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Reasons, argumentation and justification

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Editorial

Reasons, argumentation and justification: DEON 2016 special issue

This special issue of the *Journal of Logic and Computation* puts together contributions that were first presented at the 13th *Deontic Logic and Normative Systems* (DEON) conference, formerly known as ‘Deontic Logic in Computer Science’, that took place in Bayreuth in July 2016. The conference proceedings were published by College Publications as the first volume of their DEON series. This special issue is based on selected papers from the conference. The authors have been asked to revise and significantly extend their conference contributions, and each paper went through the usual rigorous journal review process. Of the twelve papers submitted, five made it through that process and are presented in this issue.

DEON 2016’s special focus was on ‘Reasons, argumentation and justification’. Reasons play a prominent role in the normative study of action, belief, intention and emotions, as well as in everyday justification and argumentation. Recent years have seen numerous fruitful exchanges between deontic logicians, computer scientists and philosophers on the nature of reasons and their role in practical and theoretical deliberation. There have also been multiple applications of formal frameworks for the study of reasons in areas of interest to linguists and philosophers of language. The goal of DEON 2016’s special focus was to continue this positive trend by encouraging submissions that explore the significance of deontic logic for the study of reasons and their connection with justification and argumentation (and vice versa).

The first two papers of this issue, Beirlaen, Heininck and Straßer’s ‘Structured argumentation with prioritized conditional obligations and permissions’ and Liao, Oren, Van der Torre and Villata’s ‘Prioritized norms in formal argumentation’, illustrate particularly well two central and related questions that arise at this interplay between argumentation, justification and norms: deontic detachment and normative conflicts. The question of deontic detachment is of identifying the circumstances under which one can infer unconditional obligations and permissions from conditional ones. The question of normative conflict is one of adjudicating incompatible duties or permissions. Both questions come together when one observes that conditional norms and arguments are structurally very similar. They can be seen as providing *pro tanto* or *prima facie* reasons or conditions in support of normative conclusions, conditions that can be defeated in case of conflict. The first two papers in this issue address these questions at different levels of abstraction. Liao and co-authors work in the abstract framework of input/output logic and pinpoint general conditions under which one can represent three popular strategies for computing priority of arguments and/or reasons supporting normative conclusions. In this very general set-up they only consider obligations and prohibitions. Beirlaen and co-authors, on the other hand, work in the more concrete framework of structured argumentation theory and study conflict resolution and deontic detachment both for permissive and regulative norms.

The next two papers in the issue, Giordani and Canavotto’s ‘Enriching deontic logic’ and Ju and Van Eijck’s ‘A temporal dynamic deontic logic’, address questions that readily arise from detachment and normative conflict, namely the question of the normative status of complex and/or sub-ideal actions, as well as omissions. One of the main reasons why deontic logicians have been studying conditional norms is to understand the duties that arise in non-ideal, contrary-to-duty

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cases, that is when other norms have been violated. Giordani and Canavotto show in their paper that, even though this question is one of the most discussed in deontic logic, current frameworks do not exhaust the logical landscape of contrary-to-duty obligations and permissions. Building on a natural distinction between ideality and optimality, they provide a fine-grained normative typology that allows them to elegantly solve some of the classical problems for reasoning with conditional norms. Ju and Van Eijck, on the other hand, start with the observation that, in frameworks that are rich enough to express contrary-to-duty scenarios, the questions of complex actions—sequential composition, free choice, parallel execution—and of omissions naturally arise. Obligations and permissions should be handled with care in such a rich environment. To take an example, the natural idea that an action A is obligatory whenever omitting A is forbidden becomes rather tricky when A can itself be a sequence of actions. Is only doing part of A omitting it? If A is obligatory, is it then forbidden to do only part of A ? Ju and Van Eijck develop and formalize a new concept of omission that improves on existing proposals and embed it in a deontic logic that allows them, just like Giordani and Canavotto's paper, to develop a more fine-grained typology of obligations and permissions for complex actions.

The final paper of this issue, Van De Putte's 'Coarse deontic logic' also pushes forward the agenda of developing more subtle notions of obligations and permissions. Unlike the other papers in this issue, Van De Putte's primary concern is with unconditional norms instead of conditional ones or contrary-to-duty cases. Van De Putte studies a recent proposal for a so-called 'contrastive' semantics of obligations, which on the one hand does not fall prey to Ross's classical paradox and, on the other hand, allows for cases where an action being obligatory is compatible with some of its executions being impermissible. It is in the latter sense that this deontic logic is 'coarse'. Van De Putte shows that the original, non-standard contrastive semantics can be translated into a combination of normal deontic modalities, that it can be completely axiomatized and that it has the finite model property. He also shows that this semantics, which might appear rather exotic at first sight, actually overlaps with a number of recent and less recent logics for obligations and so-called strong permissions.

We thank the authors of these five papers for contributing in making this special issue a success, as well as all the other authors who submitted their research for consideration and possible publication in this issue. We would also like to express our gratitude to the referees for their service in reviewing papers and also to the editorial office of the JLC for their help in preparing the issue.

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