The motivation behind this symposium on scientific methods for the analysis of agent-environment interaction is the desire to finally start with the “mopping up” activities that characterise “normal science” (Kuhn, *The structure of scientific revolutions*), the attempt “to force nature into the pre-formed and relatively inflexible box that a paradigm supplies.” The current paradigms underlying autonomous agents research still seem too weak to support “normal science”. When I first identified this as a problem within the discipline of autonomous agents in general, and autonomous mobile robotics specifically, I hadn’t realised that this concern was so widely shared within the community; but the call for papers for this symposium elicited numerous encouraging comments and sufficient contributions for a viable meeting, so that this first symposium (ever?) on scientific methods received the go-ahead from the AISB committee.

Arguably, research in agent-environment interaction hasn’t even reached the stage of “normal science” yet, because paradigms forming the foundation of our research are still emerging and formulated in vague terms. Still little “mopping up” is to be done, as we lack theories with predictive powers of agent-environment interaction. We have few precise instruments (such as for instance quantitative descriptions of agent-environment interaction) at our disposal, and are consequently left to present qualitative descriptions of experiments and existence proofs. These are by no means futile activities, but perhaps the time has come to aim for more rigorous experimental methods that allow independent replication and verification of experimental results.

The fact that this symposium is happening is very encouraging. Slowly, but inexorably the emergence of a new branch of research in behaving agents, namely “scientific methods”, is gathering momentum, and for the first time it will be discussed within the research community what we actually mean by “scientific methods for the analysis of agent-environment interaction”.

It will, on the one hand, mean characterisation through measurement of behaviour, and contributions in these proceedings will look at the evaluation of navigating robots (Hafner) and quantitative description of agent-environment interaction (Nehmzow and Walker).

“Scientific methods” will also entail aspects of computer modelling (Evans, Heuvelink and Nettle) and system identification (Singh and Singh), as well as the transfer of robotics research to related disciplines such as embodied computational neuroscience (Prescott, Gonzalez, Humphries and Gurney) and theoretical cognitive science (Ziemke).

This symposium would not have happened without the overall positive response by the scientific community, but neither would it have been possible without the dedicated work by Mark Lee, who masterminded the entire AISB convention, Gregor Schöner, who worked admirably as a programme chair for this symposium, and Joanne Walker, who kept the whole machinery running smoothly. Thank you to you all.

Ulrich Nehmzow, University of Essex
Symposium Chair

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