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engaging all Australians in creating a better future...

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FUTURE NEWS

TO CONNECT, TO INFORM AND TO INSPIRE

IN THIS EDITION

Is there a creative future for Australian schools... indeed Australia?
by Dr David Warner
(page 2)

Teaching kids how computers actually do what they do
(page 4)

Book Review
Chronos: How Time Shapes Our Universe
by Etienne Klein, translated by Glenn Burney
(page 5)

Futurists in Action
The introduction of
a new performance management scheme
(page 6)

Signals in the Noise
10 Crazy Jobs That Will Exist in the Future
(page 7)

futures foundation Australia • Ross House, 247 Flinders Lane, Melbourne 3000 • Phone: 03 9029 5787

Is there a creative future for Australian schools... indeed Australia?

by Dr David Warner

Ex-principal, ELTHAM College Adjunct Professor, La Trobe University

There is little evidence that Australian schools, apart from some ICT, have moved into the 21st century. There also is little evidence that despite the decline of manufacturing and related skill sets that Australia sees the need for change. The appointment of two arch-conservatives, Dr's Donnelly and Wiltshire, to oversee an already conservative national curriculum and educational policy direction further evidences Australia's avoidance of economic and social realities.

In mid-February, the AFR published a letter I had sent them:

> There is little evidence to show that we as a country are looking at the manufacturing decline, as with the car industry, in the strategic context of education, particularly schooling.
>
> The knowledge or ideas economy demands a different school culture of innovation, creativity and risk taking to give a context to the call to lift international standards in literacy, numeracy and scientific technology. The latter are not going to suffice. Essential yes, but without creativity and innovation they will not progress Australia into the demands of the global economy. The car industry is perhaps only the tip. The reality is that without our natural resources we would potentially be an economic basket case. In the knowledge game of education we are not keeping up with Singapore, Malaysia or Hong Kong per capita. They recognised some time ago that they needed to quickly move beyond manufacture. They are now hubs for higher education, experimental schooling, design and ICT in its various forms. They will surpass us if we do not create a sense of urgency around sustainable schooling transformation.
>
> If we don't want to be a second or third tier economy with resultant living standards, we need to ensure that all our population is well educated and creative and innovative, ideas driven. This starts with both Federal and State Governments acknowledging the need and giving schools the autonomy to develop creative cultures and Principals having the courage to genuinely transform their schools.
>
> NAPLAN and OECD testing are simply tools for allowing us to gauge student learning in basic enabling skills at a point of time. Anyone with any experience of comparative education would know that comparing literacy between Australia and Shanghai is an exercise in futility. I could take 5000 students from the Melbourne suburbs of Kew, Hawthorn and Camberwell and blow Shanghai and indeed Finland out of the water, but what would that prove in terms of relevant, exciting, futuristic schooling?
>
> (AFR, Feb 20, 2014)

Daniel Pink (*A whole new mind,* Riverhead, 2005) challenges us to recognise that we have moved well beyond the industrial era and beyond the information age to the **Conceptual Age**. It is the era in which right brain thinking will create the new ideas and concepts for a new age. It does not deny the left-brain, but recognises that we need to start using a right brain to develop the concepts and create the ideas that will make the world turn round.

At a 2013 Conference, in which he came in via video-link, he related his thinking to schools. Perhaps the most challenging of his concepts, paraphrased, was:

> *Schooling is about young people and their future not your past.*

Now, if we were seriously to take this up we would have schooling transformation occurring at an urgent rate, but we don't. We have a developing Australian subject-based, silo curriculum that encompasses general capabilities. Now these General Capabilities have been around for a while and supposedly integrated into curriculum at least since the Mayer competencies of 1990. These new capabilities are:

General capabilities in the Australian Curriculum

General capabilities, a key dimension of the Australian Curriculum, are addressed explicitly in the content of the learning areas. They play a significant role in realising the goals set out in the Melbourne Declaration on Educational Goals for Young Australians (MCEETYA 2008) – that all young people in Australia should be supported to become successful learners, confident and creative individuals, and active and informed citizens.

The general capabilities encompass the knowledge, skills, behaviours and dispositions that, together with curriculum content in each learning area and the cross-curriculum priorities, will assist students to live and work successfully in the twenty-first century. The Australian Curriculum includes seven general capabilities:

Literacy

Numeracy

Information and communication technology (ICT) capability

Critical and creative thinking

Personal and social capability

Ethical understanding

Intercultural understanding.

