

Can One Really Reason about Laws?

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Precedent decides legal cases, but few precedents make the case at bar *res judicata*. Instead, analogical reasoning is used, together with canons of statutory interpretation and theories of constitutional jurisprudence. The work under review [1] provides a model and algorithm for analogical reasoning in the legal context.

The model is best explained by the example used throughout the paper, the rule that vehicles are not allowed in a public park. How do we reason analogically that horses are not allowed in a public park? The answer given by the paper is to look at the properties of a vehicle that form the *ground* for the rule—"the reason why the rule has been established"—here, being larger than a human being and being mobile, hence being dangerous—and checking the case at bar to see whether the properties and relations that form the ground of the rule apply there, too. In the case of a horse, although it is not a vehicle, since it is large and mobile, it is potentially dangerous, so we conclude that it is not permitted in a public park. Since the method seeks the reason for the rule and abstracts it out, it is termed goal-dependent abstraction (GDA). To do this, a higher-level entity is postulated with its properties including all those covered by the rule; the new entity is then checked to see whether it is an instance of the postulated entity—if it has the properties, it is taken to be an instance of the higher-level entity and the properties assumed to have been inherited. The authors call this process "generalization and deduction." Technically, the paper represents very fine work, except that in order to find the ground of a rule, some human input is required. The rule is denied and consequences of the negation are automatically derived; then, those which a person has previously marked as undesirable are candidates for the rule's ground. So this is a man-machine system, something not emphasized by the authors. Still, it is very fine work.

Aside from its technical excellence and, on the other hand, an annoying number of missing articles, misplaced modifiers, and failures of agreement, the authors imply a certain understanding of law and how laws are made. The paper uses an ordinance rather than cases for analogical reasoning, after all, a practice that makes little sense unless the legislature is always perfectly consistent. Thus, buses and maintenance vehicles may be allowed, despite the ground, and horses may have been overlooked, despite the ground. There is also an assumption that laws do not originate from pressure by interest groups but

from well-defined, broadly applicable reasons. Such a system could not distinguish, say, licensed vehicles from unlicensed vehicles if the real purpose of the licensing system is, as is often the case, to raise funds and limit competition.

It is ironic that the authors chose this rule about a vehicle from H. L. A. Hart's article on the separation of law and morals as a descriptive matter. [2] Hart argues for a descriptive positivism, an understanding that "the law as it is" is distinct from "the law as it ought to be": "[F]irst, in the absence of an expressed constitutional or legal provision, it could not follow from the mere fact that a rule violated standards of morality that it was not a rule of law; and, conversely, it would not follow from the mere fact that a rule was morally desirable that it was a rule of law." (p. 599) And, again: "Proof that the principles by which we evaluate or condemn laws are rationally discoverable, and not mere 'fiats of the will,' leaves untouched the fact that there are laws which may have any degree of iniquity or stupidity and still be laws." (p. 626) In arguing that an ordinance such as the one barring vehicles from a public park applies as well to horses, the authors confuse law as it is with law as (they reason) it ought to be. To be sure, Hart supported such an approach for what he called "penumbral cases," cases on the borderline of the term "vehicle," but one cannot reasonably interpret a horse as a borderline vehicle (see [1], p. 102n), and analogical reasoning is simply inappropriate.

In summary, the paper's methodology is most appropriate for judicial reasoning from prior cases to new cases—reasoning from precedent—but fails in its apparent application as a means of interpreting ordinances and statutes.

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References

[1] Tokuyasu Kakuta, Makoto Haraguchi, and Yoshiaki Okubo, "A Goal-Dependent Abstraction for Legal Reasoning by Analogy," *Artificial Intelligence and Law* 5(March 1997): 97-118.

[2] H. L. A. Hart, "Positivism and the Separation of Law and Morals," *Harvard Law Review* 71(February 1958): 593-629.