

Foreword

Fifty years after the publication of the influential book on human organizations by March and Simon (1958) this new publication presents an overview of current work in agent organizations. Researchers have been attempting to use our understanding of human organizations to inform our appreciation of artificial organizations for over 50 years and this volume clearly illustrates a maturing of those investigations. It is also of note that the varied perspectives presented by the internationally diverse author panel demonstrates that the field is still at a formative stage.

To start with, the notion of “organization” in artificial intelligence is anything but crisp, and several of the early chapters discuss models and dimensions that can be seen as complementary attempts to capture the essence of the concept. Just as one can choose to describe a light switch as an “agent,” but it is generally not fruitful to do so (Shoam, 1993), the study of organizations is indeed intended to capture more than just the presence of multiple, interacting entities. The contributions in Sections I, IV, and VI provide the reader with a selection of analyses that point to the richness of organizations as a way of capturing complex “macro” phenomena in an integrated model. In contrast, the chapters in Section III adopt a “micro” perspective where interactions between agents are the focus of attention. Bridging these views, the material presented in Section II, can be seen as an attempt to ensure that the theory is supported by semantics, or, as McDermott (1978) puts it, “No notation without denotation”. The chapters in Section VI, by providing a trio of practical applications, can then be viewed as a response to the exhortation “No notation without exploitation” (Shoam, 1993).

This book presents a journey through a complex landscape. The editor, Virginia Dignum, has built on the tradition of contributions from the Utrecht group to the agent research community by bringing together a panel of highly credentialed authors. These researchers, who have already made individually significant contributions to the study of agent organizations, are well placed to influence the direction of the field. While the route taken in the book is shaped by the choice of authors, not simply by navigating to agreed signposts of the field, readers can be sure that they will have been taken to some of the most interesting landmarks, and are then well prepared to appreciate the opportunities for future research on agent organizations.

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Liz Sonenberg is professor of Information Systems and currently Dean of the Faculty of Science at the University of Melbourne, Australia. Her research expertise includes reasoning machinery as may be useful for the design of systems that exhibit complex collaborative behaviours and she has received funding from government and industry sources. Liz Sonenberg was a member of the Board of the International Foundation for Autonomous Agents and Multiagent Systems from 2002 to 2008, and in 2004 was program co-chair of the Third International Joint Conference on Agents and Multi Agent Systems hosted in New York.