

The 2012 Newman Public Lecture at Mannix College

Universities in 2025: What Newman Got Right and What He Got Wrong

Professor Ed Byrne AO

Vice-Chancellor and President, Monash University



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Professor Ed Byrne AO

DSc, MD, MBA, FRACP, FRCPE, FRCP (Lond)

Professor Byrne has had an active career in clinical neurology and basic neurological research. He received his MBBS with first class honours from the University of Tasmania in 1974 and moved to Adelaide the following year, becoming Neurology Registrar in 1977. During the years 1980 – 1982, he was the Muscular Dystrophy Research Fellow at Queen Square in London. In 1983, he returned to Australia as the Director of Neurology at St Vincent's Hospital Melbourne and from 1992 was Professor/Director.

Ed was awarded the degree of Doctor of Science from the University of Melbourne in 1995. He was the Founding Director of the Melbourne Neuromuscular Research Institute and the Founding Director of the Centre for Neuroscience and Professor of Experimental Neurology at the University of Melbourne. As Director of the Centre for Neuroscience, he played a major role in driving the establishment of Neurosciences Victoria and Neurosciences Australia. He is a board member of BUPA Pty and Cochlear Pty Ltd and immediate past Editor-in-Chief of the *Internal Medicine Journal*.

He is a member of the Neuromuscular Steering Group of the World Federation of Neurology. He was Secretary General and Chair of the program committee of the 9th International Neuromuscular Congress. He has served as a Governor of BHP Billiton Charitable Trustees and Board Member of Baker Heart Research Institute, Prince Henry's Institute of Medical Science, McFarlane Burnet Centre for Medical Research, Monash Institute of Medical Research and Southern Health. He was awarded the Queen's Square prize for Neurological Research (1982), the Bethlehem Griffiths Research Medal (2003) and the Sir Louis Pyke Award for contribution to Multiple Sclerosis (2004). He was awarded an Officer of the Order of Australia in the 2006 Australia Day Honours List. He was awarded Alumnus of the Year at the University of Tasmania in 2010. Professor Byrne was Dean of Medicine, Nursing and Health Sciences at Monash University then Executive Dean of Biomedicine, University College London and Head of the Royal Free University College Medical School and Vice Provost at University College London. He commenced at Monash University as Vice-Chancellor and President on 6 July 2009.

Newman's life and times, and what he got right

Much has been written about Blessed John Henry Newman.

In his time he was both a significant thinker and a cultural icon. He symbolised a certain type of Englishness at the high noon of empire.

He had some of the attributes of a country parson admixed with prescient traces of Fabian socialism. He was a man with a deep morality evidenced at all stages of his religious journey.

Above all he was one of a species only seen in its fully evolved form in that country and at that time: he was the quintessential English eccentric, of the kind the English love. Perhaps that is why they cared about what he thought and he had such importance in intellectual leadership through much of Queen Victoria's reign.

He was also something of a polymath, a generalist in the most successful sense, something which may well have influenced his views on education. He was a cleric, a scholar, an administrator and a novelist. He was also a poet of such skill that he moved no lesser an authority than James Joyce to remark that "nobody has ever written English prose that can be compared with that of a tiresome footling little Anglican parson who afterwards became a prince of the only true church".¹

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Such a combination, more common in Victorian times, is rarely found in one person today. Although I should mention that my collection of poetry, 'Poems from the City', is now available from the University Bookshop for the very reasonable price of just \$24.99. It moved no lesser an authority than my wife to remark that "bits of it are quite good."

Newman lived in a land where dark satanic mills sat side by side with picturesque villages. A class system with fox-hunting country squires and rising merchant princes straddled a land that was largely happy – unless you had the misfortune to live in the Dickensian murk of The Gorbals or Spitalfields. Relentless economic growth followed over the rest of the century as the wealth of half the world came to London. Britain was for a time the centre of the world, the heart of an empire on which the sun never set.

