

Introduction to Nelson Cowan for his Keynote Address

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Our keynote speaker is a distinguished cognitive psychologist and Psychonome. He is also a personal friend whom I have known for over 30 years, and a research collaborator over the last decade. So, I was delighted when Steve Lewandowsky asked if I would like to introduce Nelson's keynote talk. But given that Nelson is so well known from around 400 publications, a citation count of over 59,000, continuous research funding since 1984 from NIH and other sources, and multiple honours nationally and internationally, it is not an easy task to select what to say about him by means of introduction. Where do you start when there are so many things to say? To help with preparation of these few remarks, I thought I would ask Nelson what he would like me to say about him. His response was an enormous help, illustrated his sense of humour, and made my task potentially very easy. He suggested the following:

“Good evening fellow Psychonomes. It is my honour and privilege to present our keynote speaker, Nelson Cowan. He is so well known that he needs no introduction ---- so I won't give him one!”

However, not everyone here will be wholly familiar with Nelson's achievements, so it seems a pity not to say a bit more about him, but I will first mention one anecdote that illustrates how Nelson can also express his humour in self deprecation.

The event happened when Nelson was visiting the University of Bristol in the UK. One weekend, he and a colleague decided to cross the border between England and Wales to have lunch. Given his insatiable curiosity Nelson was keen to explore the local area, places of interest and to sample something of the Welsh culture. So, he asked the waitress what would be interesting to visit nearby. The answer was spoken in a very strong Welsh accent, and sounded to Nelson like 'Closed on St-Adins day' He interpreted this to suggest that it was a local religious holiday linked with a Welsh Saint – 'St-Adins' and said to the waitress that he would love to find out more about this local saintly person, what she or he did to deserve sainthood, when did they live and so on. The

waitress burst into a fit of laughter, peaking Nelson's curiosity even more. Eventually, Nelson discovered that this was a problem of his unfamiliarity with the Welsh accent, and what she had actually said was 'Closed on Sundays'.

This anecdote is somewhat ironic, when you realise that the title of Nelson's doctoral thesis was:

'Toward an understanding of morphological segmentation in unfamiliar languages.'

After completing his PhD in 1980 at the University of Wisconsin, Nelson spent time as a postdoc not far from here in New York University, followed by around 3 years as Assistant Professor at the University of Massachusetts, Amherst. In 1985, he moved to the University of Missouri at Columbia, where he is now Curators' Distinguished Professor. Along the way, he has been an invited visiting scientist at the University of Helsinki, Finland, University of Leipzig, Germany, University of Western Australia, University of Bristol, Institute for Psychology, Budapest, Hungary, University of Edinburgh, and University of Illinois.

He has received honorary doctorates from the University of Helsinki, Finland, and University of Liège, Belgium, and in 2020 received an APA Lifetime Achievement Award. From 2016 to 2022, he was probably known to many of you as editor-in-chief of the Journal of Experimental Psychology: General.

Nelson is best known for his research on the concept of working memory both in children and adults. This research interest stems from an early and lifelong ambition to understand consciousness, and his approach to empirically-driven theory development reflects this, viewing working memory as the activated subset of acquired knowledge and experiences that are relevant for the current task, together with a smaller subset currently in the focus of attention: that is, information of which we are fully consciously aware. There is a widespread assumption that this 'Embedded Processes' view of working memory contrasts sharply with alternative theoretical frameworks for working memory, notably Time-Based Resource Sharing associated with the work of Pierre Barrouillet and Valerie Camos, and the multiple component view associated with Alan Baddeley and Graham Hitch, as well as a modified version of the multiple component view that I have developed myself. Some of our contrasting views were published in 2015 in a special issue of Memory and Cognition that Nelson

and I co-edited. This was followed by an attempt to resolve our theoretical differences in an adversarial collaboration between Nelson, me, Pierre, Valerie, and Moshe Naveh-Benjamin, and extended over a period of four years with multiple, jointly designed and run experiments. Across 15 experiments, the data revealed that our predictions were each partly right and partly wrong. However, as noted in a jointly authored paper published in 2020 in *Perspectives on Psychological Science*, none of us completely abandoned our theoretical preferences, but the theories did become more similar. It also became clear, to me at least, that the contrasts between our views were more about our preferred level of explanation, with different perspectives and priorities, so were complementary, not mutually exclusive as many people assumed.

I would like to end this introduction with a short personal tribute to Nelson as a friend and colleague. The tribute is light hearted, but sincere. It is based on a poem written in 1818 by the British poet John Keats, although only the general structure bears any resemblance to the original. The content of the poem is very much about Nelson. There are references to Nelson's ideas, and given his passion for the importance of empirical evidence, there is reference also to his visits to Scotland, a country that, in the 18th and early 19th century had a network of schools, widespread literacy, and five universities, at a time when England had very few schools and just two universities. The city of Edinburgh was a centre for the highly influential 'Scottish Enlightenment', a period when rational thought, reason, and empirical evidence rejected dogma and unsupported views or false statements from authority figures. Perhaps the world needs a 21st century enlightenment.

POETIC TRIBUTE TO NELSON COWAN

However, tonight, the focus is on someone who has applied a creative mind and rigorous experimentation to make an enormous contribution to research on human cognition and be an inspiration to generations of researchers. He is also someone for whom I, and many others have enormous respect. Please welcome Nelson Cowan.