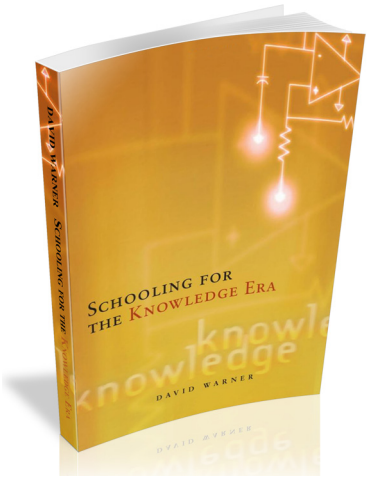
However, there is an expectation that schools and teachers will integrate these into each subject area. History tells us that this does not happen, because subjects are about content and subject oriented methodology. Schools and teachers have a strong history of simply pulling change into the ways in which they have been operating rather than transforming. Even teacher education programs at our Universities give strong credence to the subject silos! Further, teachers simply build these as 'extras' into their teaching and without the praxis relationship they have little relevance to the complexity or sophistication to how young people apply their learning to their living.

Overall, Australia is discovering that it does not have the creatively educated workforce to provide a robust non-resource sector base for its 21st century economy. Its population is schooled to traditional academic standards without the room for creativity. Therefore, its workforce will not have the confidence, optimism and resilience to be a 21st century workforce and develop a non-resource based competitive global economy. Our immediate neighbours recognize this and are directing attention to the need for an ideas based workforce.

We need Governments and educators to acknowledge that the schooling systems we have now are the products of the industrial era of the 19th and 20th centuries not the second decade of the 21st century. Just look at how young people own their technology, access to the Internet and social networks. They are cognitively and socially ready for a schooling system that works in their present and future.

What we needed with a new Australian curriculum was some 'right-brain' thinking, some risk taking, a search for creativity and innovation and an integration of problem solving and critical thinking into the design of an integrated curriculum that was about the young person and their future not the past of the curriculum makers. They didn't even attempt to consult young people, particularly senior young people until I argued for it well after the design process had started and was published! In fact some serious consultation with Sir Ken Robinson and Daniel Pink may well have helped us move forward.

The work of Lily Orland-Barak (*Learning to mentor-as-praxis, Springer 2010)* is described as leading us "...to a theory-a theory of action and interaction, of learning at the highest levels of personal and professional transformation, which we call 'mentoring'." In my talk I would like to explore this further as a model for schooling transformation. It will only be through total transformation of schooling that we will see a sustainable future for Australian young people in a complex global economy. At present Australian schooling has no future.

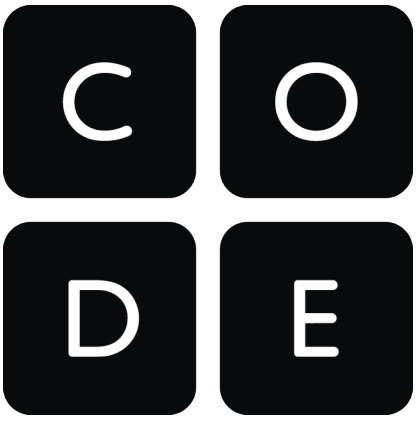


David Warner is the author of *Schooling for the Knowledge Era* published in 2006 by ACER press and will be our guest at the 29 July session of the futures forum at which his theme will be “The role of education in creating Australia’s future”.

More details of the forum can be found by logging in to our website at www.futuresfoundation.org.au

Teaching kids how computers actually do what they do

An article in the 26 April 2014 edition of *The Economist* entitled *A is for Algorithm: a global push for more computer science in classrooms is starting to bear fruit* (a copy of which is available simply by contacting the futures foundation) catalogues a number of initiatives around the world designed to help kids understand just what goes on inside a computer.



The article reports on a new initiative by an American based not-for-profit organisation called code.org. Among the initiatives of the organisation founded by twin brothers Ari and Harvi Partovi (and supported by companies such as Google, Amazon and Microsoft) is one called "An Hour of Code" aimed at rousing interest in computer programming (or coding). Anyone can experience this process by visiting the website www.code.org.

Digital technology is now so ubiquitous that many think a rounded education requires a grounding in this subject just as much as in biology, chemistry or physics. That is one reason that the pendulum is swinging back towards teaching coding. Employer's moans are another. The shortage of skilled programmers is clear from the high salaries they command. the shallower the pool of people who know the basics, the smaller the number of potential tech entrepreneurs.