¹ Ellmann, R (1982), *James Joyce*. Oxford: Oxford University Press. p. 40.

Serious intellectual life was confined to the Oxbridge colleges and a handful of Scottish universities, yet many people had a broad smattering of knowledge. There was less to know than there is now, and the idea of specialised education was in its infancy. In the 1830s there were only a handful of scientists in the kingdom, in the main wealthy eccentrics.

This was accompanied by an intellectual smugness that was a central characteristic of the imperial mentality. Great discoveries were made. The northern European enlightenment had left a deep belief in reason and the centrality of humanity which the educated largely aligned with.

Newton had opened doors to understanding beyond his mathematics, and the great equations of Clerk Maxwell lead Lord Kelvin to famously declaim that all the great questions had been answered. In fact, many of the great questions had yet to be asked.

But that was the mindset of Victorian England and one cannot grapple with Newman without understanding it. It was a world of quite astonishing self confidence based on a strong belief in God and in humanity. Perhaps sadly, our belief in both is now more qualified.

This is the world of which Newman was a child. It would be unfair to pluck him from that world and judge him by the standards of ours.

The title of this lecture is therefore very much tongue in cheek. It is no more sensible to ask what Newman got right and wrong about higher education than it is to bring Newton to book for his poor grasp of quantum physics.

Nevertheless, there is a real question. It is useful to ask what of Newman has flourished and what has faded. The exercise casts a revealing light upon higher education today.

If we are to answer the question in good faith, we must look at the whole man. All too often an analysis is based on one or two learned contributions, usually Newman's *The Idea of a University* or the Dublin lectures, and little effort is made to contextualise. I suspect that this is material for several PhDs and some may have already been written! I apologise in advance for my amateur efforts, which will barely scratch the surface.

He was born in to a solid middle-class family, with a strong, non-conformist faith. The family was wealthy enough to send Newman to Oxford.

He was a strong student activist, not around radical politics, as we might expect today, but around morality and the power of belief in empowering young people's lives. Although a brilliant student, he became emotionally exhausted before finals and graduated with a third.

He was attracted to Christianity from his earliest years. With a handful of friends he developed the Oxford Movement, initially focused on a strengthening of Anglican faith.

It is no small thing, having made one's mark advancing a particular view, to then abandon it. It takes integrity and courage. Yet when his research led him towards Catholicism, he followed it.

4 He never rose above the rank of simple priest until almost the end of a long life, when, to his delight, a new pope, Leo XIII, raised him to the College of Cardinals, perhaps against the wishes of the English hierarchy. He never sought acclaim and perhaps that quiet Englishness of a life well lived and a clear and considerate moral philosophy espoused is what endeared him to the people of at least two countries.

He gives the impression of being a shy man, more comfortable in the solitary world of the thinker. Most of his adult life was spent in the confines of the religious community he founded, the Birmingham Oratory. Yet he was clearly animated by welfare in the broadest sense, a passion that obliged him to make a number of effective forays in to the world. At the Oratory, part of his mission was to care for the destitute and homeless. Today, it is one of the finest schools in England. And when called to assist the development of a new university in Ireland as a place where Catholics could study, he responded.

Clearly he believed in opening up new educational opportunities.

What do we learn from his life then? Mainly this: he valued public service, strong morality and self preparation to live the best life possible. This is as true today as in his time when the world faces even greater challenges. It is his main lesson and he got it right.

What Newman got wrong

Those are the ticks. What then of the crosses?

There are three things that I believe he got wrong, although that may be too harsh a way in which to describe them. We could more kindly say there are three fundamental beliefs Newman had about higher education that have not held true.

He believed that a university existed to pass on knowledge, not to add to it. His passion was always for the quality of the student experience and intellectual development of young minds, including in the moral sphere. He felt that there was no reason to believe that the traits that made for excellence as a researcher would necessarily reside in the same person as those that made for excellence as a teacher.

