

## 2017 CCD Annual Workshop Occasional Address

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I'd like to start off by thanking Stephen for inviting me to the CCD workshop and for asking me to give the occasional address this evening. It is a fabulous location and the schedule looks fascinating. I am really looking forward to learning more about the truly outstanding work that the CCD has been doing over the last few years and of course sampling some of the excellent local wines!

I am a research scientist principally, but about 10 years ago I made the mistake of getting my hair cut, having a shave and buying a shirt and tie – evidently that is all that it takes – I have been in University management ever since! But fundamentally my passion, and the reason that I took leadership roles in academia, is to support research excellence and the training and education of the next generation. I feel a little spoilt over the last week – I've just got back from Psychonomics in Vancouver, one of the most beautiful cities in the world (not quite Sydney but pretty close!) and here I am a couple of days later in the Hunter valley about to enjoy listening to some of the most cutting edge cognitive science research in Australia – it doesn't get much better than that!

I have terrible habit of agreeing to do things without really putting much thought into what I have agreed to do. So, of course when Stephen asked me to give an occasional address this evening I didn't hesitate to say yes!. The problem is, I have no idea what an occasional address is! I have never given one before – perhaps that's why its referred to as occasional! The closest I have come recently is the speech I gave at my Daughter Sophie's wedding in July this year. Now, I have to say, it was quite tempting to just rehash the father of the bride speech but I didn't think you would appreciate me sobbing uncontrollably on an occasion such as this!

So what to do? Well, I thought about talking about corporate stuff, Macquarie University, the role of the Faculty in supporting fantastic research initiatives, Macquarie Park Innovation District, MQ Health, Hearing, Centres of Excellence, industry partners etc.

Well, just to put your minds at rest, I'm not going to do this (I can almost hear the sigh of relief!). I also thought about the long, proud history of Macquarie University in leading centres of excellence in cognitive science....and whilst it goes without saying, it is extraordinary that Macquarie has an uninterrupted record of 17 years of continuous funding for research in cognition– an unrivalled record internationally!

I could talk about legacy, about what has been achieved – the fantastic discoveries, the international scientific contribution, the broad collaborations across Australia and overseas. Well I'm not going to do that either!

When people talk about legacy, it too often involves looking back at what has been achieved, what contribution have been made – the papers published, the breakthroughs, the foundations that have been laid – whilst this has all been amazing, I think the real legacy of the CCD is not what has already been achieved, but what will be achieved long into the future as a result of the work that has been done. The most important and powerful legacy is the impact that involvement in the CCD will have on the next generation of researchers, research students, research fellows and post docs, who have had the opportunity of building their career as part of this incredible initiative – and this applies to so many of you sitting here in this room today. So, it is your future contributions, contributions that we may not be able to predict or envisage today, that will be the real legacy of the CCD – your achievements over the next 10 or 20 years that will be truly transformative to the discipline in ways we cannot imagine.

So, what I'm going to talk about this evening is directed to you – the next generation of cognitive science researchers. It is based on personal insights built up over a 27-year career in academia, insights that are very personal and honest that might (or might not) help you in your journey.

Tonight, I will share with you some of the lessons I've learnt along the way. So, move over, Tim Minchin, what I want to share with you this evening is Simon Handley's 7 life lessons for a relatively pain free, somewhat successful, fully satisfying and ultimately fulfilling academic career!

Before I begin with lesson 1, I want to give you a bit of background on how I got to where I am today – after all you might wonder what qualifies me for providing advice. I am not an inspirational speaker – I've not climbed every 8,000-meter peak or the highest mountain on every continent. I have completed a 100-mile foot race, and I have run 224 kilometres around a 400 metre track in 24 hours, but there are no real lessons in this, other than the observation that anything is possible including the completion of really dumb, generally useless extreme sporting events if you are bloody minded and determined enough!

In contrast, my journey starts with a generally apathetic and uninterested approach to academia. Psychology was an accident for me – an A Level course selected at College after a term of studying Maths and a dawning realisation that this would involve way too much concentration to allow for engagement in other less academic activities. So, my career in psychology has its origins in pro-active avoidance of Mathematics – sometimes opportunities arise through avoiding things you don't want to do rather than seeking things that you do!

