

Recollections of ABHS - John Reynolds

It was a great pleasure to be invited back to my old school, into that wonderful hall that never seems to look any older, to say a few words students and staff. The following is a rough transcript of my speech.

I graduated from ABHS in 1974 after spending my six years of high school there, but my connection with the school is both newer and older than that. My father Ellis spent many years at the school from its earliest days, becoming maths master and then Deputy. And my son Angus is now a Prefect in Year 12, carrying the baton for a third generation. Although I've moved around the state a number of times I love this area and was very happy to move back some years ago, and renew my association with the school.

Looking back on my high school years I was incredibly lucky. My teachers were outstanding, with very few exceptions. And I made some great lifelong friends through school - but more of that later.

I was also lucky because by 3rd or 4th Year (in the old money) I had already developed a pretty clear idea of what I wanted to do as a career - something in Physics or Maths - which gave me a bit of motivation. This was in no small part thanks to my teachers. So after 1974 I enrolled for a Science Degree at Sydney University, and while having a great time there, discovered a love for radio astronomy. This combined my interest in maths, physics, astronomy and electronics - a perfect fit! It also introduced me for the first time to digital computers, which back in those days had been miniaturized to about the size of a large wardrobe.

In my professional career I've been lucky to work at some great radio telescopes and to work with some really clever and inspiring people. It all began at the Mills Cross telescope, in a freezing frost hollow near Bungendore. This groundbreaking telescope was the brainchild of Professor Bernard (Bernie) Mills, one of the founding fathers of Australian radio astronomy and an international legend in the profession. He was a modest man of great intelligence and vision. As a great mentor he didn't talk a lot, but it always paid to listen!

I worked for several years as resident astronomer at the Canberra Deep Space Tracking Station (CDSCC), more commonly known simply as Tidbinbilla. This is where the many of the stunning images you've seen recently of Pluto and Mars are received.

In 1990 I joined CSIRO, that wonderful multi-disciplinary research organisation of the kind that's getting very rare around the world. CSIRO has come up with all sorts of exciting stuff in different fields- from the plastic banknote to Wi-Fi.

For ten years I was Officer-in-Charge of the iconic Parkes radio telescope, which has been described as the greatest scientific instrument ever built in Australia. And I had the most marvellous time there. We tracked the faint signal of the tiny space probe "Huygens" as it dropped by parachute onto the surface of Titan, the largest moon in the solar system, giving us measurements of the wind speed on this remote icy world. It really is a thrill to pick up a signal about as powerful as a desk lamp, but so far away it takes an hour for the signal to

arrive. One of our astronomers, like a latter day Galileo, found an entire new spiral arm of our own Milky Way galaxy. And we discovered something called a double pulsar, which has provided the best confirmation yet of Einstein's theory of Gravity. You couldn't ask for a more exciting workplace.

Since 2009 I've been working on a revolutionary new radio telescope, deep in remote Western Australia, called ASKAP, the Australian SKA Pathfinder. The remote location is to escape increasing radio interference from the same new technology that made radio astronomy possible in the first place. It's great to have T20 cricket streamed to your cell phone but the downside is that it's making radio astronomy more challenging each year.

So I've been remarkably fortunate to have spent my career doing something I love, and being paid for it. I used to feel a little guilty about this, or at least a little embarrassed. People would ask "who pays for this?" and I've have to say, "er, well you do, if you pay taxes". But science and research are not a cost - they are an investment. They are a necessity, not a luxury. Just a few months ago the Australian Academy of Science published a study that found that physics, maths and biological sciences contribute to a quarter of all Australian economic activity. Further, it found that over the last 20-30 years scientific research has underpinned \$330 billion of Australina economic growth. The leader of the CSIRO Wi-Fi team, John O'Sullivan, was a radio astronomer - a classic but very recent example of pure research leading to life-changing practical applications.

So science is an investment, and the investment starts at school. That's why it's so important to have a properly-funded, universal public education system of a high standard, accessible to everyone. Schools just like Asquith Boys'.