On its face, that seems reasonable. After all, great players don't always make great managers. As a player, the English footballer Bobby Charlton represented his country for 12 years, appeared 106 times, scored 49 goals and, famously, led England to World Cup glory. As a manager, he lasted just two seasons at a club called Preston North End. That team was neither famous nor glorious.

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On this view, the old saying needs a little tweak: those who can do cannot necessarily teach.

In the Oxford of Newman's time, scholars were not judged on new knowledge but on their mastery of and ability to teach the old. His belief system was based on faith-driven absolute truths and a conviction that human reason was very close to an unravelling of the final truths of the physical world. It followed therefore that most effort should go into ensuring extant knowledge was understood.

The alternative model was still in its infancy when Newman's career was beginning. Von Humboldt's idea of a university as a centre of research, of the freedom to pursue knowledge wherever it takes you, first found institutional expression at the University of Berlin, founded in 1810. But arguably it did not become the orthodoxy until 1876, when the founding of Johns Hopkins in the US functioned as a tipping point.²

² Cole, J R (2009), *The Great American University*, PublicAffairs, New York, p. 17.

Today, every single world-leading university combines research and teaching and excels at both. And rightly so. It is only by offering the opportunity to pursue a career where one can expand the knowledge base that we can bring in outstanding role models and educators who would otherwise be lost to academia. It is a concept at the heart of modern academic communities.

Knowledge moves forward much faster today than it did in Newman's time. If, as a student, you want to stay on its leading edge, there is no substitute for being close to the action.

In addition to believing firmly that Universities were for teaching, Newman held equally firm views about what they ought to teach. He was an articulate and forceful advocate for a liberal education.

The notion of a liberal education is a slippery one. Newman endorsed the definition proffered by John Davison, an earlier champion of a liberal education: it ought to contain "religion (in its evidences and interpretation), ethics, history, eloquence, poetry, theories of general speculation, the fine arts and works of wit."³

6 A rough translation to the 21st century would be an education that seeks to instil a general knowledge base of the history of humanity and the evolution of human thought, as well as a working general knowledge of science and literature, all of which taken together allow a concept of general education.

The thinking is that an acquaintance with a sufficiently broad range of topics equips a student with a selection of critical tools that they can apply to a correspondingly broad range of situations. Not only does this make them a better-rounded person, it improves their ability to pursue their chosen profession. To Newman, a liberal education develops a student's critical faculties, "it prepares him to fill any post with credit and master any subject with facility."

Most of us accept this as worthy today, but difficulties arise.

Higher education is a high stakes game. Human lives are short. The productive part of them is even shorter. If one is to invest years of one's life in general education, it must show a better return than the equivalent time spent on specialisation. For increasing numbers of today's students, it will not. Not only is a general education less valuable than it used to be, a specialist education is more demanding.

³ Newman, J H (2009), *The Idea of a University*, Ashfield Press, Dublin, p. 175.

The reason, primarily, is volume.

In Newman's day, it was possible to acquire a broad grounding that covered most knowledge in literature, the classics and the natural sciences. This has been impossible for many generations, and it gets ever more difficult.

These days, one can only hope to get across a tiny proportion of the accumulated knowledge of the human race. I would argue that a cohesive body of liberal knowledge that can be covered in even the most intense undergraduate course is now very difficult to define. One can no longer reasonably restrict expectations to an understanding of Victorian England and its history, knowledge of a few classical texts and the rudiments of natural philosophy.

It's not just the volume of the knowledge. How we think about that knowledge has changed. To Newman, a complete understanding of the workings of the universe must have seemed to be just over the next hill.