COMPUTER SCIENCE Unplugged

Tim Bell of the University of Canterbury in New Zealand has developed a collection of activities called *Computer Science Unplugged* that teach programming concepts using cards, string, crayons and lots of running around. More details can be found on their website: http://csunplugged.org/ from which a free workbook can be downloaded.

The Economist describes one of the activities from this collection:

> "Let's do it again," calls a ten year old. Once more, pupils clasping printed numbers follow tangled lines marked with white tape on the floor of their school hall. When two meet, the one holding the higher number follows the line right; the other goes left. Afterwards they line up – and the numbers are in ascending order. "The idea is to show how a computer sorts data," explains their teacher, Claire Lotriet.

Among other tools, Code.org use Scratch, a simple language created by MIT's Media Lab which allows youngsters to develop computer games out of on-screen building blocks that have been compared to 'virtual lego'.

Codecademy

Perhaps the first on-line invitation to learn to code was developed by the Code Academy (http://www.codecademy.com/) which began in 2011 and has attracted significant venture capital funding in the USA.

Israel has already included computer science on their high school curriculum, and England will follow suit (in the primary school curriculum) in September this year. A small number of Victorian Schools have trialled a year 12 computer science subject (see: http://www.smh.com.au/it-pro/business-it/high-schools-to-trial-uni-computer-science-in-y12-20120719-22c99.html) and there is talk of this being extended as part of the development of an Australian national curriculum.

Book Review

Chronos: How Time Shapes Our Universe

by Etienne Klein, translated by Glenn Burney
Published by WH Allen, 2013

By Charles Brass – Chair futures foundation

Twenty or so years ago when I first became interested in futures and foresight, Richard Slaughter suggested I take an interest in time. This was not long after Stephen Hawking had written *A Brief History of Time*, but Richard suggested I pay more attention to the writing of J.T. Fraser[1] and Paul Davies[2].

He also pointed out that many of the best futurist writers did not write in English (*The Art of Conjecture* by Bertrand de Jouvenel is a seminal example). These two pieces of advice came together when I came across a 2005 translation of *Chronos* by Etienne Klein.

Klein is a physicist at the French atomic energy agency and also a professor of physics and the philosophy of science. He says he wrote this book to "expose the *tick-tock* of our watches through which time hides its true nature" (pxii). In a very readable 160 pages he compares the mathematical time of physicists with our usual 'commonsense' of time in an effort to help readers understand that: "what happens *in* time isn't the same thing as time itself" (pxiii).

Klein's first chapter looks at clocks which, after all, are where most of us initially look when we try to explain what time is. Klein suggests that while the movement of a clock's hands indicate something – but questions whether it is time. After all, when a clock stops time does not. In fact, Klein concludes: "the word *time* vaguely covers three distinct concepts – simultaneity ("He's always doing two things at the same time"), succession ("The time will come when this book will be over") and duration ("The writer didn't quite have enough time to finish his book")" (p9).

Futurists have most interest in what Klein calls: "the most stereotypical expression – the one that shatters all records of use – says that time "passes"…the succession of three moments of time (future, present and past)…"(p11).. Klein devotes many pages to looking closely at our language about time passing, critiquing analogies with rivers and concludes: "Moments pass, not time. Isn't it exactly because of time's constant presence that things never cease to pass?"(p11). "Yesterday, today, and tomorrow are equivalent moments of time in that they are at the same 'altitude. Time does not start flowing by falling (like a river). But then, what pushes the present to flow towards the future (that is, unless the future is approaching us)? (p17)

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St Augustine in the first century of the common era is first recorded as noticing the difference between what Klein calls 'physical time' and 'psychological time' when he asked: "How can I simultaneously be in the present and have enough distance to notice that time is passing? (p42)

Klein takes this further by asserting: "… the future exists only for the mind, not in and of itself; it exists because we want for it, and not because it is linked to the present or the past by necessity…"(p84).

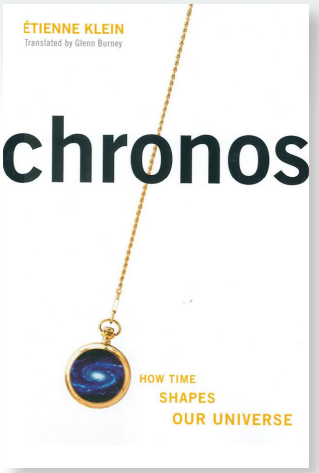
He notes that physical time is continuous, it has no duration, whereas psychological time is rhythmical and: "mixes a little of the recent past and a little of the imminent future" (p133).

