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# The Theory of Economic Policy and the Law of Torts

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## I. THE THEORY OF ECONOMIC POLICY

### A. Introduction

On October 27, 1969, the first prize in economics to the memory of Alfred Nobel, recently funded by the Sveriges Riksbank of Sweden, was awarded jointly to Ragnar Frisch of Oslo University and Jan Tinbergen of the Netherlands School of Economics. The Royal Academy of Sciences of Sweden, which selected the recipients from among about thirty nominees, commended them "for having developed and applied dynamic models for the analysis of economic processes."[1] Tinbergen's contributions include the discovery and elaboration of a framework for decision making known as the theory of economic policy, which may be used in the study of legal problems. In this article I examine the policies and objectives of the law of tort damages from the perspective which this theory supplies.

### B. Explication

To Tinbergen the success of a solution to a problem of economic policy can be expressed as a function of target variables. Target variables are variables which cannot be manipulated directly but which are determined by interaction among instrument variables and data. The values which target variables or instrument variables can assume may be restricted, for example by conditions of nonnegativity. Subject to such constraints, values of instrument variables may be specified arbitrarily by the decision maker. Data are factors having an impact on performance but subject to neither direct nor indirect control. Irrelevant variables are side effects of policy decisions not taken

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1. Lee, *2 Europeans Win First Nobel Economics Prize*, N.Y. Times, Oct. 28, 1969, at 1, col. 1. *See* Heinemann, *Econometrics: Taking the Guess out of Prediction*, N.Y. Times, Oct. 28, 1969, at 16, col. 1; *Econometrics: Equations not for Everyday Use*, N.Y. Times, Nov. 2, 1969, § 4 (Week in Review), at 10, col. 1; *Prize-Winning Pioneers in an Esoteric Science*, N.Y. Times, Oct. 28, 1969, at 16, col. 1.

into account by evaluative criteria; they usually may be eliminated from express consideration by reformulation of the model under scrutiny. Ideally the decision maker selects those values of the instrument variables which maximize community welfare.[2]

C. INTERPRETATION

This analysis permits division of problems of policy into those involving fixed targets and those involving flexible targets. If in a given problem the number of instrument variables equals or exceeds the number of target variables, the decision maker will normally be able to choose levels of instrument variables so as to achieve individually optimal target values. If the number of target variables exceeds the number of instrument variables, on the other hand, compromise among competing target claims will typically be necessary. In the former case one instrument can usually be applied to control each target variable without regard to its other effects; in the latter, at least one instrument must serve to regulate two or more target variables.[3] This distinction is of fundamental importance. Analysts have remarked that a "basic tenet of the theory of economic policy developed in the postwar period is that, in general, a necessary requirement for the attainment of a number of policy goals is the availability of at least an equal number of independent policy weapons."[4]

The difference, essentially that between a solution which satisfies all interests completely and one in which inconsistent interests must be balanced, is crucial to some aspects of the law. In particular, a number of seeming anomalies can be explained as products of an unwillingness of decision makers to develop separate instruments to implement separate policies when such policies only infrequently dictate disparate results. Naturally this propensity has not gone unremarked. Bevan, for example, notes that in the criminal law "the attempt to make one single thing, or one single course of action, serve three, or two, wholly different purposes, commonly leads to its being unsatisfactory in its results . . . ."[5]

2. J. TINBERGEN, ECONOMIC POLICY: PRINCIPLES AND DESIGN (1967); J. TINBERGEN, ON THE THEORY OF ECONOMIC POLICY (1952).

3. K. FOX, J. SENGUPTA & E. THORBECKE, THE THEORY OF QUANTITATIVE ECONOMIC POLICY WITH APPLICATIONS TO ECONOMIC GROWTH AND STABILIZATION 20-50 (1966).