The intellectual world that Newman inhabited was different not just in what was known, but in how it was thought about. To his mind – and those of his contemporaries – the universe fits together in an orderly, balanced way:

"The sciences", he writes, "correct, complete and balance each other...To give undue prominence to one is to be unjust to another; to neglect or supersede these is to divert them from their proper object. It is to unsettle the boundary lines between science and science, to disturb their action, to destroy the harmony that binds them together."⁴

"Balance", "harmony", a "proper object" – these are terms one would use to describe a symphony, a painting or a poem. If that is how you view the world, as logical, orderly and constructed, then it's understandable that breadth of knowledge seems paramount. In such a world, one can confidently expect disciplines to echo each other, like themes in a concerto, or the fire and ice motif in the novel *Jane Eyre*. A truth revealed by the study of epic poetry might find a cousin in physics. A pattern in theology might be replicated in biology.

⁴ Ibid, p. 100.

But I would query how well that fits with the world today, a world of wave-particle duality and dark matter, a world where each new discovery throws up fresh questions, where the certainty of central planning, be it expressed in empire-building or divine creation, has been deposed by the cacophony of self-determination and the capriciousness of evolution.

In such a world, to draw general lessons from one discipline and apply them to another seems dangerous.

And as I said earlier, the problem is not just that the utility of a general education has diminished. It is that the demands of a specialist education have increased.

The burden of knowledge, and the cost

8 In any given field, there is simply much more to learn before one can make a useful contribution. The frontier of human knowledge is being pushed back ever further, which means it takes longer and longer for a student to get there. Of course, even Newton had to stand upon the shoulders of giants. But we have a lot more clambering to do than he did.

If I can refer to my own academic career, when I studied medicine it was possible for a reasonably bright student to be across almost the entire scientific basis not only of a single discipline but of the whole of medicine.

When I trained as a neurologist it was possible for a competent clinician to have good expertise in all of the fields of neurology. Years later, when my career came to an end, it was an effort to be completely across even one sub-field such as the neuromuscular area.

I started my research career with broad interests, and became more and more focussed on one or two areas and conditions. That focus enabled me and the people I worked with to make real contributions in advancing knowledge. At the same time, we knew that many hundreds of laboratories around the world were undertaking similar activities around other important questions.

It was difficult enough to be completely across the themes relating to our own areas of research, much less the totality of even clinical neuroscience.

Alas, like it or not, a high degree of specialisation is necessary in all areas of complex knowledge, although there is no doubt that strong broad intellectual strengths and lateral thinking will always have a major role. The world is increasingly competitive. The contributions of major generalists in thinking, while not lost, are much less in evidence than they have been in the past.

The increasing burden of knowledge is evident across most fields.

You can see it most clearly at the top end. Over the course of the 20th century, the average age of a Nobel Prize winner has increased by eight years. There are markedly fewer people producing ground-breaking work in their twenties and thirties, and this decline hasn't been offset by increased output at the other end of their working lives.⁵

The opportunity costs of time spent in education, then, appear to be significant. It is possible that four years spent studying Aristotle's homunculus, the poems of William Carlos Williams or the philosophy of Robert Nozick will make a better string physicist. But it is doubtful whether they will merit the time spent on them.

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And then there are the financial costs.

Higher education costs money, both for the student and for government. If it becomes too expensive then people from lower socio-economic backgrounds will be discouraged from attending university. That undermines one of the purposes for which many universities – including, emphatically, Monash – were founded: to promote social equity.

That would not just be a problem for those students. It would be a problem for the professions they would otherwise have entered, because it shrinks – or, more accurately, shallows – the available talent pool. It is anti-meritocratic.

None of this is to deny the merit of a general education. A basic grasp of history, geography, English and the like – what the educator E D Hirsch called 'Cultural Literacy' – is vital to functioning in society.⁶

⁵ Jones, B F, *Age and Great Invention*, Review of Economics and Statistics, February 2010, Vol. 92, No.1: 1–14.

⁶ Hirsch, E D (1987), *Cultural Literacy: What Every American Needs to Know*. Boston: Houghton Mifflin.

But everyone needs that basic knowledge – not just those who choose to go to university.

