

## Special edition in honour of John M. Findlay

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## Foreword from the contributors

*Valerie Benson*

Professor John Findlay has made an outstanding contribution to the field of eye movement research at both a National and International level. For me personally, it has been a very great pleasure and honour to have worked for, and then later collaborated with John, on a number of interesting and rewarding projects over the last decade. The paper presented in this JEMR special edition reports data from experiments examining the influence of complex distractors in the Remote Distractor paradigm. The Remote Distractor Effect (RDE) was of course examined in detail by John and colleagues (Findlay, Walker, Deubel & Schneider, 1997). I would like to take this opportunity to thank John for his intellectual support, for the sharing of his vast knowledge about eye movements and the work carried out in this area, and not least, for being such good fun to work with.

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*Trevor Crawford*

John Findlay had already started his pioneering work on the 'global effect' when I joined his laboratory at Durham University in 1980 as a Ph.D. student. The 'global effect' refers to the situation where a saccade is generated towards an intermediate position between to closely spaced targets. Unfortunately, despite John's patience and enthusiasm, it was not until much later that I began to appreciate the important implications of this work. Although low level visual channels appeared to mediate the effect, we demonstrated a degree of plasticity with extended practice on the task (Findlay and Crawford, 1983). The 'global' effect is not restricted to visual targets, but is also found across visual and auditory modalities (Lueck, Crawford, Savage and Kennard, 1990). John's investigations into the effects of visual orienting on saccadic eye movements (Shepherd, Findlay & Hockey, 1986), inspired Herman Muller (who was also working with John at the time) and myself to explore the effects of attention on the spatial and temporal properties of a saccade (Crawford and Muller, 1992). This paper addresses the cross-modal effects of attentional cue on saccadic eye movements.

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### Zoi Kapoula

As a member of the Paris group Regard, in 1982, just finishing my Ph.D., the natural next step was a post-doc with John Findlay at Durham. John has been a great mentor for me; I was impressed by the way in which he combined multiple approaches in research of the ocular motor field, cognitive, psychological, neuro-physiological and clinical, and his solid expertise both in hard and soft sciences. Together we discovered the speed accuracy trade-off and the range effect for saccades. I learnt a lot from him on the intricacies of THE GLOBAL EFFECT. Over the years, our exchanges continue, always rich, a reference point for going further on the complexity of the ocular motor system.

### Simon Liversedge

I first started to interact directly with John Findlay when I joined the Department of Psychology at the University of Durham as a Lecturer in 1997. One of the key reasons for moving to Durham was that John had a longstanding reputation for research excellence in the field of eye movements and had established a very successful laboratory there. Our initial discussions centered on our common belief that eye movements provide an excellent on-line indication of the psychological processes that underlie visual search, reading and visual cognition more generally. We published our first paper together to this effect in January 2000 (Liversedge & Findlay, 2000). John and I were fortunate to supervise a student called Sarah White during her undergraduate degree and her Ph.D. (Sarah is now a Lecturer at Leicester University). Also, during this period we secured Leverhulme Trust funding to host Keith Rayner as a Visiting Professor for one year. It was during the year of Keith's visit that John, Keith, Sarah and I first turned our attention to the issue of binocular coordination during reading. We have now published several papers reporting findings from experiments investigating aspects of binocular coordination (reviewed in this JEMR Special Issue and more comprehensively in Kirkby, Webster, Blythe & Liversedge, 2008). It has been a pleasure to work closely with John and I am very grateful to him for the tremendous amount he has taught me.

### References

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### Eugene McSorley

My work with John Findlay started in 1996 when he agreed to take me on as a PhD student despite my thesis involving no eye movement recording whatsoever! I examined the temporal integration of spatial frequencies over time and found that information was integrated isotropically and was flexible to the nature of the information and task at hand (McSorley & Findlay, 1999; McSorley & Findlay, 2002). My work on eye movements started with my first postdoc with John from 1999. During that time we worked on target selection in serial and parallel visual searches and found that saccade targeting was best explained by a parallel processing of visual information rather than by a covert selection mechanism (McSorley & Findlay, 2001). We also examined the temporal evolution of competitive processes in saccade targeting. We reported (McSorley & Findlay, 2003) that saccades landed more accurately if accompanied by more distractors. We explained this counterintuitive finding by suggesting that the distractors acted as remote distractors fractionally increasing saccade latency but having large effects on saccade accuracy (Cruickshank & McSorley, 2007).

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### Françoise Vitu

The first time I heard of the global effect was when I was a Masters student in the 'Groupe Regard'<sup>1</sup> in Paris, France (1985-1986). The effect had been discovered a few years before by John Findlay, who frequently visited our group since his prolonged visit and collaboration with A. Lévy-Schoen. The global effect was one of the first things we, as students, had to learn, and as a matter of fact we have almost all worked on the global effect or some related issue at some point in time! While most of my ex-colleagues have now moved to slightly different research topics, I, after years of research on eye movements in reading, am back to this effect and the related centre-of-gravity notion because I strongly believe it is central to accounting for eye movements in natural perceptual tasks such as reading. In honour of John Findlay, the scientist and the godfather of the 'Groupe Regard', and as a tribute to John Findlay's inspiring work, my paper will first review evidence for the robustness and generality of the global effect and will then present recent data which further document the effect itself and its potential neural substrates, and specify the centre-of-gravity hypothesis in the framework of reading.

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The 'Groupe Regard' was founded in the late seventies by A. Lévy-Schoen and J. K. O'Regan and it was dissolved in the mid-nineties. Members of the group who are cited in this issue were C. Coëffé, A. Jacobs, Z. Kapoula, T. Nazir and F. Vitu. The group was located in central Paris. A. Lévy-Schoen is now retired, J.K. O'Regan is the director of the 'Laboratoire Psychologie de la Perception' in Paris, and other members of the group are working in different laboratories in France and abroad.

### Robin Walker

I was first introduced to eye-movement research when I started a PhD supervised by John Findlay in the late 1980's. One of our early discussions centred on the dissociable effects that distractors can have on the behavioural characteristics of saccades (e.g. Findlay, 1983). When two stimuli appear in the same hemifield, latency is comparable to that observed with a single stimulus, but saccade amplitude is increased (the well-known 'global effect'- (Deubel, Wolf, & Hauske, 1984; Findlay, 1982). By contrast, when two stimuli appear simultaneously in opposite hemifields an increase in latency is observed, but amplitude is comparable to the single target condition (Lévy-Schoen, 1969). The so-called 'remote distractor effect' on the latency of saccades has been a central theme of my research over the years (e.g. Walker, Deubel, Schneider, & Findlay, 1997; Walker & Findlay, 1996; Walker, Findlay, Young, & Welch, 1991; Walker, Kentridge, & Findlay, 1995; Walker, Mannan, Maurer, Pambakian, & Kennard, 2000). John has been a continued source of inspiration to my research activities and those of us lucky enough to have worked with him have benefited from his prodigious memory as well as his intellectual rigour and inquiring mind. We hope that the papers in this special edition of the *Journal of Eye Movement Research* provide examples of John's wide-ranging interests and reveal some of the research that he has inspired.

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