

Professor John Cole
Steele Rudd & Macgregor Professorial Lecture
Tuesday 20 April 2010 at 7:30 pm
Allison Dickson Lecture Theatre
University of Southern Queensland

Saving the Future

Chancellor, Vice Chancellor, Members of the University Council, distinguished guests, graduates, ladies and gentlemen.

I am very pleased to be here this evening to deliver the Steele Rudd and Macgregor Lecture.

Growing up as the great grandson of German selectors who in the 1870s carved farms out of the scrub where Highfields today stands, I am very familiar with the world portrayed in the works of Arthur Hoey Davis, also known as Steele Rudd.

Much of his world is the place in which is sprung my heritage.

The stories of “On our Selection” are remembered mostly for the naïve plots and comic farces that translated the life struggle on the Rudd farm into the good cheer of Dad and Dave radio plays and movies.

Figuring strongly in my memory of that world of hard work and relatively meagre return was the undaunted optimism of the farmers in the face of unpredictable seasons and markets, ever rising costs, and the almost routine overdraft extensions.

Mostly, I recall the commitment of these country people to the land, their families, and to the pride they felt in a strongly egalitarian culture about working for themselves.

The price to be paid for the passionate individualism of the farm selectors and their descendants was most evident in the limited life opportunities they had.

When manual labour was still such a significant component of the family economy, there was little value placed on education, nor indeed was there much opportunity for education beyond a few years in a grade school had there been interest.

I was already a boy attending a one room primary school in the South Burnett when finally a Queensland Government introduced universal secondary schooling.

It was 1964 and everyone had to attend school until age 15 – and like a lot of things that started with changes in the 1960s, our world was never the same again.

Thankfully, there were local visionaries like Dr Alex McGregor, who refused to accept that access to education should be limited only to metropolitan Australians.

At a time when many people were just beginning to get their heads around secondary education, this one-time mayor of Toowoomba worked tirelessly to see tertiary education established here in this city and region.

He pushed for a Toowoomba based tertiary centre so that young people from the country could move on from school, secure a tertiary education, and not end up as part of the brain drain to the cities.

For communities, for families, for individuals, McGregor understood the transformative function of education – which through knowledge, to paraphrase the much quoted Chinese philosopher, Lao Tzu – enables us to let go of who we are so that we might become what we might be.

And here we are today – all of us in one way or the other on that marvellous journey that education nurtures.

“Per studia mens nova”, “through study the mind is transformed”. Where will you see that?

It is the motto on our university.

Ladies and Gentlemen

If I could offer you a picture summary of what I am going to talk about tonight, I would show you a photograph snapped back in December 1972.

I was still a farm boy then finishing my secondary schooling not far from here, just up the New England Highway at Yarraman.

The photograph was taken 14,000 miles away by a man using a hand held camera.

It was taken by the commander of Apollo 17, as his space module sped on its way to the last manned mission to the moon.

The man was Harrison Schmitt and at this point in time, he is the last man who walked on the moon.

He is also one of the more interesting people with whom I have had lunch.

Harrison Schmitt’s photo image of our world provided a compelling, humbling, and inspiring perspective of our fragile, complex, beautiful home in the dark expanse of space.

All the human problems ever made and all the human challenges ever faced, have happened there.

But so, too, all the possibilities and pathways to the future of humanity are to be found there.

The thing I value most about the privilege of being here at USQ is the opportunity it presents for me to help others in realising their personal journeys to what they might be amidst those many pathways.

Equally importantly, as the Director of the Australian Centre for Sustainable Business and Development, I have the day to day opportunity of working with USQ researchers and our external partners in building those pathways to the future.

In the process, hopefully, through the knowledge we generate we shall contribute to the saving of the future, including the future for people not yet born.

It will be my thesis tonight that the role of education in saving the future is critical, for without enabled, empowered, and educated citizens, we will fall short in understanding what is happening in our world and in devising strategies that will secure a sustainable future.

I will argue, too, that our education and research has to be focussed on the right century, it must be education addressing the demands of the 21st century, not the 20th century, and it should be education that amounts to more than a paper qualification in a life journey.

In its ethic, spirit, content, and application our education system must be proactive, broadly engaging, intellectually rigorous and relevant.