That suggests the appropriate place in which to deliver it is the school system. We recognise a need for adequate grounding in the sciences in the twelve years of schooling but have placed a lesser emphasis on a good grounding in history and the humanities - especially knowledge of countries and cultures beyond our shores. Clearly this is as crucial, if not more so, to acquire the education to support responsible citizenship than a sound knowledge of mathematics.

It is not the role of universities to remedy weak schooling.

Those are the first two places where I part ways with Newman: the research/teaching issue and his preference for a liberal education.

The third head involves taking a step back and asking, what is the ultimate purpose of universities. What exactly are we here for?

A university of the world

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For Newman, the answer was admirably simple: to mould strong, influential Catholics. “When the Church founds a university,” he writes, “she is not cherishing talent, genius or knowledge for their own sake, but for the sake of her children, with a view to their spiritual welfare and their religious influence and usefulness”.⁷

For universities today, the picture is much more complex. We have duties to our students, their parents, our staff, the communities in which we operate, state and national governments here and overseas, regulators, private sector partners and the bodies that fund our research, alongside a duty to the world *in rem*, plus an overarching imperative to add to the sum of human knowledge.

Since the Second World War, universities have become drivers of economic wealth for nations. America’s great research universities drive innovation in its economy. Stanford and MIT alone have generated more wealth than most advanced nations. Higher education is one of Australia’s largest exports. For many years it was the largest export of Victoria.

⁷ Newman, J H (2009), pp. xi-xii.

But all this is secondary. (Well, technically, it's all tertiary).

At Monash, we are very clear about the fact that our students come first. We have a constantly evolving understanding of what they should be taught and how. We aim for them to leave Monash both academically excellent and well-rounded contributors to the world in which they live, inspired to view learning as a lifelong process.

That's a more complicated proposition than it sounds. Young people entering universities today are likely to have several careers before they retire in their seventies with another thirty years of life remaining.

They already live in an age where technology in their lifetime has radically altered the world in a way not seen since the invention of the printing press. Electronic storage of vast amounts of knowledge, available to all on the Internet and now the cloud, free course content from the world's greatest universities, hand held devices that make access to information straightforward wherever you are, new forms of direct interaction with others and of feedback and many more to come.

It's worth pausing to reflect just how quickly this has all happened. Thirty years ago, we considered faxes a brave new world of sophisticated communications. Today most of you probably consider high speed Internet to be roughly as miraculous as a toaster.

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And there is no reason to suppose that the march of innovation will slow.

It is seriously asked if the type of physical community of students and staff like the Monash of today will survive the next quarter century much less the next century in its current form. That is an easy question to answer: it will not. I suspect it will change in more subtle ways than the proponents of virtual universities in the cloud anticipate. Campuses are likely to stay as homes for research scholars, places of social interaction and personal contact between student and teacher and a place for young people to prepare for life.

The world is changing politically as well as technologically. The domination of Europe and its North American offspring is already a thing of the past. Asia is predicted to add 2.5 billion people to the world's middle classes in the next 20 years.⁸ The change of mindset needed

⁸ Drysdale, P (2011), South Asia and Asia's middle-class future, East Asia Forum, <http://www.eastasiaforum.org/2011/11/28/south-asia-and-asias-middle-class-future>. Accessed 16 July 2012.

in Australia to adapt to the Asian century is only just beginning and our universities have a major role in increasing knowledge in our country to aid this pivotal transition.

Students will graduate expecting to work in Shanghai as much as Melbourne. They will need to understand the culture and history of our major neighbours as well as they understand western traditions.

In research the needs are great and time is short. To achieve a sustainable future for our planet with nine billion people living in reasonable affluence and health will require major advances around all of the world's grand challenges. The contribution to be made to this by universities which have broad disciplinary expertise and an increasing aptitude in developing cross disciplinary teams will be very important

So when we say that, at Monash, students come first, this is the world for which an education at this institution aims to equip you.

