Jaap C. Hage
Reasoning with Rules: An Essay on Legal Reasoning and Its Underlying Logic.
Dordrecht: Kluwer Academic Publishers 1997.
Pp. xiv + 264.
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This book is a contribution to the intersecting fields of practical reasoning, philosophy of law, and philosophical logic. Hage, who is a member of the Department of Metajuridica at the University of Maastricht, aims to show that the dominant, syllogistic model of reasoning with rules is defective, and to replace that model with a superior alternative that emphasizes instead how reasons are adduced, weighed, and balanced against other reasons. He proposes a formal extension of the first-order predicate calculus, called 'Reason-based logic' ('RBL'), which will be of particular interest to specialists in the field of artificial intelligence and the law.

In Hage's view, a truth-semantics for rules has to be rejected because it crucially fails to account for the phenomenon of rule defeasibility. For example, if it is a rule that thieves are punished and it is a rule that minors are not punished, and, further, if it is a fact that John is both a minor and a thief, it follows both that John is to be punished and that John is not to be punished. Obviously, consistency requires that something give. Theorists attached to syllogistic models tend to deal with such situations by the maneuver of 'adapting the premisses', i.e., narrowing one of the initial premisses to eliminate the potential conflict. This maneuver saves consistency by ex post rule-revisions — but, as Hage points out, this is not true to the ex ante, action-guiding nature of our reasoning with rules. Reasoning with rules is nonmonotonic, which is to say that conclusions may always be withdrawn in light of further information, but without our having to rewrite our rules to incorporate every conceivable exception, as the syllogistic models invite us to do.

Hage wants to make a more fundamental case against a truth-semantics for rules, and to this end he canvasses a wide range of work on practical reasoning, with particular emphasis on the work of Joseph Raz. Hage takes the position that rules, unlike statements, require application, which explains both the distinctively defeasible nature of reasoning with rules and the possibility of analogical reasoning with rules. In the end, though, the argument against the syllogistic model, and its rendering of rules as statements, comes down to the argument from defeasibility.

RBL, Hage's formalized alternative to the syllogistic models, incorporates a novel approach that treats rules as 'structured' individuals, rather than as statements. Its advantage is its ability to render the weighing of reasons in the process of legal reasoning. When a rule's antecedent-term is satisfied, reasons for its conclusion-terms are generated, and these reasons in turn are collected and represented as being weighed against countervailing reasons. Thus, in the above example, the two rules can be seen as colliding vectors

that survive the outcome, whichever it is, that is determined by their relative weights.

One disadvantage of this approach is that it does not transparently render the logical relations between legal rules. For example, the rule that

under_35(x) → ~eligible_presidency(x)

(in the symbolism of RBL) does not entail the logically equivalent rule that

eligible_presidency(x) → ~under_35(x).

('Notice that → is a function symbol that operates on terms, and not a logical operator which operates on sentences,' 135). Because Hage's decision to render rules and principles as individuals is so fundamental, RBL cannot elegantly be extended to recapture the advantages of traditional approaches that render rules as statements. The logical products of a given rule-set can, of course, simply be handled metalinguistically, or by straightforwardly supplementing the domain theory. Whether such maneuvers are more or less artificial than that of 'adapting the premisses' to restore consistency under a syllogistic approach is a judgment that Hage tacitly leaves to the reader.

After illustrating the application of RBL and proposing possible extensions, Hage suggests yet another argument against a truth-semantics for legal rules. Legal rules have a different 'direction of fit' than statements — 'world-to-word' rather than 'word-to-world'. In the end, Hage seems to acknowledge that this point is not decisive, as he allows that rules 'take a position in between principles [which have no "information content"] and descriptive sentences [which do]' (254).

Hage's book invites comparison to Kevin Ashley's *Modeling Legal Argument: Reasoning with Cases and Hypotheticals* (Cambridge, MA: MIT Press, 1990). Ashley, like Hage, is drawn to formal models but dissatisfied with deductive ones. Taking the role of *stare decisis* in the common law tradition as the key explicandum, Ashley devised a formalism, called HYPO, eschewing rules and rule-applying altogether, and emphasizing instead the use of precedents and hypothetical cases — each schematized as a cluster of facts and an outcome — and the argumentative moves of assimilating and distinguishing cases. Hage, perhaps more in keeping with the civil law tradition, makes rules the centerpiece of his approach, and regards the defeasibility of reasoning with rules as the key explicandum. Although neither RBL nor HYPO fully capture the Protean nature of legal reasoning, they complement each other interestingly and together point the way to ever more sophisticated alternatives to deductive models.

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