At the very least, in an era which has seen the dumbing down of much of our media communications, culture and public debate, I believe it to be incumbent on our schools and universities to lead in restoring our public capacity to make sound, well reasoned choices.

At the Australian Centre for Sustainable Business and Development our mission and approach is active and indeed our research is a means to an end, not the end in itself,

Our mission is to accelerate the adoption of sustainable development by proving the business case for sustainability.

It means we are about proving the case for change and we are about providing the tools by which things must change to ensure a sustainable future.

In a world where economics determines what is valued and wasted, our challenge specifically is to bring the ingenuity and commercial interests of business to play in making sustainability the dominant and most practical value of our culture.

It amounts to turning the world, as we know it, on its head!

We do not want for ambition in our Centre.

So what is sustainability?

Someone once said you will know it when you see it.

Let me tell you sustainability is not a product, nor is it a brand.

As a concept, sustainability means a state of continuing indefinitely.

In science there are evolutionary and biological connotations with this notion of forever.

Sustainability is not necessarily a natural state, but it is a condition of optimisation and permanence to which all natural systems instinctively aspire.

Sustainability is an end and the means to the end is something called sustainable development.

In its modern parlance, sustainability has less to do with the millions of other species on the planet and everything to do with us humans.

As a notion to be practically applied beyond the primal level, sustainability is essentially an ethic.

It is about making sure the things we really value, and which are essential to achieving decent human lives, are protected and nourished forever.

Some would say that implicit in this is an acceptance of limits - the limits to growth for example - and a guarantee of equity or fairness in decision-making and the allocation and utilisation of resources.

It means we should not expropriate from each other as the first world has done from the third world, nor should we take from our children as we have done with climatic impacts and depletion of non-renewable resources.

Ladies and gentlemen

H G Wells once said that "Human history becomes more and more a race between education and catastrophe".

Understanding and practicing sustainability is the alternative to catastrophe for humankind.

And where do we start?

Well... highly educated, informed and well skilled peoples are the keystones of an open, tolerant, capable and adaptive society.

Within the USQ community including the alumni and those yet to come to study with us, there are people who will enrich the global commons creating jobs, starting and running small enterprises, building and managing corporations and economies.

We have others among us who will care for and administer to the health and well being of people and create a better quality of life for those they tend.

Yet others will work on the land and grow food and fibre and through innovation build the basics of the low carbon economy.

Some will work as professionals in environmental protection.

To our students here tonight, particularly, let me say - you are needed in the work of saving and building the future and you can each count in making a difference for the better.

If your experience is anything like mine, in 20 years time you will be surprised just where life will have taken you.

When I graduated from UQ in 1978 with an honours degree in history I had no idea then where life would lead.

And if I did have any concept, standing here tonight is a far cry from where I thought I would be, teaching population history in an American or English university.

Over the past quarter century, paradoxically, my education as an historian has been used more to make sense of the future than of the past.

Working with engineers, scientists, business innovators, and government, I have advocated for and assisted emerging industries, and advised in fields as diverse as technology commercialization and community development.

For the past decade, I have served in government as a change agent, promoting innovation and understanding of new technologies and the role markets might play in driving the take up of sustainable practices and values.

Through it all I have had had one major goal in mind – to help people live smarter and tread more lightly upon the planet, so that we might sustain the living systems of the land, air, seas and rivers – and all the biodiversity that makes possible life as we know it.

With the arrival of our children, my personal motivation to push the cause of sustainable development has only strengthened in its passion and resolve.

It is what motivates me to come to work.

And I am resolved because deep down, like the farm folks who came before me, I am optimistic about the future and I believe in the essential goodness and capacity of people – that once they understand what is going on, once they connect to the issues, they will see the challenge, rise to the occasion and get the job done.

I say that, but admit too that such changes will not happen magically, they will require catalysts, leadership and organisation and universities should be in the forefront.

Indeed, if my presence here tonight says much about how the world is changing, also resonating is the potentially different product universities might offer.

My involvement at USQ I believe says something about the types of skills we will need to manage tomorrow's organisations and issues.

It is a theme picked up in the university's commitment to sustainability.

These are skills that are, necessarily, generalist – drawn both of the humanities as well as the sciences.

They are skills that integrate different disciplines, emphasizing a holistic rather than reductionist approach to problem-solving.