Anyway, a rather unspectacular degree in Psychology at Cardiff followed, that including two attempts at the first year, a surprising first addition to my family during the second year (this was my daughter Sophie, I mentioned to you earlier this evening) and a final year, where the lights came on and a realisation dawned that this was a subject I was passionate about. Following my degree, 3 months of missed mortgage payments and two visits from the bailiffs motivated a job application to work as a research assistant on a project with Professor Ruth Byrne on meta-deduction. Somehow, despite my less than stellar academic record, I landed the job and a career in academia followed! Sometimes things just happen and if you had told me then that I'd be standing here today in the Hunter Valley, as Dean of an amazing Faculty at a University in Sydney, Australia, I would seriously be questioning your sanity!

So, Lesson 1: Don't expect anything to go to plan! This is the most exciting thing about life, careers and achievement. The path you imagine you will take will bear little relationship to the journey you will actually make. I guarantee that none of the senior academics with us today knew where their career would take them, the country they would be living in or what research they would be doing now. So, do embrace uncertainty, take opportunities as they arise and enjoy the ride!

I want share a story with you which I think very effectively makes this point. I was recently on a work trip, visiting Universities in Europe and I met a sociolinguist who was telling me about some of the research he had been doing with indigenous languages in Peru. He told me about a village in a remote region where he spent time studying their unique language. One thing that he struggled to understand was that when the villagers talked about the future they would accompany their discussion with hand gestures pointing behind them. In contrast when they talked about the past they would gesticulate in front of their bodies – the complete opposite of what one observes with European languages. Being completely perplexed by this, one day the researcher approached a village elder and asked him to explain the basis of these gesticulations and this is what he said. Imagine you are standing and looking out from the edge of a cliff at the past in front of you and as time moves forward the cliff edge begins to crumble to mark the passage of time and as it does so you walk backwards into the future viewing the past in front of you as it passes by. But of course, you cannot see the future as it is behind you.

So, my first lesson is to encourage you to embrace your walk back to the future with absolute certainty that there is no linear plan that will be realised but with wonder and excitement at the range of unknown opportunities that will be afforded to you.

Lesson 2 – Don't measure yourself against other people's achievements – think about what you want to achieve not about what other people have done. It is normal to feel inadequate, not good enough or even an imposter at times! But don't be motivated by aspiring to have a record like the best researcher in your field, the highest number of citations, the largest h index, the best funding record – Whilst it is naïve to think that these things are not important, it is equivalent as a motivation to wanting to accumulate the greatest wealth, to having the best house or car, to running further than anyone else can in 24 hours, or 48 hours or six days. Fundamentally, as I have realised, these are futile motivations because there is only temporary satisfaction in achieving these goals. They speak to a neo-liberalist ideology where people are judged by economic value and the greatest accumulation of a relevant currency. Be satisfied by what you discover, by adhering to the values of integrity, passion and curiosity. This is the only route to true satisfaction as a scientist.

There will always be someone with more cites, a bigger h index and greater influence. For every Max Coltheart there is a Danny Kahneman and for every Stephen Crain there is a Noam Chomsky. Be satisfied with your achievements and discoveries and don't measure yourself by others.

Lesson 3 - Respect your academic adversaries and those that disagree with you as much as those that are your supporters. Because their work, their data, findings and theories have motivated you, driven your thinking and stimulated your creativity. They are just as much a part of what you create and contribute (and perhaps even more so) than your collaborators and academic sympathisers. So, credit them, acknowledge them and respect them irrespective of their attitude to your own work. Whilst I would want to avoid being too deep about all of this, I have found throughout my career, particularly in leadership roles, that you gain much by always acting with dignity and respect even with those that are actively trying to undermine and discredit you. The research world is no different – be kind always, respect everyone and above all don't let the bastards get you down!

Lesson 4 – Your most important contribution in your career will be what you teach others. We have all learnt much from the selfless support and guidance of our supervisors, mentors, collaborators and peers. The future of our discipline depends upon the selfless transfer of knowledge and skills to the next generation of researchers. If there is one thing that I would value above all others, in terms of academic contribution, this is it and this CoE is an exceptional illustration of this in action.

It is deeply satisfying to support others in achieving their research aspirations. Always be generous with your ideas and your support – remember how tough it is to establish an academic career. We were all there once and it is worth reflecting on the times early in our careers when we felt uncertain about our futures and our ability to succeed. So, please always be supportive and constructive and aim for your students to be more successful than you.