4. Willett & Forte, *Interest Rate Policy and External Balance*, 83 Q.J. ECON. 242 (1969).

5. E. BEVAN, SYMBOLISM AND BELIEF 221 (1938).

## II. THE LAW OF TORTS

### A. History

Early antecedents of modern tort doctrine appear primarily to have been products of efforts to maintain order by restricting individual reactions to supposed wrongs:

> In the beginnings of law the idea is simply to keep the peace. In primitive law justice, in the sense of the end of the legal system, was a device to keep the peace. Whatever served to avert private vengeance and prevent private war was an instrument of justice. The law existed as a body of rules by which controversies were adjusted peaceably. At first, therefore, it attempted nothing more affirmatively than to furnish the injured person a substitute for revenge. Where modern law thinks of compensation for an injury, archaic law thought of composition for the desire to be avenged. . . . [T]he original problem of the law was to narrow the field of self help, to regulate self redress and finally to supersede it by peaceful modes of redress. . . . The measure of what the person wronged may exact is not the extent of the injury done but the extent of the desire for vengeance awakened.[6]

The less ambitious regulatory measures might at first have sought only to control procedural aspects of private war; thus in 1187 the Diet of the German Empire at Nürnberg decreed "that he who intends to do damage to another or to injure him shall give notice to him at least three days before by a sure messenger."[7] The growth of collective authority was accompanied by limitation of the form and extent of retaliatory response. In some cases permitted vengeance, although appropriate given the primitive test of equivalence with the initial harm, did not encourage additional injury: "[W]here a man falls from a tree and kills another below, he shall be held innocent; yet the blood-feud will be allowed if insisted upon, but it may be carried out in one way only,—the avenger may himself mount the tree, and in turn fall upon the slayer."[8] Eventually the vestigial claim to redress by reciprocating violence was reduced to a right to monetary payment.[9] The problem of the magnitude of this payment remained.

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6. Pound, *The End of Law as Developed in Legal Rules and Doctrines*, 27 Harv. L. Rev. 195, 198-99, 200, 202 (1914). *See* H. Potter, An Historical Introduction to English Law and Its Institutions 20, 306, 307 (2d ed. 1943).

7. Pound, *supra* note 6, at 200 n.22.

8. Wigmore, *Responsibility for Tortious Acts: Its History*, 7 Harv. L. Rev. 315, 324 n.4 (1894).

9. Harding, *Individual Responsibility in Anglo-American Law*, in Responsibility in Law and in Morals 41, 44-46 (A. Harding ed. 1960).

B. TARGETS: DEFINITION

Section 901 of the *Restatement of Torts* provides:

> The rules for determining the measure of damages in tort are based upon the purposes for which actions of tort are maintainable. These purposes are:
> (a) to give compensation, indemnity or restitution for harms;
> (b) to settle disputes as to rights;
> (c) to punish wrongdoers.[10]

The second purpose recognizes the initial justification of government-sponsored relief but offers no guidance with respect to measures of recovery other than to dictate award of nominal damages in instances where other tests might indicate dismissal. The first purpose is recapitulated in the assertion that "the law of torts attempts primarily to put an injured person in a position as nearly as possible equivalent to his position prior to the tort";[11] the third engrafts to this standard additional criteria of deterrence and retribution. The formulation is not novel; in 1763 Lord Chief Justice Pratt noted that "[d]amages are designed not only as a satisfaction to the injured person, but likewise as a punishment to the guilty, to deter from any such proceeding for the future, and as a proof of the detestation of the jury to the action itself."[12]

For the moment I disregard transaction costs, those frictional costs incurred in shifts from one position of equilibrium to another. In terms of the Tinbergen model one may define three target variables:

$y_1$ = the amount which if paid to plaintiff would be just sufficient to compensate him for his injury;

$y_2$ = the amount which if paid by defendant would be just sufficient to deter undesired conduct;

$y_3$ = the amount which if paid by defendant would be just sufficient to satisfy legitimate societal and individual desires for vengeance.

The damage remedy, however, confines the decision maker to use of a single instrument variable:

$z$ = the payment by the defendant to the plaintiff.

Achievement of the retributive goal requires exaction from the defendant of a sum equal to or greater than $y_3$. Retributive and deterrent criteria are not, however, independent. That degree of social undesirability of conduct sufficient to legitimate a given retributory payment would presumably also compel an

10. RESTATEMENT OF TORTS § 901 (1939).
11. *Id.* § 901, comment *a*, at 537.
12. Wilkes v. Wood, 98 Eng. Rep. 489, 498-99 (C.P. 1763).

equal or greater payment on deterrent grounds. If $y_3$ is thought to equal $y_2$, attention may be focused on the potential inconsistency of $y_1$ and $y_2$ alone. Ideally the instrument variable should be set to attain exactly the desired target variable levels:

$$z = y_1$$
$$z = y_2$$

If z exceeds $y_1$ the plaintiff will be awarded more than is necessary to compensate him for his injuries; if z is less than $y_1$ the plaintiff will not be fully compensated. Similarly, if z exceeds $y_2$ the defendant will be required to pay more than is necessary optimally to deter him; if z is less than $y_2$ the defendant will be suboptimally deterred. Simultaneous satisfaction of these relationships requires that $y_1$ equal $y_2$.