USQs investment in a research centre for sustainable business and development says something also about the state of the physical world and the changing context and role of our core institutions, whether they be businesses, companies, or for that matter governments, universities and professions.

For those of you from the Faculty of Business, in your business studies I hope you will have encountered and considered emerging concepts like the triple bottom line, corporate social responsibility, sustainable development, and corporate sustainability.

There cannot be sustainable development without business that is good for people and the planet as well as for profits.

It is why the vision of the Australian Centre for Sustainable Business and Development is: "Profitable business that is good for the planet".

The planet – the global environment – is, as a renowned economist, Herman Daly, once said the envelope in which society and the economy happen.

Indeed, the biggest question of our time and most likely of this century is how do we live sustainably and get humanity back in balance with other part of the living system that is our planet?

For universities, the corollary biggest question is how to we research and find answers and educate people to live sustainably?

As a member of the 'baby boomer' generation, I am numbered among those many millions who were born shortly after World War 2, and whose singular achievement as a generation might well be to leave our world worse off than when we inherited it from our forebears.

Our era, the second half of the 20th century, was built on the industrial economies of scale, quantum jumps in scientific and technological capacity, market globalisation and a rapacious consumption of natural resources.

If we overlook the one in six people on Earth who go to sleep each night chronically hungry, we can say all this has transformed billions of lives positively.

But it has also been an unmitigated catastrophe for much of the planet's natural systems

Indeed, with nearly two thirds of the Earth's ecosystems already seriously degraded, we can be confident the century ahead will be lived in a very different way.

Sooner or later we will have to deal fundamentally with the discipline of living within the limits of the planet's capacity to sustain life.

Even in addressing the issues of poverty and sustainability, it seems the natural environment is the one that always pays the piper.

Just last week the World Watch Institute in Washington published a report showing that each day across the world the equivalent of almost 270,000 trees is either flushed or dumped in landfills.

Roughly 10 percent of that total is attributable to toilet paper.

As sanitation improves in the Third World so increases the demand for toilet paper.

And with about 1.6 billion or one in four people on Earth having no access to electricity, the World Bank maintains that it must continue to lend money to poor countries for relatively cheap fossil fuel projects to relieve energy poverty.

Two hundred years ago Thomas Jefferson, one of the founders of the American Republic, wrote that each generation had a moral duty to pass on the world "free and unencumbered, and so on, successively, from one generation to another forever".

For our first 10,000 generations, we did not have the population and technology to make sustainability an issue and so Jefferson's injunction seemed no big deal, being more likely to attend to government debt than the physical state of the planet itself.

Some, like Jared Diamond, author of "Guns Germs and Steel", have said that our experience over 10,000 years as farmers provided some early indicators of problems to come.

But it is really in the achievements of the past 100 years, since we became serious industrialists, that we have put ourselves at the cross roads and at cross purposes in our relationship with the planet, all other living species and indeed with the future itself.

With little more than a lifetime to adjust to what has happened, we are now asking ourselves to take a very different path, think differently, value and dream differently, produce and consume differently.

And this is the rub because we humans have shown ourselves not to be truly capable of assimilating, thinking and practising at the rate of change needed to manage the pace of innovation unleashed through the technological revolution of the past century.

As organisational systems guru Stafford Beer said 30 years ago, we find ourselves unwittingly at a point where *"Acceptable ideas are competent no more and competent ideas are not yet acceptable."*

And while that is the conundrum that characterises our time, let us be under no illusion that the risks have not been known for just as long.

Way back in 1987 when many of you were not even born, the UN published its landmark report entitled "Our Common Future".

Chaired by former Norwegian Prime Minister, Dr Gro Harlem Brundtlandt, the UN Commission on Environment and Development found that if future generations were going to have at least the same opportunities and quality of life enjoyed by my generation, there would have to be changes on a global scale in the way we conducted our economies.

Only the serious students of sustainability, a small coterie of progressive governments in Europe, and some strategically well advised Fortune 500 multinational companies got the real message of the UN report and the later summit at Rio in 1992.

The real message was that sustainable development was not about some establishing green nirvana but rather it was a massive change leadership and values reorientation process within the global economic system.

Sustainable development requires of governments, businesses and communities that in the way we exploit our resources, direct and structure our investments, build

infrastructure and launch new technology, and play our politics – that these take account of children not yet born as much as meeting the needs of people right now.

