

National Trust of Western Australia

CY O'Connor Lecture 2020

Address by the Honourable Kim Beazley AC Governor of Western Australia

Tuesday, 10 March 2020

I would firstly like to acknowledge the traditional owners of the land on which we meet – the Whadjuk Noongar people – and pay my respects to their elders past and present.

Introduction

It is a pleasure for me to be delivering the 2020 CY O'Connor Lecture to you all here in the State Library of Western Australia on the anniversary of O'Connor's death. It is a privilege to deliver it in the presence of so many of his descendants. Many of you have made massive contributions to this State as well.

Here I am, talking in my capacity as a proud Western Australian. I spent a near lifetime in politics from here and topped it up with representational duties in the U.S. One of the dominant themes of my life's work has been an attempt at a realistic understanding of the national strategic situation and what policies and actions are essential for our long term survival. The extraordinary thing about the Governor's job is that it has significantly reoriented my perspectives. Both in historical and contemporary terms I have been briefed into a deeper understanding of how critical this state is and how it works. Tonight I want to talk about some of our strengths.

CY O'Connor

This annual lecture provides an opportunity for someone in my position to undertake this reflection. There was some similarity between C.Y's era and this one. C.Y had to handle the infrastructure challenges of a massive increase in population 50-200,000 in his decade. Based on a mining boom. We have been similarly challenged with what has been a further mining based surge over the last two decades. Part of his legacy, though it is distant, has helped us comprehend the challenges in a way that makes the truly extraordinary efforts in the North seem part of the passing parade. We do these things now with an expertise that is world class.

Charles Yelverton O'Connor was a man ahead of his time. With 25 years of experience in New Zealand behind him, in 1891, O'Connor arrived in Western Australia. At the invitation of Premier Sir John Forrest, Charles Yelverton O'Connor undertook the role of both Acting General Manager of Railways and the Engineer-in-Chief of Western Australia. Over the course of his time in Western Australia, until his untimely death in 1902, CY O'Connor undertook major projects which contributed significantly to the development of Western Australia and left an indelible impact on our State.

O'Connor arrived in Western Australia immediately prior to the discovery of gold here. Amid increasing population and consequently, increased resource demands, O'Connor had a very clear cut view on what the development issues and concerns in Western Australia were. These views however, were not without opposition.

David Whish-Wilson in his book *Perth*, describes Premier Sir John Forrest as “a great abettor of O’Connor’s various projects, protecting him from interference and broadly encouraging the realisation of his ambitions.”

However, Sir John Forrest himself was reported to also have had doubts about C.Y. O’Connor’s plans. C.Y. O’Connor’s plans for the development of the Fremantle Harbour for example did not initially receive the support of Sir John Forrest who believed ‘it too costly and too risky’ however admitted at the opening of the harbour, that he had been won over.

O’Connor’s determination despite the doubt and criticism of many, is inspirational. It is vital for us that we had people like O’Connor who lived life effectively on a political straight razor during a significant period in the State’s development. He was always at risk of mockery and discarding.

It was, in some ways, to his misfortune that CY O’Connor found himself situated in a period where we effectively came into responsible government. The departure of Forrest for the national legislature, which resulted in four changes of state government within a single year, created the conditions that left O’Connor exposed to the criticism of parliamentarians and the ridicule of sections of the press... “as an engineer, he was no naïf, and he knew where he stood in the altered political climate.” In the end, the concerns and worries that entailed, in all probability induced his decision to take his own life.

We should pause on this and think a little further. O’Connor operated in a political milieu of deep immaturity. Colonial politics up until responsible government was marked by a relatively authoritarian governor surrounded by a limited dancing social set and opposed by an often frustrated class of journalists and would be/could be community leaders prepared to see and find endless error. Scepticism abounded judgement did not. He was vulnerable in an atmosphere without balance, particularly when his protector was removed. He was undertaking big projects which to him seemed the normal way an engineer solved problems. That normalcy was beyond the scope of the imagination of many invested in an essentially immature broader political process and a similarly challenged, hovering media.

O’Connor’s Legacy

In the book *The Chief: C.Y. O’Connor*, the late Dr Merab Tauman describes O’Connor’s impact on Western Australia as standing in “comparison with that of Isambard Kingdom Brunel in the United Kingdom.”

C.Y. O’Connor was championing innovative ideas and projects such as the creation of the Fremantle Port, the Goldfield’s pipeline and significant railways. These significant undertakings are key pieces of infrastructure which underpin much of Western Australia’s strengths and character today. All were controversial in the day.

