

Occasional Address

Royal Exhibition Building, Wednesday 11 April 2018, 11.00am

Professor Justin Zobel

*Redmond Barry Distinguished Professor, School of Computing and Information Systems
Pro Vice-Chancellor (Graduate and International Research)*

Chancellor, Members of the University, graduates, ladies and gentlemen.

But in particular, graduates. Congratulations on being here, to be awarded the title of ‘Doctor’. Congratulations on completing your PhD – what an accomplishment, quite possibly the single largest project you will ever undertake. It may seem ridiculous, but many of you know more on your topic than anyone else on the planet. You truly are experts.

And congratulations, by the way, to your family and friends – for enduring your PhD (from the outside) and being here to celebrate with you today.

But what is it that you new Doctors will take from your PhD, and what will you do with it? What is this ‘expertise’ you new Doctors have? Why should we value a PhD?

No question, it brings respect. The title of ‘doctor’ has authority. What a PhD really reflects, though, is that you are capable of this thing we call research thinking. Research itself has changed a great deal over time, but research thinking is the same fundamental skill it has always been.

And I think this is really what sets PhD graduates apart. You have shown the skill of questioning, not asking questions about everything but asking the right questions, and knowing when the answer is good enough. You have shown the confidence to reason and work on an extended timescale, and not expect answers to be easy or quick, or to think that everything can be done in a day. You have shown reflectiveness and care and thoroughness, taking the time to get a rounded, deep understanding of a problem. And most of all you have shown resilience, openness to the possibility of being wrong, being comfortable acknowledging mistakes.

The skill of research thinking will drive your career, as much as the specific things you’ve accomplished. The work you’ve done is important, but it will age.

I’d like to look back for a moment. I graduated at a PhD event like this one, at the start of the 1990s. The Vice-Chancellor at that time had only just got his first computer; he didn’t yet have access to email because there was no university email system.

Most of the graduates that day had written their theses by hand, because they couldn’t type. Most of them had done their work without the internet. There was no web, no search, no Wikipedia, no blogs.

Yet those same PhD graduates are our research leaders today. You’ve studied under them, and their insights have helped shape your work, their research thinking has helped shape your thinking. You’ve seen how their skill endures, and develops. There’s a lesson here – you

have to keep learning. What you know today will not be enough to sustain a career, and your new skills may be only beginning to develop.

And this is something you don't expect of your PhD. You think that you are going to do research, get on a particular professional path. But it also gives you something more profound – a change in you and your abilities. As I look back at my own PhD, and I wasn't aware of it at the time, it deeply changed me. My work from before the PhD is outright embarrassing! I had expected the PhD deepen my technical skill but what I really learned was to write, to communicate, to reason. And I learned a lot more later on.

So what does this mean for your career? One thing I see is that the different disciplines are becoming more interlinked. An example is the web – it's a new technology but it is also a social place, it has become the equivalent of the ancient Greek agora, the forum where we thrash out our ideas and conflicts and views. As another example, the modern state is now continuously informed by data and analytics. And another: our arts are increasingly technological, and technology is introducing us to art and performance and literature and knowledge in ways that are totally new.

It has gotten more difficult, then, to understand how our society works, so research thinking is increasingly needed if we are to have rational, informed decision making – in government and industry, we need PhDs to shape policy and direction and strategy.

And PhDs are needed because of the physical world. We're increasingly constrained by space, resources, and climate, so we must make decisions in a thoughtful way. We cannot run our civilisation by guesswork and hunch.

There are further challenges. Online technology has created a kind of ungoverned marketplace of thought, in which every idea is equally important – good, bad, profound, and fake. Anyone with a belief in anything can publish it and find an audience. We're at risk of losing sight of fact, truth, reason, and sense.

This to me is the importance of expertise: it provides intellectual integrity, for a world where knowledge is under assault. Public debate has moved from the orderly, curated printed world of just 20 years ago to an online world that is utterly uncontrolled, where sense and nonsense are on an equal footing. We need rational people, research thinkers, to participate. We need you to engage, to contribute, to lead.

I'm going to finish with a quote. 'We live in this world in order that we may always learn industriously, and by means of rational discussion enlighten each other.' This was written in 1776 by Leopold Mozart, father of the composer. It is startling, I think, that an ordinary educated citizen of that time would make this observation, when many people today clearly do not share this view. But it remains utterly true. I encourage you all to 'by means of rational discussion enlighten each other'.

Thankyou.

Vice-Chancellor's Introduction

Chancellor: this morning we are fortunate to be addressed by a leading computer researcher and educator, Professor Justin Zobel.

Professor Justin Zobel is a Redmond Barry Distinguished Professor in the School of Computing and Information Systems and Pro Vice-Chancellor (Graduate and International Research) at the University of Melbourne.

Justin received his Bachelor of Science with Honours and PhD from Melbourne, and later worked at RMIT University where he led the Search Engine group, and at the ICT research centre of excellence, NICTA, before returning to the University of Melbourne in 2008.

In the research community, Justin is best known for his role in the development of algorithms for efficient web searching and text retrieval.

A keen public communicator about his field, Justin has written on the University's Pursuit website that 'Computing underpins every aspect of our lives, from smart phones to the robots that assemble our cars'.

*His many publications include the books *Writing for Computer Science* and *How to Write a Better Thesis*.*

It is a pleasure to call on him to speak today. Ladies and gentlemen, please welcome Professor Justin Zobel.