He therefore places time at the centre of human consciousness, noting that: "In the eyes of a physicist, our consciousness never stops achieving the impossible, since it makes bit of the past and the future, which physical time has never united, coexist with the present moment" (p137).

Klein suggests: "*we* are the engines of time"(p86 – italics in the original) and: "time seems to be simultaneously what makes things last and what makes it that nothing lasts for ever" (p155).

We humans are, however, complex creatures. We not only are consciously aware, but we also clearly have a very active unconscious which seems to approach time quite differently. Klein quotes Sigmund Freud as saying: "the unconscious ignores time – more precisely the unconscious does not suffer from the effects of time, because it does not decline nor weaken"(p143).

Perhaps St Augustine had it right when he suggested there was only the present. However he identified three kinds of present: "a 'present of the future' which he called *expectation*; a 'present of the past' which he called *memory*; and a 'present of the present' which he called *attention*"(p138 – italics in the original).



The futures foundation maintains an extensive library of books, which are available to be borrowed. Apart from those already mentioned in this review, other books on time in the library include:

A Brief History of Time, by Stephen Hawking – Bantam, 1989

The Nature of Time, edited by Raymond Flood and Michael Lockwood – Basil Blackwell, 1989

The Death of Forever: A New Future for Human Consciousness, by Darryl Reanney - Longman Cheshire 1991

Out of Time, by James P. Hogan – Bantam Books, 1993

The Clock of the Long Now: Time and Responsibility, by Stewart Brand – Butler and Tanner, 1999

Time: From Micro-Seconds to Millennia – A Search for the Right Time, by Alexander Waugh – Headline Books, 1999

Beyond 9 to 5: Your Life in Time, by Sarah Norgate – Phoneix Books, 2006

What is Time?, by GJ Whitrow, – Thames and Hudson, 1972

The time traveller: a scientist's personal mission ot make time travel a reality, by Ronald Mallet and Bruce Henderson – Corgi Books, 2007

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1 *Time Conflict and Human Values* by J.T. Fraser – University of Illinois Press, 1999
Of Time, Passion and Knowledge – Reflections on the Strategy of Existence, by J.T. Fraser, George Braziller, 1975

2 *AboutTime - Einstein's Unfinished Revolution* by Paul Davies – Viking Penguin, 1995

FUTURISTS IN ACTION

The introduction of a new performance management scheme

The *futures foundation* was recently invited by an organisation planning to implement a new performance management scheme to outline what perspective a futurist might bring to this process.

The scheme currently in use by the organisation had been introduced some seven years previously and was considered to be working poorly. The HR team had benchmarked other companies in their industry asking them what schemes they had in place, and had redesigned their scheme and they contacted the *futures foundation* just prior to its launch.

Our initial assessment was that the benchmarking exercise they had undertaken was seriously flawed. Asking companies in similar industries about their current scheme was a very useful exercise, but very narrowly focused. They didn't ask, for example, how long the current scheme had been in use, and what it had replaced and why. They didn't ask how the schemes had been launched or how their success was being monitored (if at all).

It was too late to re-contact the companies with which they had conducted their initial benchmarking. They did, however, respond positively to the suggestion that there was value in benchmarking with different organisations – perhaps those which were of a similar size (ie number of employees) or those where the geographic dispersion of employees more closely matched their own. A small team went off to identify and make contact with such companies.

The real value in our intervention, however, was in the suggestion that there was much to be learned from inside their own organisation. What was the rationale, we asked, for implementing the current scheme? What were the perceived failings of the previous scheme, and what was the reaction of employees when the current scheme was implemented?[1]

None of the HR leadership team were in place when the current scheme was conceived and hence answering these questions required some internal research.

The organisation in question was a relatively independent subsidiary of a multi-national and research eventually located (in the overseas head office) the document which the then HR team had used to justify the introduction of the current performance management scheme. Much to the surprise of the current team, this document critiqued the then existing scheme in virtually identical language to that being used to defend the proposed change some seven years later. And even more to their surprise the design of the scheme they proposed to implement had been chosen for virtually the same reasons as the current team had chosen their new design.

The new HR team also discovered that their predecessors had commissioned a small internal survey a year after their new scheme had been implemented. It identified a number of employee concerns about the process and expressed concern about the extent to which the scheme was actually being used in practice. There was no evidence that the responses to this survey had ever been acted upon.