- **Ports**

C.Y. O’Connor’s plan for the development of the Port much criticised, on cost. The development of the Port also required the removal of a rock bar to open the Swan River to the Indian Ocean. This upset the Whadjuks who were essentially ignored. However, the opening of the Swan River to the Indian Ocean, and therefore the City of Perth to the wider world, was seen as essential to the City’s centrality in WA’s development.

The Fremantle Port of course now facilitates trade that is vital to our State's economy and remains Western Australia's largest and busiest general cargo port operating through two harbours. 'The Inner Harbour at Fremantle handles almost all of the container trade for Western Australia'. 'The Outer Harbour is one of Australia's bulk cargo ports handling grain, petroleum, liquid petroleum gas, alumina, mineral sands, fertilisers, coal, sulphur, iron ore and other bulk commodities.'

Reportedly, \$3.75m worth of trade are handled at Fremantle Port every hour 24/7.

Following C.Y. O'Connor's move to Western Australia, the discovery of gold prompted a mass migration to the State and saw its population rise from just under 50,000 in 1891 to nearly 200,000 in 1901. The fields demanded resources. The poor water supply in the Goldfields at the time, created harsh and unsanitary conditions with many people dying, particularly due to the prevalence of typhoid fever. The method of extraction used in the mining process, also required large quantities of water further exacerbating the problem.

At the request of Government, C.Y. O'Connor designed the Goldfields Water Supply Scheme which saw water transported from Mundaring Weir in the west to a reservoir at Kalgoorlie. The pipeline was to serve as a reliable source of water for both the mine and the goldfields.

At the time of its opening the scheme was recognised as the largest engineering undertaking of its time, globally. When it opened in 1903, it was the longest pipeline in the world and the first major pipeline in the world constructed of steel. O'Connor and his hydraulic engineer, Thomas Hodgson adopted the use of new material and new technology when designing the pipeline. Through the Goldfields Water Supply Scheme 'O'Connor succeeded in pushing the limits of the technology of his day' In many ways our northern offshore and onshore extraction industries now with their "biggest of's, best of's", most capable robotics draw a line back to CY's engineering genius.

The Scheme supported the emergence of Western Australia as a minerals province. This pipeline would also become significantly important in the development and sustainment of much of Western Australia's agricultural industry. Another at least partial CY legacy as the wheat fields remain among the most productive wheat fields in Australia, accounting for 42% of the nation's wheat crop and sustaining six million sheep.

The pipeline, now known as The Golden Pipeline still remains Kalgoorlie's primary source of potable water and continues to service the domestic, agricultural and mining needs of surrounding communities.

Pipelines now remain central to the transportation of critical resources such as water, gas, oil and other liquids across the State of Western Australia and across Australia more broadly.

O'Connor's success in the role of Acting General Manager of Railways can be surmised in noting that "By the time Forrest resigned as premier, every major goldfield was connected by telegraph or railway to Perth and all the big towns had been provided with essential services. So, too, had the south-western farming districts and their local centres."

Railways continue to play a vital role both in connecting communities across the expanse of Western Australia, as well as the use of railways in our burgeoning resource industry.

A man I thought the world of and one of my teachers at UWA, the late Professor Geoffrey Bolton wrote a good history of WA, '*Land of vision and mirage.*' In a collection on Geoff's work Prof. Stuart MacIntyre identified his theme "that this isolated society was given to big projects 'hastily planned and executed' that never fulfilled their promoters grand visions but usually left a residue of modest growth." At least that conforms to a do no harm requirement. But I don't think that would be a fair assessment of C.Y. His were deliberately planned and effectively executed. The only one I would query was blowing the mouth of the Swan which salinized the reaches of the river. But in terms of the simple objective of effective riverine traffic important in the day, it is easy to see why it was done.

Western Australia

Contemporary WA does think and collectively act in a framework of broad thinking unconsciously within the CY tradition. As Governor I am briefed in a myriad ways on projects critical to the nation's future. It is a constant verity in our public debates that we need to think beyond our mining/energy sector with the suggestion we risk being a one trick pony. That misses the point. We are such a powerful extractive state that that industry produces a multitude of spin off industries and services. I have enjoyed pointing out in this discussion over where full cycle docking should be done for our submarines that WA has 50% more blue collar skilled and semi-skilled workers than SA. As US Ambassador I used to point out that 60% of the world's mining industry software is written in an area 20kms around Government House. Its supporting industries and services drive a multitude of seemingly unrelated products.