### C. Targets: Consistency

Payments exacted from individuals causing injury should make relevant socially undesirable conduct unprofitable to them but not eliminate their gain from socially desirable conduct. Socially undesirable conduct can be differentiated from socially desirable conduct by a rule sufficiently value-free to command wide acceptance. One can isolate, at least conceptually, a set of states of society from which movement benefiting any one individual may be made only at the cost of injury to another. Such states may be characterized as Pareto optimal or efficient. Although choice among Pareto optimal states entails evaluation of competing individual claims, the superiority of at least one such state over any designated state outside the set of Pareto optimal states may be defended as almost tautological. Affirmance of such superiority follows directly from acceptance of the proposition that scarce means should be allocated so as to maximize the satisfaction of ends; if this is an ethical premise, it is at least one which generally enjoys unqualified assent.[13]

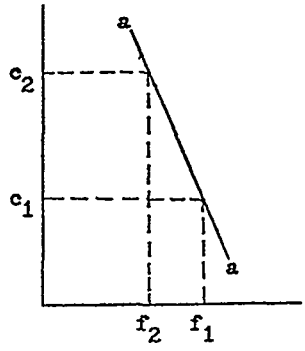
In the prototypical case, where the actions of the defendant harm the plaintiff but have no impact on third parties, Pareto optimality can be achieved only by equating the sum exacted to deter unwanted conduct with the amount which must be paid to the injured individual to assure that his utility level is not affected by his injury. Where the tort is intentional and the defendant can accurately compute the advantages and disad-

13. R. Emmer, Economic Analysis and Scientific Philosophy 39 (1967).

vantages of alternative courses of conduct, this result is obvious. Greater liability would discourage intentional infliction of some injuries which could be offset by compensation without exhausting the gain to the tortfeasor; a smaller exaction would permit individual profit from practices which on balance decrease community welfare. Imposition of a duty to compensate on those who have caused unintended harm will similarly promote allocative efficiency through consequent changes in the frequency of activities occasioning liability. As has been suggested, "[t]he best way we can establish the extent to which we want to allow such activities is by a market decision based on the relative price of each of these activities and of their substitutes when each bears the costs of the accidents it causes."[14] The additional expense of behavior which increases the likelihood of unintended tortious conduct will reduce its attractiveness and therefore normally its prevalence. Increased entrepreneurial liability will for example be reflected in higher prices charged for an ultimate product or service; the affected firm or industry will reduce output if demand is not completely inelastic and the profit motive prevails. That little or no change in behavior may occur in some instances does not signal insufficient deterrent pressure but merely demonstrates that uncontrolled patterns of conduct need not differ greatly from optimal patterns.[15]

14. Calabresi, *The Decision for Accidents: An Approach to Nonfault Allocation of Costs*, 78 HARV. L. REV. 713, 719 (1965).

15. The impact of imposition of a duty to compensate can be presented in the familiar terms of microeconomic theory. Measure the cost of particular conduct and its frequency along vertical and horizontal axes respectively and indicate as by line aa in the diagram below the frequencies associated with various levels of cost. If compensatory requirements increase the cost of the conduct involved from $c_1$ to $c_2$, the frequency of that conduct will change from $f_1$ to $f_2$. The change of frequency is determined both by the magnitude of the change in cost and the inclination of line *aa*. While $f_2$ will usually be less than $f_1$,



Ideally $y_1$ therefore will equal $y_2$ and the requirements which each imposes can be met by manipulation of the single instrument variable z. Implicit legitimation of injury when resulting losses are outweighed by associated gains is not unprecedented. Although Mr. Justice Black can find it "difficult at best" to admit that financial losses can be balanced against individual injury or death,[16] the callously realistic disagree. One critic of ritualistic alarm concerning highway safety contends "that there is, in effect, a desirable level of automobile accidents—desirable, that is, from a broad point of view; in the sense that it is a necessary concomitant of things of greater value to society."[17] One should not forget that the duty to compensate is not the sole deterrent of tortious conduct. Thus a sign near an Irish power station admonishes: "To touch these overhead cables means instant death. Offenders will be prosecuted."[18]

