

## **Explaining economic and social phenomenon: models with low cognition, interacting agents**

Paul Ormerod

*Volterra Consulting Group, London, UK*

Corresponding author e-mail: *pormerod@volterra.co.uk*

The standard socio-economic science model requires the assumption of powerful cognition on behalf of its agents. Efficient outcomes arise from the cognitive powers of the agents.

An alternative view posits that efficiency is the *joint* product of institutional structure and agent actions (see, for example, Vernon Smith, *American Economic Review*, June 2003). Models in which agents have low cognition may be able to offer superior accounts of many socio-economic phenomena than the standard approach. For example, under the continuous double auction, agents with zero intelligence can be shown to achieve most of the gains from trade.

We consider original empirical findings in completely different socio-economic areas, and show that they are superior to high cognition agents models from the standard economic paradigm.

A key feature of the models is the need to characterise the topology of interactions accurately. In evolved social structures, this is more important than the specific behavioural rules assigned to agents.