It is a major factor in Australia's diplomatic posture. The industry is a ticket to the top table. We are a mining and energy superpower. It is noteworthy that the major African mining conference takes place in Perth every year with 15 African ministers attending.

Mineral Resources

Western Australia has a deeper global involvement than just about any other part of Australia. Our dynamic industry has seen merchandise exports to Asia increasing from \$24 billion to \$129 billion between 2004 and 2018 and our State exporting more to Asia than any Australian State or Territory.

Western Australia and our people are of exceptional importance to the nation, and increasingly so in these times of global uncertainty. We are the world's great mineral province with some 21,030 mining tenements in force, and about one thousand mines either operating or under development. These sites include resources and expertise underpinning the green technologies the world urgently seeks now, and will need into the future. We work to not only improve our own society but advance others' too, via world-leading work in fields as diverse as health research to space and automation.

I would like to reiterate the astounding fortune we offer the globe in providing open and fair access to critical minerals, which underpin the world economy. The fact that half of the world's lithium supply comes from WA, including the world's largest lithium mine only two and a half hours from here, is testament to this. In fact, someone quipped to me that the Greenbushes mine probably had both the world's highest grade and second highest grade of lithium in the world. The second being its tailings dam. We now seem to have other equally, some speculate, even more promising lithium reserves in our North.

Mineral production and leadership in Western Australia is critical to national prosperity and our survival. Critical for ourselves. Critical for our friends. Critical for our trading partners. We have all the minerals vital for battery production, all now being mined. We have all the rare earths – heavy and light – critical for industrial magnet production and all the other components for fourth industrial revolution production, present here in WA. Some in production. Other countries have what we have, what they don't have is our highly developed productive genius.

Beyond high grade resources, including all forms of critical minerals available right here in Western Australia, our mining industry is the gold standard in offering:

- No sovereign risk;
- Secure and voluminous supply;
- Fair and safer work;
- Innovative mining; and
- Environmentally and ethically responsible supply.

We are easy to relate to. For those countries concerned for human labour rights and the environment, we cause no embarrassment.

We are actively exploring opportunities for the State in areas of lithium and hydrogen production and energy, as well as exploring our mineral processing capabilities.

Fourth Industrial Revolution

As was with CY O'Connor, Western Australia continues to be at the forefront of many technological innovations both in and beyond the resource sector. Technological advances present new ways to combat emerging challenges. A number of cooperative research centres are currently in development and operating across Western Australia. These Centre's are pioneering research into future battery industries, cybersecurity, various areas of health science, mineral exploration and more.

A fusion of emerging technologies with our inherent strengths in the mineral and resources sector has contributed to Western Australia being a global leader in automation. Advanced technology in the fields of autonomous transport and advanced robotics is becoming a regular feature in mines across Western Australia.

Rio Tinto as an example, currently 'operates the world's first fully autonomous, heavy-haul long distance railway system AutoHaul – which has so far travelled more than 7 million kilometres.'

The use of drones and remote operated vehicles to conduct risky jobs and inspections is ensuring the safety of employees.

Space

These skills are transferable into other areas and sectors such as the space industry in which Western Australia is playing a prominent role.

Woodside and NASA are currently working in collaboration to explore how robotic technology can be used to improve safety, reliability and efficiency in the high-risk and remote environments where Woodside operates. Through this collaboration Woodside contribute their advanced cognitive

science technology developed in their State operations, while NASA share their expertise in Robonauts used for tasks in places such as the International Space Station.

Western Australia's strengths in this area will be further utilised in our contributions to the Australia-Nasa Moon to Mars partnership. Perth has secured the headquarters for the national entity AROSE (Australian Remote Operations for Space and Earth), which is being led by founding partners Woodside, Fugro, Nova Systems, Curtin University and The University of Western Australia. This partnership will enable WA to play a key role in the development of technologies and services for space that will benefit future exploration.

Western Australia is also playing a vital role in co-hosting the Square Kilometre Array, a global big-science project to build the world's largest and most capable radio telescope. This project is in collaboration with South Africa. The State's involvement in this project could present opportunities across a variety of industries and sectors.

Defence

Western Australia remains uniquely placed to contribute to ensuring Australia's national security.

Western Australia serves as the gateway to the Indian Ocean and emerging international defence markets. As the location of HMAS Stirling, RAAF Base Pearce and the Campbell Barracks, there is a critical defence presence in the State.

