

Formal Models of Norm Change, 18th-19th January 2010 *Davide Grossi*

After the first successful edition held in 2007 at the University of Luxembourg, the workshop “Formal Modes of Norm Change” has been held this year at the University of Amsterdam, on 18th-19th January, in the distinguished location of the Doelenzaal of the University Library. This second edition of the workshop has brought together, for two days, several researchers interested in norms and active in neighboring research fields such as philosophy, computer science, artificial intelligence, theory of law. The aim of the workshop was to foster the interaction between these research fields on the common topic of norm change and, in general, on topics related to the dynamics of evaluative and deontic notions such as preferences, obligations, permissions, rights.

The program of the workshop has been structured in four groups of talks. The first group of talks have focused on a comparison, highlighting similarities as well as differences, between the dynamics of norms and the dynamic of mental attitudes such as belief and knowledge, this latter being a well-established object of research in the fields of belief revision and dynamic epistemic logic. So, after the first talk “What is Norm Change?” by **Leon van der Torre** (University of Luxembourg), **Gabriella Pigozzi** (University of Luxembourg) and **Guido Boella** (University of Turin), which set the stage for the workshop, **Richard Booth** (University of Luxembourg) has tested the application of the AGM postulate-based methodology to provide an abstract high-level framework for the analysis of norm change. Still in line with established research on the dynamics of knowledge and belief, **Alexandru Baltag** (University of Oxford) has provided a fascinating insight into norm change by looking at how agents change policies for interpreting incoming information when confronted with a belief-change process: “Dynamic-Doxastic Norms versus Doxastic-Norm Dynamics”.

The second group of talks has focused on issues relating norm change to argumentation and to the dynamics of legal codes. **Henry Prakken** (Universities of Utrecht and Groningen) has argued for the incorporation in the design of argumentation procedures of social-theoretic aspects of multi-agent procedures such as fairness and efficiency. **Guido Boella** (University of Turin) has looked at the interesting problem of the dynamics of the interpretation of legal rules. The interpretation of the law varies as it is confronted by new cases: e.g., (from a real legal case!) if it is forbidden to fish, does this mean that it is also forbidden to fish frogs? Finally, **Antonino Rotolo** (University of Bologna) has offered a thorough logical analysis (in the framework of defeasible logic) of the sort of subtleties involved in the dynamics of legal provisions, a dynamics dictated by changes concerning not only the validity and existence of the provisions themselves, but also of their scope and time of force, their efficacy, and their applicability.

The third group of talks has tackled issues related to deontic logic proper and to the logic of normative systems and institutions. **Emiliano Lorini** (Université Paul Sabatier, Toulouse) has presented an extensive logical analysis of multi-agent institutions based on the notions of acceptance (roughly, what is true in the context of an institution is what all agents in that institution accept / agree to be true) and has formally captured a number of operations of “acceptance change”, accounting for a bottom-up perspective on institutional change. **Dov Gabbay** (King’s College) has provided an original new analysis of a traditional theme in deontic logic, the issue of contrary-to-duty norms, by means of reactive Kripke models. Remaining in the field of deontic logic, **Davide Grossi** (University of Amsterdam) has proposed an analysis of norm change by interfacing standard preference logics with dynamic context logic, pointing then at a number of open issues concerning the application of preference logics to deontics.

The last group of talks has focused on applications of modal logic techniques to the study of norm change. **Paolo Turrini** (University of Utrecht) has proposed an analysis, within coalition logic, of the standard deontic notions of permission, prohibition and obligation, in terms of a game-theoretic notion of optimality. **Guillaume Aucher** (University of Luxembourg) has presented a system of dynamic deontic epistemic logic in which issues of knowledge dynamics are put side by side with deontic notions, allowing for the formal analysis of concepts such as “being obliged to know”. The last talk was given by **Johan van Benthem** (Universities of Amsterdam and Stanford) who contoured the problem of norm change from the point of view of the general program of logical dynamics, giving to it a precise place concerned with the dynamics of agents’ preferences and evaluations: norms and, more generally, evaluations are essential ingredients of the decision-making of rational agents in social contexts.

All in all, the workshop has given a lively snapshot of the interests of a growing research community working at the interface of several disciplines, and sharing a common trust in logic-based methods.

For the abstract of the talks, as well as the slides, please visit the website at:

<http://www.cs.uu.nl/events/normchange2/index.html>

Davide Grossi Institute of Logic, Language and Computation University of Amsterdam