All of this in the normal course of events might take generations to happen.

The only trouble was and remains, we do not have generations to make the changes – at best we have 30 to 50 years and for some issues even less time.

Indeed as American sustainability advocate, Alan AtKisson wrote a decade ago:

“Achieving sustainability does not mean slowing down our economy. It means speeding it up and directing its energy toward the redesign and redevelopment of the systems that are the cause of our dilemma”.

So far, we have been speeding in the wrong direction!

We have consumed more energy than was used in the previous 200 years and even though countries are signing up to greenhouse gas limits, in the next 20 years we humans propose to put more greenhouse gas emissions into earth’s atmosphere than the 700 billion tonnes we have put there since 1750.

There are other vital signs of deep concern.

They include rapid population growth etching closer to the seven billion mark, with one in six persons ending each day without food, and one in three without adequate sanitation and clean water.

Since the 1950s we have enjoyed a massive expansion in our technological capacity to exploit commodities.

But now the rampant consumption of the industrialized OECD countries is being compounded by the gargantuan appetite for raw materials in the emerging economies of China and India.

Taken together they promise essentially to strip the Earth of its natural resources faster than they can be replaced

We in the first world have built such a wasteful standard of living where just to support the McMansion lifestyle in suburbia, a tonne of waste is generated each day for each one of us.

Twenty power stations the size of Kogan Creek will be built across the world over the next decade just to provide power to the red dot on your TV – its call stand-by power, so you don’t have to walk to the wall and turn it on there.

If everyone who is projected to live on this planet between now and 2050 was to live like us we would need seven Earths.

And while we in the advanced economies are beginning to think about who is going to pick up the bill after the feast, the recent Copenhagen summit on climate change made one thing very clear.

The fast emerging economies of China, India and South America have just joined the feast around coffee time, and understandably they are saying, they do not intend to pay half the bill.

At this point China and India only account for about 10% of the GHG emissions in the atmosphere.

But realising their share of the economic bounty will see them account for more than half of future emissions, as well as causing further impacts almost beyond imagination.

Jungles are being devastated, fisheries exhausted, rivers dammed, waterways poisoned, and farmlands degraded.

Humanity is drawing down on the natural capital of the earth at such a rate as to threaten the quality of life of its children and all future generations.

In the process, we are polluting our air with carbon emissions that are warming the planet at a rate faster than most species will be able to adapt.

And extinction is already between 1,000 and 10,000 times greater than what we might expect without the human impacts of the past century.

The scientists are telling us that if we do not do something very serious about greenhouse gas emissions very soon, it may get to a point later in the century where it will cost a whole lot more to fix or lead to an actual "climate crisis".

Indeed, beyond 2 degrees increase in average global temperature, we can already plot enormous geophysical, economic and social impacts – like the loss of the Great Barrier Reef, diminished agricultural productivity in the Murray Darling basin, and the incursion of tropical diseases south of Rockhampton.

Beyond 5 degrees it's anyone's guess as to whether anything could be done to bring Earth's climate back into the broad balance that has supported human life.

Just last week, Professor Stefaan Simons, Professor of Chemical Engineering at University College London and Director of UCL's Centre for CO₂ Technology warned of the risks of looking for silver bullets like burying carbon emissions back in the earth.

He said the challenge of reducing greenhouse emissions was even bigger: “If we are to achieve the CO₂ emission reductions necessary to avert catastrophic climate change, we need to initiate the next industrial revolution, a transition from a low efficiency, high carbon energy system to one that is high efficiency, low carbon”.

This is all rather confronting, isn't it, but we do nothing to shape the future by putting our head in the sand.

“Nothing is inevitable so long as we are willing to contemplate what is happening”, the Canadian scholar and philosopher Marshall McLuhan once said.

Ladies and gentlemen,

Let us here at USQ play our part to create and save the future rather than stand by and be run over by it.

The changes to make sustainability happen are almost too much to ask, I believe, but for the saving grace of the sheer genius of human ingenuity and innovation.

As individuals, citizens, and consumers - our challenge is to contemplate what is actually happening in our world, acknowledge the personal responsibility we each share for doing something about it, and then each play a small part in fixing it – at work and at home.