As the regional strategic environment continues to change and increase in its complexity, Western Australia's defence capacity and capabilities remain central to the assurance and consideration of our national security. Not to mention the free flow of trade and the security of our neighbours.

But herein lies the challenge. I have talked here in truisms and factoids without context. We now have to harden up. We should struggle for the principles of the liberal international order so vital to us economically. However increasingly force majeure rules. When I was Defence Minister I used to think in terms of deterring and repelling raids. As the climate crisis and the critical character of fourth industrial revolution minerals evolves increasingly we need to think not so much of raids but seizure. Success for an enemy would create almost as much of a logistical problem for us taking the north back and them holding it. Others may come to regard a continent for a nation as no God given right. This is not to throw out panic lines. Obviously effective defence deters the thought in potential adversary. But our northwest is Australia's number one desirable objective. As rainfall, and agriculture increases in the region and the abundance of critical minerals becomes obvious, it will become our focus.

Other emerging challenges

The significance of Western Australia to our nation's security and prosperity is only going to continue to grow. Consequently, we are also going to become a bit of a target.

We are strong but we are vulnerable.

Climate Change

To take that climate point further, Western Australia is likely to experience diverse effects of climate change. In the south, and indeed across the continent, there is substantial drying. Our North continues to face a variety of weather events, such as cyclones, which are only

increasing in their ferocity. However rainfall is rising likely to render the area suitable for more intense agriculture. I firmly accept the judgements on global warming and its causes by climate scientists but it is hard to be optimistic on agreement and action. Along with the non-coastal parts of Russia, Canada and Alaska it may produce opportunities for agriculture and minerals exploration. Geopolitical struggles will likely follow with those less beneficial.

Finally, it is important that we consider the value of consulting with our First Nations peoples when considering how to tackle emerging challenges. Our first Australians are testament to Australia's resilience, as one of the oldest continuous cultures on earth, surviving and even thriving through dramatic climate events. The circumstances surrounding a story about cultural burning miraculously saving a man's house in an utterly fire ravaged area, during the recent bushfire crisis, are worth a closer look. It is important that we demonstrate sufficient humility and discuss with Indigenous Australians how they manage and have for thousands of years.

We are historically challenged here. There are many features in our past of desperate cruelty to our Aboriginal cohabitants. As a Governor I have to be cognisant of that legacy. In C.Y.'s time the prevailing injustice was a continuing and ultimately successful effort to remove from our constitution a British imposed obligation to maintain one percent of our gross revenue (or 5000 pounds whichever was greater) be set aside and provided to the Aborigines Protection Board for expenditure upon the welfare of Aboriginal people.. How different is it now. We are the Native Title State. When all the claims conclude about 90% by area will be in this State. We now have one agreement, effectively a Treaty, with the Noongar nation. Another will shortly be with us. This has not been a product of our initiative. It has been imposed by the High Court but it is ours to implement. We have a new chance.

I was intrigued earlier last weekend to go to the opening of Worl Wangkiny at the Perth Observatory. There, some notable Noongar artists have portrayed stories that interlink earthly beings to star formation. I said to a guide and some of the organisers that I thought they stopped short of where they might go. The stories were beautiful but the science formidable. Aboriginal astronomy was deeply sophisticated. Movements through the year in star formations determined the Noongar six season, the correct moment for harvesting particular foods, the start of particular hunting season and even a pattern on moves to secure bloodlines. This was not theology but hard guide to survival. We need to understand why they are the oldest civilisation on Earth. They were in no small part due to a broad based scientific genius.

Conclusion

In the story of CY we have a tale for this state both of inspiration and caution. We need genius. We need viability in proposals. But we cannot afford easy cynicism and cruel mockery.

To quote from A. G. Evans biography on C.Y. O'Connor:

“Many decisions of a political or social nature in history that prove to have been overwhelmingly the right ones in retrospect, and have since brought benefits to succeeding generations, were often decided upon at the time after closely fought debate when a less satisfactory, much favoured alternative might just as easily have won the day. And in such cases it has been, generally, the genius or determination of one person that has ultimately swayed opinion.”

Australians on the whole have a superb egalitarian, 'can do' nature but we do take scepticism often to excess and that can destroy the best of us.

Just as a shifting political environment and trends presented a number of challenges for O'Connor, contemporary global politics and trends challenge us today. How we meet these challenges will ultimately determine our prosperity and maybe our survival.

Continuing to champion our innovators during a time of increasing uncertainty, is of utmost importance. C.Y. is an example for us to conjure with.