

PREFACE

This issue of the *Nordic Journal of Philosophical Logic* contains a selection of the papers presented at the Fifth International Workshop on Deontic Logic in Computer Science (DEON '00) in Toulouse, France, 20–22 January, 2000. The first workshop in the series was held in Amsterdam, The Netherlands, in December 1991, and subsequent meetings have taken place in Oslo, Norway (1994), Sesimbra, Portugal (1996), and Bologna, Italy (1998).

The Toulouse workshop, like its predecessors, was organized in order to bring together investigators working in deontic logic and its applications in different areas of research; for example, logic and philosophy, legal theory, computer science and artificial intelligence, and management science. During its brief history as an area of systematic logical research, deontic logic has developed from a study of the conceptual and logical questions concerning the basic normative concepts (the concepts of obligation, permission, prohibition, and related concepts) into a complex interdisciplinary field. This field includes studies of norm systems and their formalization, normative positions and the dynamics of norms, the representation of actions and agency, and reasoning about conflicting regulations, as well as research into reasoning about confidentiality and database security, the interaction between computer systems and their users, and the formalization of contracts and trade procedures. Another selection of the papers presented at the Toulouse meeting will be published in the journal *Fundamenta Informaticae*.

The papers published here deal with the structure of normative systems, the logical representation of conditional and conflicting obligations, and the interrelations among deontic concepts, value concepts and concepts representing agency and responsibility.

In 'Three Characterizability Problems in Deontic Logic', Lennart Åqvist develops a system of alethic modal logic in which various deontic categories (conditional obligation and permission, supererogation and offence) are defined by means of "systematic frame constraints" which represent different levels of perfection. Mark A. Brown, 'Conditional Obligation and Positive Permission for Agents in Time', investigates different concepts of obligation and permission, including the concept of "positive" or explicit permission, in a system of temporal deontic logic and the logic of action. Lou A. Goble's 'Multiplex Semantics for Deontic Logic' develops a "multiplex semantics" of deontic logic which allows a perspicuous representation

of conflicting normative standards and obligations. Paul McNamara's paper 'Toward an Integrated Agential and Aretaic Framework' is an attempt to integrate the "aretaic" concepts of blameworthiness and praiseworthiness with deontic concepts (obligatory, permissible, etc.) and the concepts representing agency. Jan Odelstad and Lars Lindahl's paper 'Normative Systems Represented by Boolean Quasi-Orderings', presented in the workshop as an invited paper, investigates the structure of normative systems and the possible interrelations among their subsystems in the framework of Boolean quasi-orderings. The authors show that the representation of a normative system as a class of Boolean quasi-orderings makes it possible to distinguish the interpretative amplifications of a normative system from its uncontroversial "core" and from the changes in the core of the system. Another invited paper, Cristiano Castelfranchi's 'Formalising the Informal? Dynamic Social Order, Bottom-up Social Control, and Spontaneous Normative Relations', will be published in the next issue of *Nordic Journal of Philosophical Logic*.

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Guest Editors