Charles Handy, the English businessman and writer who authored *The Empty Raincoat* and *The Hungry Spirit*, said that learning after university was a process of re-qualification and extension.

For Handy, life itself is the great learning experience. And he is right.

Handy also observed that the great issues of our time would not be resolved so long as we failed to look beyond the materialist world to that which also encompassed essential values and other considerations such as the human spirit, the value of nature and so forth.

He suggests we take a closer look at ourselves and our relationship with our world.

Abraham Lincoln said the same thing when at the time of the war to preserve the Union and abolish slavery, he told Americans to “disenthrall” themselves of all the ordinary distractions of life and focus on what really mattered – the enduring principles upon which their country had been founded – notions like democracy, equality and liberty.

In disenthraling ourselves of the artefacts of modern life, we might ask ourselves what really matters.

It seems we are all too busy these days to care or be involved.

Fifteen years ago Professor Robert Putnam in a book called “Bowling Alone: America’s Declining Social Capital” warned of the decline of civic spirit and involvement and the demise of small group living – like going out bowling on Wednesday evening. And that was before the internet.

The internet is a massive technology that promises to transform human capacity to do things indeed even rise to the challenge of living sustainably – because of its unparalleled capacity to deliver connectivity and interaction on a global scale.

We are these days, it seems, what our web sites say we are. Ironically, we cannot be real for most of the world, without being virtual.

But the internet can also isolate and diminish the human experience, encouraging cultural tribalism in place of community and anonymous dispassionate disassociation instead of connectivity and citizenship.

Indeed, our capacity to process information grows exponentially, but it is not being matched by the quality of our knowledge and education.

The massive American supermarket chain, Wal-Mart, processes a million transactions an hour and has a database 167 times the size of the Library of Congress, but it is arguable whether the modern shopping mall experience has made the world a better place.

And while it took a full ten years to decode the 1 billion pairs that form the human genome back in 2003, seven years later that amount of processing can be done in just one week.

But are we any closer to understanding how to live sustainably?

Indeed in our scientific quest to find and understand the bases of life, I fear sometimes we miss the wood for the trees.

We may find the secret of human genes, but miss the value of clean air to breath or the risks to health of accumulative chemical toxicity in the environment and in our bodies.

So I ask you to imagine what it would be like to live life and create value without damaging the earth or stealing your children’s right to a world at least as good as ours.

Encouragingly, if you do imagine and think about that possibility, you will not be the first to do so.

Possibly surprisingly to those who are critics of globalisation, it is in the senior echelons of global corporations, the mainstays of the international economy where you will find greenhouse gas emissions, climate change, and corporate social responsibility being taken very seriously.

So are the major institutional investors and insurance companies that determine the cost of business capital.

Besides the millions being spent on being more efficient and consequently saving millions more – using less energy, water and materials, these companies are also taking far greater account of environmental risks that previously were discounted or externalized.

Today we are seeing glimpses of the beginning of a new international economy that will reward environmental stewardship and social responsibility.

Whether it be tradable credits for carbon emissions, transferable development rights, biodiversity stewardship payments or a host of other market instruments that are just beginning to be brought to bear – the fact is business is already showing that it will be the fastest moving sector in addressing the great challenges of sustainability.

They are proving, too, the business bottom-line benefits of corporate sustainability – higher efficiency and productivity, attraction and retention of talented highly motivated people, better risk management and reputation.

If business is beginning slowly to see its role in accelerating the adoption of sustainable development, then so too are universities.

I am delighted that just a few weeks ago USQ joined the AASHE, the Association for the Advancement of Sustainability in Higher Education

AASHE's mission is to “empower higher education to lead the sustainability transformation by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research”.

If universities and the education sector are to play their rightful roles in helping save our future and that of generations to come, we will need more than new laptops in the class room.

We will need a real revolution in education which puts sustainability front and centre in all that we do and challenges the comfortable ideas that no longer work while yielding up new ways of thinking that will provide solutions.

Most of us here have specialized in particular disciplines and we have learned largely by deductive reasoning, by pulling things apart rather mechanically to establish understanding of relationships, equilibrium and causality.

Understanding and delivering on sustainability requires expertise in systems thinking which is more instructed by what I will call biological thinking, seeing things organically as the sum of a host of inter-relationships, and as dynamic entities operating always in a systems context – the boundaries of which can be a bit blurred.

