

Special Issue in honour of Keith Rayner (1943–2015)

Simon P Liversedge¹, Monica Castelhana², Erik D Reichle³
and Fernanda Ferreira⁴

Quarterly Journal of Experimental
Psychology
2018, Vol. 71(1) 1–2
© Experimental Psychology Society 2017
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1747021817740774
qjep@sagepub.com



This Special Issue of *Quarterly Journal of Experimental Psychology* is dedicated to Keith Rayner, Atkinson Family Distinguished Professor, University of California San Diego, who sadly passed away in January 2015 after a long battle with cancer. Keith was a leading figure in the field of cognitive psychology and was recognised as the leading world expert in eye movements and reading. During his career, Keith published well over 400 papers in international, peer-reviewed journals. Keith was primarily an experimentalist, although he did also publish theoretical papers, review articles, and position statements. Together, the body of Keith's published work represents the single largest and most significant contribution to current understanding of the visual and cognitive processes underlying oculomotor behaviour during reading.

As you will see, there are a large number of papers in the Special Issue authored by a wide range of authors. Most of those who have collaborated with Keith during his career, and many are themselves senior figures in the field of experimental psychology. It is testimony to Keith's standing in the field that so many researchers wished to publish an article in honour of his memory—this was not a difficult Special Issue to put together.

Keith was born in the United Kingdom (Dover) before emigrating with his family as a child to the United States where he lived for the remainder of his life. Keith obtained his Bachelor's (1968) and Master's (1970) degrees from the University of Utah and then his PhD (1974) from Cornell University. Post PhD, Keith worked initially at the University of Rochester before moving to the University of Massachusetts at Amherst where he worked for approximately 30 years. Keith moved to University of California San Diego in 2008 to take the position of Atkinson Family Chair of Psychology and he worked in this role until his death in 2015.

During his PhD, under the supervision of George McConkie, Keith and George developed a novel and very powerful experimental paradigm, namely, eye-contingent change methodology (McConkie & Rayner, 1975; Rayner, 1975). In this paradigm, an aspect of the visual stimulus

(most often a sentence, text, or a scene) presented on the subject's display screen would be very rapidly changed in real time contingent on the position of the subject's point of fixation. At the time, this method involved the use of the most cutting-edge software and experimental hardware technologies. The paradigm allows researchers to investigate and understand which aspects of a stimulus are processed prior to being directly fixated. This in turn provides insight into the nature and time course of attentional, visual, and linguistic aspects of processing in real time. Importantly, no secondary task is required in the paradigm, meaning that the psychological processes that are under scrutiny occur naturally. It is notable that several of the papers included in the Special Issue report work using this approach, and this in itself underlines the fact that the methodology is now standard in many areas of psychology. Other important achievements in Keith's career include the two *Psychological Bulletin* articles that he published, each of which provided a comprehensive review of the eye-movement studies published primarily in the previous two decades (Rayner, 1978, 1998). These two articles are highly cited. In addition, his collaborative article published in *Scientific American* espousing the importance of phonics in teaching children to read represented an important translational piece. Keith was also centrally involved in the development of the model of eye-movement control in reading, the E-Z Reader model (Reichle, Rayner, & Pollatsek, 1999).

¹School of Psychology, University of Southampton, Southampton, UK

²Department of Psychology, Queen's University at Kingston, Kingston, Ontario, Canada

³Department of Psychology, Macquarie University, North Ryde, NSW, Australia

⁴Department of Psychology, University of California, Davis, Davis, CA, USA

Corresponding author:

Simon P Liversedge, School of Psychology, University of Southampton, Highfield Campus, Southampton SO17 1BJ, UK.

Email: s.p.liversedge@soton.ac.uk

In addition to his publishing achievements, Keith was committed to helping his students, postdoctoral, and academic colleagues. He supervised more than 25 PhD students to graduation, offering excellent guidance and support in relation to all aspects of academic life. He operated with an “open-door” policy and encouraged all his junior colleagues, instilling a sense of confidence in relation to the quality of their experimental work and the possibility of it being publishable, and facilitated career moves writing hundreds of letters of reference and providing excellent advice on academic negotiations of many kinds. In 2014, he received the Women in Science “Outstanding Mentor Award,” and he made the effort to travel to Long Beach to accept the award at the annual Psychonomic Society meeting, even though he was very ill at that time. Keith was a role model for many.

Keith took on many senior editorial roles, being the Editor-in-Chief of *Journal of Experimental Psychology: Learning, Memory and Cognition* (1990-1995) and *Psychological Review* (2004-2010). He collaborated internationally, working abroad for periods of time (e.g., Oxford University, Netherlands Institute for Advanced Study, Durham University, Potsdam University, and Dundee University), and invested significant efforts to establish eye-movement research in China—Keith was directly involved in organising the first China International Conference on Eye Movements, and this conference is now held biennially.

Of course, Keith worked very hard, but he always made time for his family and his hobbies outside of work. Those close to Keith knew him to be happiest when he was surrounded by family—eating good food and talking. And Keith was a keen (and competitive) sports enthusiast, particularly enjoying playing tennis with his graduate students and colleagues. And in his younger years he enjoyed playing basketball. As a spectator, Keith followed the Boston Red Sox closely.

It is of relevance to this Special Issue that Keith was a keen member of the Experimental Psychology Society (EPS) attending meetings as often as was possible during his career.

He also encouraged his students and collaborators to present their work at EPS meetings. Keith received many honours over the years, but one that he was very proud of was his selection by the EPS to deliver the Bartlett Lecture (2007). The article that he published in *Quarterly Journal of Experimental Psychology* on the basis of his talk is a very highly cited paper in the journal.

The papers published in this Special Issue cover a range of topics authored by some excellent researchers in the field of experimental psychology. In our view, the articles are of very high scientific quality as befits a scholar of Keith Rayner’s standing. We sincerely hope that you enjoy reading these papers published in honour of Keith Rayner.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- McConkie, G. W., & Rayner, K. (1975). The span of effective stimulus during a fixation in reading. *Perception and Psychophysics, 17*, 578–586. doi:10.3758/BF03203972
- Rayner, K. (1975). The perceptual span and peripheral cues in reading. *Cognitive Psychology, 7*, 65–81. doi:10.1016/0010-0285(75)90005-5
- Rayner, K. (1978). Eye movements in reading and information processing. *Psychological Bulletin, 85*, 618–660. doi: 10.1037/0033-2909.85.3.618
- Rayner, K. (1998). Eye movements in reading and information processing: 20 years of research. *Psychological Bulletin, 124*, 372–422. doi: 10.1037/0033-2909.124.3.372
- Reichle, E. D., Rayner, K., & Pollatsek, A. (1999). Eye movement control in reading: Accounting for initial fixation locations and refixations with the E-Z Reader model. *Vision Research, 39*, 4403–4411. doi:10.1016/S0042-6989(99)00152-2