Eventually the client decided that there was nothing intrinsically wrong with their current performance management system and they resolved to retain it. However, they did embark on an organisation wide program of discussion and consultation designed to explain just why the system existed and what it was intended to achieve. They also resolved to commit to a bi-annual survey of their employees to help HR better understand how the system was being used and could be improved.

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1 questions of this kind emerge from the analysis of American Buddhist philosopher Ken Wilber, whose four-quadrant model is a tool often used by futurists (www.kenwilber.com)

Signals in the Noise

10 Crazy Jobs that will Exist in the Future

The Canadian Scholarship Trust Plan (CST) worked with foresight strategists to create job descriptions that will likely be available in the year 2030. With technology moving at a dizzying pace, a glimpse into the future provides some fascinating insight on our future careers, as well as those of our children.

1. Nostalgist

Nostalgists are interior designers who will be tasked with helping the wealthy elderly design spaces that reflect their favorite decades. Whether this means recreating a 1980s living room or a 1950s kitchen, nostalgists will help recreate happy memories for their clients. This career path combines the roles of therapist, historical researcher and interior designer, and an eye for historical detail is essential.

2. Telesurgeon

Telesurgery (also known as remote surgery) allows trained surgeons to operate on patients remotely using robotic arms, a master controller and a sensory system that provides feedback to its user. This is a concept that's already being practiced. Telesurgeons will specialize in performing surgeries on patients in far off locations. In addition to a degree in medicine, these surgeons will have backgrounds in robotics and telecommunication technology.

3. Rewilder

The rewilder's job will help undo the damage that humans have caused to the countryside. This means tearing down fences or ripping apart roads and replacing them with forests and natural greenery. Folks interested in wildlife management, agriculture and environmental sciences will be great fits for this career.

4. Garbage Designer

These designers will make careers out of perfecting the art of upcycling. Upcycling is a way to use trash to create new, better quality items. Garbage designers will see to it that upcycling attempts are efficient and successful, designing ways to make new items with very little waste. The requirements for this job will include a background in materials science and engineering, and a familiarity with industrial design.

Signals in the Noise

10 Crazy Jobs That Will Exist in the Future, continued

5. Simplicity Expert

Simplicity experts will find ways to help businesses streamline and simplify their day-to-day operations. Folks who excel at math, have an eye for design and a keen sense of human connections will do well in this line of work.

6. Healthcare Navigator

It can be tricky for hospital patients and their families to understand the complex hospital system. But with the help of a healthcare navigator, patients will have better access to information they need. While healthcare navigators will have answers to questions regarding procedures and paperwork, they'll also provide support for families struggling to cope with the stress of illness. Excellent navigators will have the knowledge of a healthcare specialist and the sensitivity of a social worker.

7. End of Life Therapist

As life spans increase, planning for the last phases of life will become standard practice. End of life therapists will act as guides to planning for the years before their death. This will involve being straight-forward but sensitive about ways to making dying a smoother process. A background in social work, healthcare, education and psychology will be helpful in this career.

8. Gamification Designer

Games make excellent tools for helping people of all ages to learn new skills. The gamification designer will combine game logic with everyday activities, events, services and products to make the world a more playfully challenging place. These designers may also work with doctors and therapists to create games that help people bounce back from the stress of illness. Gamifications designers will become certified in their fields and will develop a background in human motivation and play behavior. They will also learn to translate game design into real life experiences.

9. Robot Counsellor

As robots start to play even larger roles in our lives, wealthy people will own robots who act as servants or caregivers. People looking to purchase robots for their homes will work with robot counselors to determine which model is best suited to a family's particular needs. If a robot does not fit in with the family, the counsellor will be on hand to determine better options and to provide care and customer service. Successful robot counsellors will have skill sets similar to those of today's family counsellors. This means a keen understanding of social work, family counseling and sociology. Robot counsellors will also have training in sales and marketing.

10. Media Remixer

A media remixer takes the job of DJ or VJ to another level by remixing various forms of media into one cohesive new project. These remixers will bring together audio, video, images and augmented reality to create projects ranging from marketing campaigns to wedding entertainment to installation art. These remixers will likely work in a freelance capacity, and will need to be self-driven and able to juggle multiple projects at once. Highly creative and entrepreneurial types will make excellent media remixers, as knowing how to build a personal brand will be key to their success.

the full article can be found here:

http://mashable.com/2014/04/28/jobs-of-the-future/#:eyJzIjoiZiIsImki0iJfZnVjYjI1Y3Zyd2JhM2w5Z3YyaHI5XyJ9

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