

SHYSTER: A Pragmatic Legal Expert System

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Except where otherwise indicated, this thesis is my own original work.

A handwritten signature in black ink, reading "James Popple". The signature is written in a cursive style with a large, stylized 'J' and 'P'.

James Popple
29 April 1993

shyster \ˈshɪstə(r)\ *n* -s [prob. after *Scheuster* fl1840 Am. attorney frequently rebuked in a New York court for pettifoggery] : one who is professionally unscrupulous esp. in the practice of law or politics ...

Webster's Third New International Dictionary (1961)¹

shyster (ˈʃaɪstə(r)) ... [Of obscure origin.

It might be f. SHY *a.* (sense 7, disreputable) + *-ster*; but this sense of the adj. is app. not current in the U.S.]

... 'A lawyer who practises in an unprofessional or tricky manner; especially, one who haunts the prisons and lower courts to prey on petty criminals; hence, any one who conducts his business in a tricky manner' (*Funk's Stand. Dict.* 1895). Also *attrib.* or *adj.* Orig. and chiefly *U.S. slang* ...

The Oxford English Dictionary (1989)²

shyster. An unscrupulous lawyer (note that the definition presumes the existence of scrupulous ones) ...

The term does *not* come from—as suggested in various dictionaries—the surname Scheuster, supposedly a lawyer noted for shyster-like practices; from the name of the Shakespearean character, Shylock; ... or from any of the various meanings of *shy* (e.g., to be shy of money). Rather ... *shyster* evolved from the underworld use of *shiser*, a worthless fellow, which derived in turn from the German *scheisse*, excrement, via *scheisser*, an incompetent person (specifically, one who cannot control his bodily functions) ...

A Dictionary of Invective (1991)³

Abstract

Most legal expert systems attempt to implement complex models of legal reasoning. But the utility of a legal expert system lies not in the extent to which it simulates a lawyer's approach to a legal problem, but in the quality of its predictions and of its arguments. A complex model of legal reasoning is not necessary: a successful legal expert system can be based upon a simplified model of legal reasoning.

Some researchers have based their systems upon a jurisprudential approach to the law, yet lawyers are patently able to operate without any jurisprudential insight. A useful legal expert system should be capable of producing advice similar to that which one might get from a lawyer, so it should operate at the same pragmatic level of abstraction as does a lawyer—not at the more philosophical level of jurisprudence.

A legal expert system called SHYSTER has been developed to demonstrate that a useful legal expert system can be based upon a pragmatic approach to the law. SHYSTER has a simple representation structure which simplifies the problem of knowledge acquisition. Yet this structure is complex enough for SHYSTER to produce useful advice.

SHYSTER is a case-based legal expert system (although it has been designed so that it can be linked with a rule-based system to form a hybrid legal expert system). Its advice is based upon an examination of, and an argument about, the similarities and differences between cases. SHYSTER attempts to model the way in which lawyers argue with cases, but it does not attempt to model the way in which lawyers decide which cases to use in those arguments. Instead, it employs statistical techniques to quantify the similarity between cases. It decides which cases to use in argument, and what prediction it will make, on the basis of that similarity measure.

SHYSTER is of a general design: it can provide advice in areas of case law that have been specified by a legal expert using a specification language. Hence, it can operate in different legal domains. Four different, and disparate, areas of law have been specified for SHYSTER, and its operation has been tested in each of those domains.

Testing of SHYSTER in these four domains indicates that it is exceptionally good at predicting results, and fairly good at choosing cases with which to construct its arguments. SHYSTER demonstrates the viability of a pragmatic approach to legal expert system design.

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