Spatial conference a case of child's play

Useful concepts found in children's game

By John Gibb

Hidden depths are lurking within the apparently innocent children's game of rock, paper and scissors, university scientists say.

Researchers from the University of Otago's Spatial Information Research Centre argue that the game and its principles provide a useful conceptual tool in scientific analysis.

How the game could be applied in spatial information science was among several topics explored during the centre's 18th annual conference, which ended on Tuesday at the university's School of Business.

The two-day gathering focused on the theme "Interactions and Spatial Processes".

Centre director and event organiser Dr Peter Whigham said rock, paper, scissors was a simple system: rock beats scissors, scissors beat paper, paper beats rock. But this apparently trivial concept had many applications to other systems and fields.

In the modelling of food webs, species A eats B, species B eats C, and species C eats A, leading to cyclic structures often found in nature.

Dr Marcus Frean, of Victoria University of Wellington, one of the keynote speakers, said that some behaviour by species in such cyclical food webs could have seemingly paradoxical outcomes, sometimes exemplifying the concept of "the enemy of my enemy is my friend".

If species A was less aggressive in eating species B, this could bring significant indirect benefits for species A, given that species B was helping to keep under control species C, which, in turn, tended to feed on species A, he said.

Dr Frean has termed this situation the survival of the weakest, in contrast to the Darwinian notion of survival of the fittest.

He has published widely on competitive applications of the rock, paper, scissors model.

Dr Whigham said about 30 people, including several from abroad, had attended the gathering, which had proved positive and successful.

Among highlights were addresses by Dr Frean and fellow keynote speaker Prof David Green, of Monash University, Australia, he said.

Prof Green is one of the pioneers of web-based Geographical Information Systems in Australia.

The Dunedin gathering, titled a colloquium, brings together academics and industry practitioners to discuss spatial information science, a subject combining geography, surveying, the physical sciences and information technology.

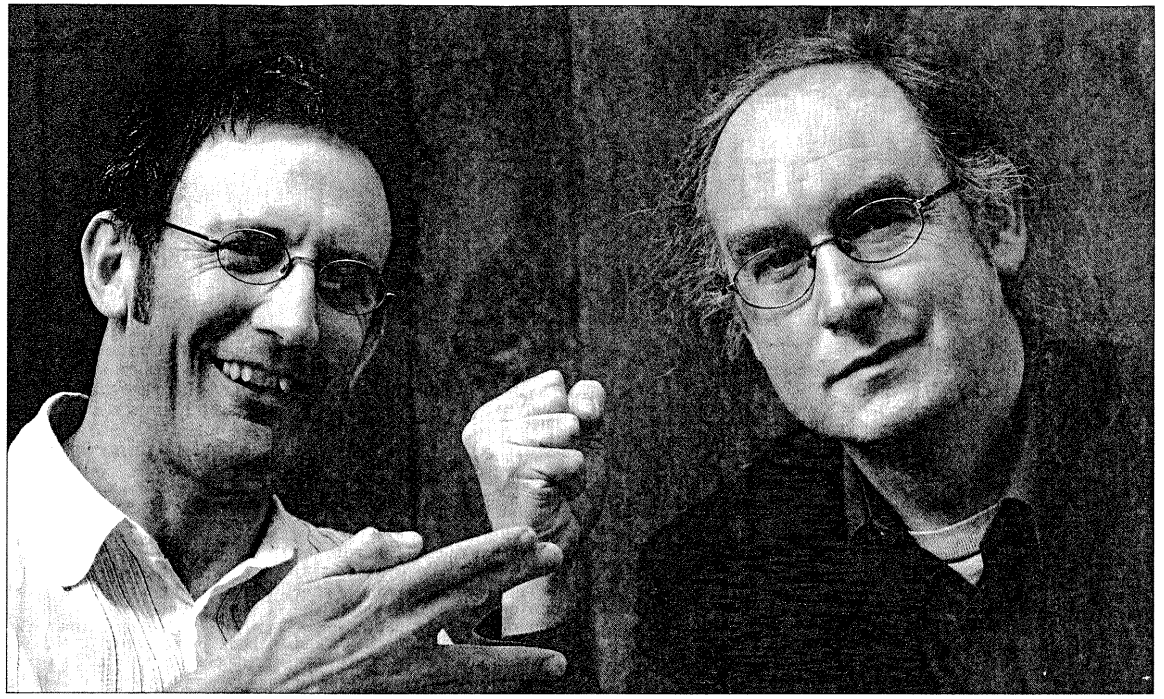

PHOTO: PETER McINTOSH

Science that rocks . . . Researchers Dr Marcus Frean, of Wellington, (left) and Dr Peter Whigham, of the University of Otago, demonstrate the "scissors" and "rock" of the popular children's game.