HUMAN MOVEMENT SCIENCE

Special issue

An Interdisciplinary Focus on Skilled Perception–Action

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Editorial

An interdisciplinary focus on skilled perception–action

The year 2000 was, for sport and the study of human movement in Australasia, a very good year. Australians were able to witness at first-hand the world's finest athletes as Sydney welcomed and hosted what was proclaimed to be "the best Olympics ever". They were indeed heady times. Earlier that year, long before all the excitement of the Olympics had turned almost every Australian into a complete sports nut, we were honoured to host a smaller but no less stimulating international meeting concerned with human movement.

The *Fifth Biennial Motor Control & Human Skill Research Workshop* was hosted by Griffith University, and held during the heat of January in Surfers Paradise, Gold Coast, QLD. For the first time it was held outside of its more familiar West Australian environs. The latest in a series of conferences begun in Perth in 1991 by Professor Denis Glencross, the *Biennial Workshop* was designed to foster interactions between Australasian researchers who study human movement and those researchers in the wider international motor control/human skill community (half the number of oral presenters this time came from overseas). It is perhaps fair to say that those from the Northern Hemisphere often assume that Australasia is just too far away and too sparsely populated and has too many unfamiliar species that to make a trip Down Under is just too much trouble. The 2000 Olympics seemed to radically change that misperception for many! Indeed, over the years it seems that the *Biennial Workshop* has served a similar role for many Northern Hemispherians who are often visiting Australia for the first (but not the last!) time.

The *Fifth Biennial Workshop* brought together over 80 established and student scientists investigating phenomena in the fields of perception, action, motor control and coordination, learning, psychology, neurophysiology, dynamical systems and complex systems theory, rehabilitation, physiotherapy, ergonomics, and systems engineering. With such a range of disciplines represented, the conference had not only something for everyone, but more importantly, a strong interdisciplinary theme that emphasised dialogue, the

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exchange of ideas, and the broadening of what might otherwise become too rigid a theoretical perspective. It has truly become one of the leading conferences of its kind not only in the Southern Hemisphere, but world-wide, and as this issue of the Journal goes to press, the latest in the series, the *Sixth Biennial Workshop*, is being scheduled for Freemantle, WA, December, 2001.

The current issue follows a similar format to the account of the *Fourth Biennial Workshop* (Piek, 1999). Although not all the oral and poster presenters are represented in the current Special Issue (for a full list of abstracts, see Treffner, 2000), 16 articles have been chosen and grouped together into four main sections. The first section involves research in the control of posture and locomotion and includes several analyses of lower limb coordination during walking. Importantly, an emphasis is placed on the *perceptual specification of control* using optic and (in the case of non-sighted individuals) acoustic information. The second section involves papers that highlight the rapidly expanding field of coordination dynamics. This section includes reports of how learning can now be fruitfully approached from the dynamics perspective, how new control parameters might be discovered, and how whole-body tasks such as lifting can be usefully described using the phase transition methodology of complex systems theory. The third section gathers researchers who have made, quite rightfully, the phenomena of eye–hand coordination crucial for any purported explanation of skilful behaviour, especially in individuals with movement disorders where an inability to achieve previously simple goal-directed acts is most apparent. In the final section on learning and development, issues of how we might quantify change and non-change in complexity across the lifespan are addressed. In sum, we trust that the current collection of articles provides the reader with considerable insight into the challenging and dynamic field of motor control and human skill, circa the early 21st century.

References

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