This applies not only to our students and mentees, but also in our professional work. There is much damage that can be done in stifling the start of an academic career, through a misplaced criticism in a review or a disparaging remark at a conference. One of my early papers was on Wason's selection task, an arguably trivial little task that has dominated the reasoning literature for the last 50 years! Of course, I thought my paper was a brilliant, creative piece of work that would be theoretically transformative. When the review came back, one of the reviewers, a senior researcher in the field (I won't mention his name – but he did sign his review) described my research as parenthetical and recommended rejection.

It took me a while to work out what this meant, but the realisation that this influential individual judged my research to be no more valuable than a footnote in brackets to a research field built around a trivial little logical puzzle was somewhat crushing at the time. So be kind always and remember that we were all at the beginning of the journey once!

Lesson 5 - Never forget how lucky you are to be paid to think about thinking. Being able to guide your own research program, develop your own research questions and to have the freedom to take your work in whatever direction you choose is a rare privilege. There is no job like it and whilst it can be pressured, challenging, unforgiving and intellectually demanding, fundamentally we get paid to do something we enjoy and we are passionate about. Don't ever forget this! But, importantly don't take yourself too seriously. Your work will make a difference, sometimes incrementally in a small field to a small number of people, but that is ok. Don't get lost in your own self-importance and always be grounded. What we do is important but as I realised early in my career, at any one time there may be only 3 or 4 people in the world who care about my most recent paper, plus perhaps a handful more who have read the abstract!

Lesson 6 – Don't ever feel apologetic or guilty for doing basic science. You will have heard a lot about impact, application, translation, engagement, economic and social value – these are all great principles, but don't feel you need to apologise for research that contributes to knowledge and understanding without any obvious practical application or benefit. As many of you know my thesis was on the word 'OR'. 115,000 words on how people reason about the equivalence between 'Or' and 'And' as defined by De-Morgan's rule. This was important (honestly) as it provided a key test of two competing theoretical explanations of deductive reasoning. I gave a copy to my parents and for years they used it as a prop to keep the utility door open in their house which at least gave me some comfort as to the practical value of my thesis. I did sometimes think about the practical relevance of the work more broadly but it didn't trouble me too much. But you never know when it might have an application!

Earlier this year I attended a Sydney Salon event at which Gonski was talking about the composition of corporate boards. At the pub afterwards I started talking to a woman who had attended the event and she asked me about my thesis. Well, my heart sank as typically it takes a little less than 5 minutes of talking about De-Morgan's law before an excuse is made and a companion will move on to a different table to engage in discussion with others. On this occasion, my companion seemed fascinated and told me that her husband would love to meet me. It turns out that he was a contract lawyer who spends much of his time resolving contract disputes that rest on a breach linked to a disjunctive or conjunctive clause – a clear case where the divergence between a logical and everyday interpretation of the negation of a disjunction or conjunction is critical. I was delighted! It had taken 27 years to realise that my thesis has some practical application above and beyond being a door stop!

But of course, we shouldn't apologise for doing basic research. Hundreds of thousands of dollars goes into supporting astronomical observatories or particle physics research, where contribution to knowledge is the principle objective and no one complains. Understanding the mind is a similarly important enterprise.

Lesson 7 – It has never been more important to be a scientist. The skills that we have in evaluating evidence, assessing hypotheses and determining truth are more important now than they have ever been.

We live in a world where communication is often limited to 140 characters and the life cycle of a news article is a few hours duration – determined by the time sensitive decline in readership and advertising revenue. As a result, the impact of a story is no longer determined by the quality of the journalism, the argument or the evidence, but by the extent to which an article is emotive, contentious or polemical. There is often no time for a story to develop and grow, for arguments to be made and countered. For evidence to be considered and evaluated.

We have a responsibility as scientists to push back at every opportunity against unfounded opinions and beliefs that have no evidential basis or are at odds with prevailing scientific knowledge. Of any group in society, we have the deepest understanding of what it means for a claim to be objectively true and we have a duty to challenge relativism in all its destructive forms as many thousands of scientists did earlier this year across the world in the March for Science.

So, my final request is that you are not just a scientist in work but also a scientist in life. As Marie Curie so appropriately said:

*Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.*

Well, that's it – my first occasional address. Thank you so much for indulging me and I do hope you all enjoy the remaining two days of the CCD workshop – it is a fantastic event! Thank you!