act of faith – in the people – an act of imagination and courage borne out of challenging circumstances.

Jurong Industrial Estate

Jurong Industrial Estate was the key to Dr Goh Keng Swee's plan to industrialise Singapore and drive economic growth, shifting the economy away from entrepôt trade towards

manufacturing. In 1959, the newly-elected People's Action Party confronted a huge challenge – sky-high unemployment estimated at 14% or over 200,000 jobless people, and the population growing at around 4% to boot.

Dr Goh's vision to transform the swamps, jungles and small fishing villages of Jurong into a modern industrial estate was based on Dr Albert Winsemius' report on Singapore's economic potential, which emphasised giving a big boost to manufacturing. Dr Winsemius was, of course, Singapore's long-time Dutch economic advisor.

But there were many sceptics. Jurong was seen by many to be a risky venture given the absence in Singapore of any real track record in manufacturing, the choice of an area rural swampland for the project, and the huge cost involved.

Dr Goh himself joked that if Jurong failed, it would go down in history as "Goh's folly". Still, the government pressed on, with Dr Goh describing the project as "an *act of faith* in the people of Singapore".

By 1968, almost 300 factories had been built at Jurong, providing employment for 2,000 people. Jurong's big breakthrough came in 1968 when EDB persuaded Texas Instruments to visit Singapore, which then started up its plant in Jurong within 50 days of its decision to invest. It was an extraordinary vote of confidence in Jurong and in Singapore.

Dynamic governance in Singapore is an unending series of re-imaginings and reinventions. So, Jurong Lake District will be transformed into Singapore's second Central Business District. The KL-Singapore High Speed Rail Terminus will be located there. And Jurong will also be the site for the future Integrated Transport Hub, a new gateway to Singapore.

Tanjong Pagar Container Terminal

The Tanjong Pagar Container Terminal was also another early act of faith. In the 1970s, the shipping industry was enduring one of the most severe shipping crises ever experienced, affecting shipping companies with high investments in tankers and tramp/bulk ships.

Against this backdrop, Tanjong Pagar Container Terminal emerged as a potential solution. The country's shipping industry needed to exploit a growing market and a completely new transportation mode could help Singapore to remain competitive.

It was a calculated gamble that PSA took – under Mr Howe Yoon Chong’s chairmanship. Singapore started building the region’s first container port even before a single shipping line had committed to call at Tanjong Pagar. The terminal itself was constructed against the advice of professionals.

Though business was slow in the 1970s, container trade rose in the 1980s, giving Singapore a first-mover advantage, leading it to become the world’s busiest container port in 1990. Today, Singapore is the second busiest container port in the world, and only one of two in the 30 million TEU class, after Shanghai.

Long-term versus Short Term

The point of this dialectic on governance is not to posit false binaries where there are none. There are no absolute “rights”, especially not when the world is constantly changing. What the government needs to do is to prepare itself – and Singapore – for the *black swans* and disruptions that will surely surprise us in the future.

To achieve this, the government must put into proper perspective the pressing, day-to-day concerns within the larger context of longer-term challenges and uncertainties.

The question you might wish to pose is, what is “the long view”? How far ahead can and should we really think? Some policy issues, such as demographics, the environment and education, stretch out over many years. In contrast, government institutions are designed for four to five year electoral cycles. Even if we had the political will, do we really have the imagination to view and tackle challenges that lie beyond the life-time of the already-born citizen?

At the same time, we talk about making the future; but if we were to reframe it, is it not also the case that our actions in the present are “taking the future” away from unborn generations to come? Here I am thinking of our actions – or rather inaction – on a global basis with regard to climate change, for example.

This is a question of responsibility and trade-offs. On one hand, the current generation has a responsibility of stewardship, for example in steering Singapore to SG100 and beyond. However, in order to fulfil that duty of stewardship of the future, certain tough decisions have to be taken in the here and now. How much appetite is there really for long-term thinking in

a society that is focused on the short term, dealing with the problems of the day, and “putting out fires” all the time?

This is why thinking about the future is an essential and yet delicate task for governments to foster – both as a matter of institutional processes and as a habit of thinking.

Singapore’s success in managing its paradox has been achieved by a mixture of good government, good luck and a heavy dose of *kiasuism*. But Andy Grove, late CEO of Intel, once said, “Success breeds complacency. Complacency breeds failure. Only the paranoid survive.” This echoes something that Lee Kuan Yew himself once said,

“What I fear is complacency. When things always become better, people tend to want more for less work.”

But, of course, too much paranoia can ultimately consume a society. Paranoia suggests always looking over your shoulder, always being driven by threats, rather than also looking out for opportunities. Paranoia, taken too far, can also lead to a loss of solidarity within society, leading to people viewing the world purely in zero-sum terms. What about being pulled forward by the *better angels of our nature*, instead of being chased by demons?

Thank you.

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