

Introduction: Essays in Honour of Doug Mewhort

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On June 7, 2012, a meeting was held at the University of Manitoba in Winnipeg, Canada to honour Professor Douglas John Kerr Mewhort, a recognised authority on human memory and computational cognitive modelling. This issue is a collection of articles from that meeting.

Doug was born on January 14, 1942 in Toronto, Ontario. He completed his Honours degree in 1964 under Endel Tulving at the University of Toronto. He completed his Masters degree in 1965 under Richard Thysell and his Doctoral degree in 1968 under Phil Bryden, both at the University of Waterloo. Doug took a position as Assistant Professor in 1968 in the Department of Psychology at Queen's University where he established the Human Information Processing Laboratory.¹ He was named Associate Professor in 1974 and Full Professor in 1982. He spent time at the University of Rochester from 1972 to 1973 and was an invited scholar at the prestigious Zentrum für interdisziplinäre Forschung (Centre for Interdisciplinary Research) at Universität Bielefeld from 1984 to 1985. Doug was instrumental in establishing the High Performance Computing Virtual Laboratory at Queen's University in 2001. He served as President of the Canadian Society for Brain, Behaviour, and Cognitive Science from 2007–2009. He served as associate editor of *Psychological Research/Psychologische Forschung* from 1988 to 2002 and has been editor of the *Canadian Journal of Experimental Psychology* since 2009.²

From the 1960s through the 1980s, Doug forced a reconsideration of visual attention by his influential scanning model for iconic memory (Mewhort & Campbell, 1981; Mewhort, Campbell, Marchetti, & Campbell, 1981; Mewhort, Merikle, & Bryden, 1969). In the late 1970s and 1980s, Doug's research turned to problems of memory, knowledge, and computation; his "Alice paper" gives a good overview on his thinking in this period and is a tribute to Donald O. Hebb, his intellectual grandfather (Mewhort, 1990). In the 1990s, Doug took up the principle that simple mechanisms applied to a complex environment can produce complex behaviour and he used the computing resources at the High Performance Computing Virtual Laboratory to cash the idea out in several places (e.g., Jamieson & Mewhort, 2009; Jones & Mewhort, 2007; Kwantes & Mewhort, 1999). Doug has contributed to mathematical psychology by a reevaluation of the power law of learning (Heathcote, Brown, & Mewhort, 2000) and work on exact tests for the null hypothesis (Mewhort, 2005). Doug is now focused on the extralist feature effect in recognition memory and the



Douglas John Kerr Mewhort (c. 2007).

challenge it issues for the long-standing dominance of signal detection theory as a model for human recognition (e.g., Johns & Mewhort, 2002, 2003, 2009; Mewhort & Johns, 2000, 2005).

Doug is an authoritative experimentalist, a premiere computational psychologist, and an important spokesperson in Canadian Psychology. He is well described as an irreverent gentleman scientist. Someone once said, "There is comfort in knowing that the bull will stamp its foot before charging." If asked to name his greatest contribution to science, Doug will name his students, who have been situated in industry, science, and the military. Doug's colleagues recognise how fortunate they were to be trained by the man and for many reasons. A comment from Gordon Logan captures this sentiment well:

"I owe a lot to Doug. It may not be apparent in the topics I've studied, but I hope it is apparent in the quality of my work. I learned to live up to his high standards. Perhaps most importantly, Doug helped me buy my first lab computer, a PDP 11/03, and get his t-scope program running on it. Many of my most important papers were based on data from that program and that computer. The only thing Doug told me

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¹ Originally named the Visual Information Processing Laboratory.

² Arrangements for this special issue were made with the previous editor Simon Grondin in 2008.

that wasn't right is that you have to wear a tie to work with a computer. . ."

Each article in this issue is written by a student or colleague. The common themes amongst the articles—computational theory, empirical rigour, numeric sophistication, and respect for the priority of experimental data over theory—are characteristically Doug. On behalf of all contributors to this special issue, we wish Doug productive and happy years to come. There is little doubt that he will continue to influence and challenge our science.

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