

Book reviews

Artificial intelligence and human institutions by Richard Ennals, Springer-Verlag, London 1991, pp 166, DM84.

Computer systems, like motor cars, are designed and built by people with great technical skills and vision, for use by people who have entirely different skills and aspirations. This gap should be bridgeable for systems designed for individual use, both at naive or expert level, provided that developers empathize sufficiently with the user.

When consideration is given to computer systems in the context of an institution or organization, then a new order of complexity is added. Organizations can be regarded as complex ‘open socio-technical systems’, about whose behaviour we understand surprisingly little. Adding artificial intelligence to the melting pot multiplies the complexity and the difficulty of predicting the impact of an AI system on an institution such as a school, or a bureaucracy.

This book addresses some of the problems of applying AI in a variety of settings in which the author has worked. He is an enthusiastic proponent of low-cost applications of AI to everyday activities. His method has been ‘hands-on’ involvement using action research methodology. His starting point is the need to achieve acceptance and success using conventional criteria, before changing the paradigms and the rules of the game.

He attempts to ‘humanize’ AI by using a qualitative dialogue or group-based approach, and balances the human processes of collaboration and continuing development against technical requirements. He firmly resists the idea of a final product whose development is frozen. Action research is an appropriate method for applying AI techniques in loosely-structured institutions, where both parties are embarked upon a voyage of discovery. Surprisingly, perhaps, in such a scholarly and well-referenced monograph, he does not draw on the work of Schön (1990) on the reflective practitioner and of Argyris and Schön (1978) on the learning organization, which might add powerful support to his arguments.

The book is aimed at the general reader who is led through the history and theory of AI as well as its practical application in various fields. He describes 16 organizational preconditions for collaborative AI activity (pp 110–113) which could be used as a project checklist. How many current AI projects would meet even half of these preconditions? Project leaders might benefit by putting the author’s list on the wall as a daily workout.

In his conclusions, the author argues strongly for a human centred approach, based on progress towards qualitative social goals, and this brings in a political dimension. He sees the alternative strategies offered by AI as potentially liberating, and as a useful tool for developing responsive social institutions. We still have a long way to go to realize this vision, bearing in mind that institutions are not homogeneous, and are made up of individuals each with unique attitudes, learning needs and behaviour.

This monograph contains a stimulating series of vignettes rather than a coherent and integrated whole, which does not make for easy reading, but it is a worthwhile adventure.

References

Argyris, C and Schön, DA, 1978, *Organizational Learning: A theory of action perspective*. Addison-Wesley.
Schön DA, 1990, *Educating the Reflective Practitioner*. Jossey-Bass, Oxford.

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