I said earlier that I was lucky at school - and lucky to attend ABHS. One of the great qualities of the school then and now was the range of social backgrounds, which must have something to do with the large catchment area. In my era we had boys from the North Shore to Moonee Moonee. And then there were the Galston boys, winding their way up the gorge by bus every day, and then down again. The bus seemed to break down or get stuck quite often, which may account for their laid-back demeanour as a group. "Sleepy Walton", was one such character who springs to mind. There's no doubt I was at the "nerdy" end of the spectrum in those days. I used to do maths problems at home for fun. Not everyone was impressed. One of my peers used to thump me on the shoulder for being a smartarse, every time I passed him the corridor. Mick was a bit of an exception, but a memorable character in a rich and diverse school experience - far richer, I've often reflected, than spending six years hot-housed in school full of like-minded nerds. I am not a fan of the selective high school system.

As a nervous first year, the ABHS seniors of my era demonstrated strong and mature leadership, setting high standards of behaviour, but also independence of thought, which was passed from one year to the next. I remember vividly walking between classes early in my first year when a classmate threw a segment of mandarin at me, which I managed to catch and throw back, but not accurately. Instead it hit a bigger, older boy - a towering figure I recognized with horror as the School Captain, also Captain of the First XI and probably First XV as well. Time slowed to a crawl as this perfectly-proportioned athlete examined with annoyance the large orange splodge on his beautiful white shirt, while striding

ever closer to me. In my own mind I was already in the toilet block, laundering my underwear. But instead of beating me to a pulp he simply gripped my shoulder and told me in no uncertain terms not to repeat such an act. And I didn't. At the time this seemed like an escape worthy of Houdini, but later I realized this was the action of a mature young man, who was comfortable enough in his own skin not to have to defend his honour and position with a public display of force. It is just wonderful to see in the current ABHS Prefect group how well these fine traditions have been maintained.

I made some great friendships at ABHS which have lasted a lifetime. I went even further and married an Asquith Girl, whom I met through a semi-formal dance in this very hall.

But above all I was lucky with my teachers. I had outstanding teachers in every subject, across the board. At an Open Day at the Parkes telescope in 2007 we had hundreds of people queuing to get a tour inside the telescope when my old science teacher Euan Simpson introduced himself, wondering if I remembered him. It was a magical moment to assure him yes I certainly did, and to thank him for really propelling me into a science career through his wonderfully lucid teaching and memorable laboratory demonstrations, like blowing the lid off an ice cream tin. I never told him this at the time, nor told any of my other teachers, simply because I didn't appreciate till much later how capable and dedicated they actually were.

One of my sons once told me "I don't see why I need to go to school now - I've learned everything I need". This was going into primary Year 3. He'd learned to read and write and presumably thought he could Google the rest. But Google is no substitute for good teachers. For one thing, you don't know what you don't know - and this may be a lot more than you think! The great thing about school is you get to do stuff you may never do again. Poetry, Shakespeare, reading music, using a lathe or an anvil - I was ignorant of all these pleasures until good Asquith teachers made them interesting and fun. It's so important to seize these opportunities at school - you might never get around to it later.

So I had a wonderful experience at ABHS, despite the occasional thumps on the arm from Mick of Berowra, God love him. To be fair, I think he also taught many of us the lyrics to The Good Ship Venus.

If you look about the world today it's obvious we live in a land of great opportunity, and moreover in a Golden Age of opportunity - opportunity and challenge. Make the most of it boys. Or in the words of Woody Allen;

It is clear the future holds great opportunities. It also holds pitfalls. The trick will be to avoid the pitfalls, seize the opportunities, and get back home by six o'clock.

Footnote

I'd like to thank Terry Griffiths and Ronelle Laffer for the opportunity to address the School and to present achievement awards to the 2015 Year

12 Group. Many thanks also to Chris Kent for organising it. It was a pleasure to talk to Principal Griffiths, Deputy Andrew Skehan and several other teachers at the morning tea held after the event, and to discuss some of the issues confronting the public education system.

I'd also like to thanks Chris Yates for inviting me into his Year 12 science class to chat with the students for half an hour or so, and do my best to answer some excellent questions about science and careers in science.

John Reynolds

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