

Normative Reasoning - Dyadic Deontic logic of Carmo & Jones

Alexey Gonus

December 17, 2019

Abstract

During this talk one more topic on Normative Reasoning, namely Dyadic Deontic logic of Carmo & Jones {**DDL** later on}, will be presented. Firstly, we will try to give a feeling and intuition with some examples that motivates the definition of **DDL**, or Contrary-to-Duties, presenting some new **DDL** operators and applying them to those examples as done in [1]. After, the formal language will be defined followed by Semantics section alongside with explanations of different parts of the constructed **DDL** model. To continue, we axiomatize logic adding inference rules as well and at the end present some results concerning soundness and consistency mostly following [1]. Presumably, we pointing out the implementation of **DDL** in HOL relying on [2].

References

- [1] JOSE M. C. L. M. CARMO and ANDREW J. I. JONES. Completeness and decidability results for a logic of contrary-to-duty conditionals. In *Journal of Logic and Computation Advance Access* published April 26, 2012
- [2] CHRISTOPH BENZMÜLLER, ALI FARJAMI, XAVIER PARENT. A Dyadic Deontic Logic in HOL. In *Journal of Applied Logics — IFCoLog Journal of Logics and their Applications*.
- [3] JOSE M. C. L. M. CARMO and ANDREW J. I. JONES. Deontic logic and Contrary-to-Duties. In *Handbook of Philosophical logic* Volume 8, pages 265-343, 2002.