Systems' thinking focuses more on the 'environment' in which things happen than does more conventional problems solving and it tends to be more creative largely because it is broader and more openly focussed.

In many respects it runs opposite to the specialisation tendencies of modern education and research – and that is the challenge: to run a different way when we have become so good at running the way we learned in the 20th century.

A university wanting to be a serious leader in sustainability is going to employ and commission good systems thinkers and encourage multidisciplinary courses, capacities and perspectives.

Versatility and innovation are the hallmarks of tomorrow's careers.

You might conclude that the days of departmentalised knowledge are numbered and I think you would be right.

“Specialise yourself right out of a job” was the headline in today's Australian Financial Review.

Ladies and gentlemen,

Our common obligation in facing up to the challenges of our time and in framing solutions to their resolution - whether we are in government, business or in universities - is to bring the community with us through education, engagement and empowerment.

Yes, we face an array of challenges, but with understanding, dedication and innovation the future can be assured.

Yes we have to face up to climate change, sustainable living and all the other challenges of our inheritance. There is nothing to be gained by putting our heads in the sand.

Indeed we are at a point where we actually know what we have to do – but there remain the little matters of change, human resistance to change, and dealing with the vested interests which are threatened by change.

Addressing all that is a big ask, particularly at a time when millions are still living the effects of the global financial crisis – the other best example in living memory of the world and its economy running into a wall that no one seemed to see looming.

At a global level, the sustainable development challenge is immense, requiring a series of major first half century transitions identified over 20 years ago by Professor Gus Speth when he was at the World Resources Institute.

These crucial transitions start with stabilising population and go on to include transforming per capital eco-footprints particularly through technology, eliminating subsidies and market distortions that hide the real costs of products, building better governance structures and international collaborations to achieve real outcomes, and embarking on a massive education of the public so that they actually understand what is going on.

All of this is supposed to happen while we de-carbonise the economy and essentially eliminate greenhouse gas emissions in a world doubling its consumption of energy.

In this tumultuous context there are some quite fundamental, if not problematic, questions we might ask ourselves.

Are we up to the vision of sustainable life on Earth? Can we make the changes, invent the technologies, and solve the politics of sustainable development? Can we do it? Where do we look to find inspiration and reassurance?

I suggest we look no further than ourselves and the example set by our parents generation.

My parent's generation grew up in economic depression, fought and prevailed over fascism, fostered a global economy, and put a man on the moon and safely returned him to Earth.

They also saw the people of Eastern Europe tear down the Berlin Wall as fundamental human principles triumphed over tyranny and the sterility of state corporatism or communism as we called it was shown to be the sham that it always was.

They did those things unflinchingly and with simple self belief; they met the stretch targets and they did not always have the tools at hand when the challenge arose.

So if we take a leaf from our forebears we must answer yes, the fact is we have it within our capacity to see sustainable development in our life time.

We have to be as energetic as our parents and their parents but be focussed in a different orientation – and the focus must be the saving of our future through sustainable living.

By the middle of the century we can bring greenhouse gas emissions within an acceptable range; we can replenish the Earth and ensure the place is in good enough condition to well sustain the people not yet born.

These are neither aspirations nor tasks we can leave to others; these are things we must do ourselves.

In closing let me return to the Apollo moon program.

I remember Sunday 20 July 1969 (it was Monday our time) when Neil Armstrong and man first walked on the moon.

Looking out five decades from now what will the USQ students of that time point to as the “moon-step” day of this generation?

While only time will tell the answer, the steps we take to finding it will define also our university and its value in the lives of people well into the future.

To our students let me reiterate that your education is both a premise and a proposition.

Already you have shown the great promise of your lives by enrolling and electing to study, but at the end of your course you should leave here believing in your capacity to make a difference by the use of your knowledge and your ongoing further learning.

We cannot underrate the importance of learning because besides sunlight it is the only thing I can think of that is not constrained by limits in the otherwise closed system that is planet Earth.

Your self belief and optimism is most important because without it your education is not enabled nor is it ennobled.

The education that really matters in saving the future is more than the getting of a degree or a qualification.

It is the personal transformation that your education brings and your active citizenship in the global community that will do more than anything else to save our future.

Thank you.