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BOOKS

Proceedings Knowledge Representation and Reasoning in the Humanities and Social Sciences

17-19 September 1979

Saint Maximin

IRIA-LISH

1980, 607 p.

I.S.B.N.2-7261-0234-4

Edited by

**l'Institut National de Recherche
en Informatique et en Automatique**

Although the contribution of Computer Science tools and methods to research in Human Sciences is fairly well understood, little attention has been paid the possibility for Computer Science to find in Human Sciences procedures an inspiring source leading to new research, or even more, to useful results in the framework of knowledge representation and reasoning simulation.

The papers presented in these proceedings explore this hypothesis. Even though their first concern is logic, linguistic and computer science, they also present work demonstrating how reasoning is elaborating in some subsets of human sciences together with perspective and limitations of a formal approach.

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ABSTRACTS

A Model for Deliberation, Action, and Introspection

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TR-581, May 1980

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This thesis investigates the problem of controlling or directing the reasoning and actions of a computer program. The basic approach explored is to view reasoning as a species of action, so that a program might apply its reasoning powers to the task of deciding what inferences to make as well as to deciding what other actions to take. A design for the architecture of reasoning programs is proposed. This architecture involves self-consciousness, intentional actions, deliberate adaptations, and a form of decision-making based on dialectical argumentation. A program based on this architecture inspects itself, describes aspects of itself to itself, and uses this self-reference and these self-descriptions in making decisions and taking actions. The program's mental life includes awareness of its own concepts, beliefs, desires, intentions, inferences, actions, and skills. All of these are represented by self-descriptions in a single sort of language, so that the program has access to all of these aspects of itself, and can reason about them in the same terms.

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A Simple Filespace Management Scheme for Floppy Discs

P.M. Ross & K.R. Johnson

DAI Research Paper No. 137-1980

10 pages - Price: 25P + postage

The filesystem management scheme described in this paper is intended for use in microcomputers. It was designed to resolve the conflict between the need for reasonably fast file access and the need to avoid the disruption that major garbage collection of free space causes, while still being simple to implement. To this end, it is built to allocate consecutive free blocks for files when possible, but to chain together the component blocks of files in case it is not possible. The scheme is part of TERA LOGO.