That is why we have defined and are introducing a new education plan aimed at incorporating the best pedagogies with state-of-the-art technologies. We are moving to blended models, where on-campus education occurs with the support of online learning and analytics, so you can track your own progress.

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It is why we have developed and are implementing a new research plan focused on the grand challenges our world faces.

It is why we are moving towards greater differentiation between our campuses, so each can better serve the needs of its community.

It is why our educational proposition explicitly recognises the centrality of a moral compass, incorporating notions of public service and good citizenship.

It is the motivation behind our partnership with Warwick University in the UK, the first deep partnership between two great international universities on different continents. The partnership will bring an exciting range of educational and research initiatives. Together we will meet a global demand for new ideas in fields like sustainable chemistry, cultural connectivity, tropical medicine, advanced materials, behavioural economics, business and social policy. Students will have ready access to joint degrees with joint testamurs and the

opportunity to do the same degree in the UK, Australia or in both countries.

It is also behind our partnership with Southeast University in China. China is now Australia's most important neighbour in both overall trade and international student education. In the years ahead, the importance of our intellectual and technology links with China will become increasingly to the fore as the resource boom fades.

With the recent announcement by the central government in China of a licence to Monash University and Southeast University in Nanjing to run a joint graduate school in Suzhou, we are developing major transnational links of a new order. This school is the first graduate school with an international university to receive a licence and only the third foreign university of any type to be licensed in China. To be clear: this means we are not simply an Australian university operating in China, but a fully-fledged part of the Chinese university system, with all of the research and educational possibilities that come with it.

A custom-designed facility in the most exciting precinct in China will house the school and an affiliated research institute. It is a Chinese campus supported by the central and provincial government and will enable Monash to lead the way in building bridges not just in education but in research, industry links and cross-cultural understanding.

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I have visited China many times as this project has developed and have been amazed and at times dumbfounded by the pace of development. I find that those who decry this have not fully seen it. One or two visits to the Suzhou industry precinct should be *de rigueur* for every Australian PM and foreign minister! I believe this development together with our new joint academy with IITB in Mumbai are the most pivotal steps made by any Australian university in a full intellectual partnership with the giant economies of Asia.

Newman for Monash today

The Monash I have just described is a long way from the Catholic University of Ireland, circa 1851. Yet although the ways in which they are applied have changed, the underlying principles are much

the same. The centrality of the student experience and the focus on equipping young people for life is still fundamental. These, of course, are still highly relevant issues. They are as pertinent in this wonderful college, or for a full-time student working twenty hours a week behind an espresso machine, as they were in Newman's time

Newman's advocacy of a liberal education was born of a belief that the cultivation of the mind was the highest calling. He considered it a worthy object for its own sake. So do we. But that object suggests a different course of action today. Curious minds are not content to paddle in the shallows when there are depths to be explored.

Newman regarded education as paramount. So do we. But we also recognise that the best teaching is indivisible from the deep knowledge that research creates.

Finally, Newman considered the ultimate goal of his university to be the strengthening of the Catholic Church. There's no getting around the fact that the aims of most modern universities – Monash amongst them - are very different.

14 But Newman was working in a very different context – one where Catholics had been systematically excluded from both higher education and positions of influence in wider society. In those circumstances, the best way for him to reach his goal was to ensure his students were prepared for the challenges of life and ready to make a full contribution to their profession and their society. That doesn't sound a million miles away from the Monash of today.

In sum, we can admire John Henry Newman as a significant historical figure in the development of the modern university and as a great and good man.

We can also view him as a reminder that the idea of a university is not carved in stone, that it both shapes and is shaped by the society it serves.

If that is the case, then there is an imperative not to stand still, but to keep evolving, to keep charting new territory.

As the signs on our doors say, *Ancora Imparo*.

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Mannix College
Wellington Road
Monash University
Victoria 3800
Australia

www.mannix.monash.edu

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