### D. Targets: Inconsistency

That the measure of damages derived above is not undeviatingly applied is clear from instances where courts either assert an unwillingness to or do not in fact compensate an injured person exactly. Williams states: "Where possible the law seems to like to ride two or three horses at once; but occasionally a situation occurs where one must be selected. The tendency is to choose the deterrent purpose for torts of intention, and the compensatory purpose for other torts."[19] The problem, however, is much more complex. Divergence of the amount recovered from the sum which would exactly compensate the plaintiff appears due to error in computing or inability to compute the monetary equivalent of an injury, belief that this monetary

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behavior will be unaffected by added cost if line aa is vertical. In any case within the narrow framework of my analysis, if compensation is exact, the induced frequency is optimal.

Salmond states that "[n]o one can be deterred by a threat of punishment from doing harm which he did not intend and which he did his best to avoid." J. Salmond, Law of Torts: A Treatise on the English Law of Liability for Civil Injuries 18 (10th ed. W. Stallybrass 1945). His pronouncement is premised on a semantic distinction without functional significance.

16. Brotherhood of Locomotive Firemen v. Chicago, Rock Is. & Pac. R.R., 393 U.S. 129, 140 (1968).

17. Williams, *The Nonsense About Safe Driving*, Fortune, Sept. 1958, at 118, quoted in L. Lewin, Report from Iron Mountain on the Possibility and Desirability of Peace 46 (1967).

18. Quoted in N.Y. Times, Dec. 11, 1969, at 59, col. 2.

19. Williams, *The Aims of the Law of Tort*, 4 Current Legal Prob. 137, 172 (1951).

equivalent is not always an accurate measure of deterrent requirements and introduction of distributive criteria to supplement the allocative standard. Isolation of the importance of each of these factors in motivating an individual decision or in explaining a rule of law is frequently impossible. Historical accident and unthinking adherence to precedent are often dispositive.

1. *Monetary Equivalence.*—Unless counterbalanced by jury bias, failure to allow recovery by the plaintiff of his costs of litigation will in itself cause distortion. In general, compensation does not seem to reach the point where the plaintiff is indifferent between recompensed injury and freedom from harm. Where death has occured, however, damage measures have been and remain particularly inadequate.

Absence of common law civil liability for wrongful death was long a source of paradox. Prosser and Smith relate:

> [I]t was more profitable for the defendant to kill the plaintiff than to scratch him—a fact which gave rise to the quite unfounded legend that this was the reason that Pullman passengers in berths rode with their heads to the front, and that the fire axes in the cars were provided for trainmen to use in finishing off those injured in train wrecks.[20]

While some relief is now available, generally as a result of legislative intervention, few would contend that the measure of recovery either by the estate of the deceased or by his family is fully compensatory. Even in a capitalist society, potential earnings hardly summarize the value of life. Determination of the sum required when the individual is no longer alive to choose between compensation and freedom from harm is particularly difficult. In addition, a frequently pervasive disinterest in the welfare of others, who must of course receive the equilibrating payments, will often make full compensation impossible.[21]

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20. W. PROSSER & Y. SMITH, CASES AND MATERIALS ON TORTS 602 (4th ed. 1967).

21. That exact compensation in terms of the creation of indifference between life and death is possible is indicated by the Indian experience of Sir Richard Burton:

> He seems to have been the first to point out to Sir Charles—who was most reluctant to believe it—that though he had signed the death warrants of several rich convicted murderers, the actual man hanged was usually a poverty-stricken substitute hired in his stead. Burton interviewed one pauper "badal" who had agreed to be executed for a murder he had not committed and asked him why. "Sain!" came the answer. "I have been a pauper all my life. My belly is empty. My wife and children are half starved. This is fate, but it is beyond my patience. I get two hundred and fifty rupees. With fifty I will buy rich

2. *External Effects.*—The rule equating optimal deterrence with exact compensation was derived through consideration of a case in which the actions of the defendant injure the plaintiff but have no impact on third parties. In a number of situations, seeming divergence from the requirements of Pareto optimality is attributable to attempts to take account of otherwise uncompensated costs imposed or benefits conferred on nonlitigants. If such external economies or diseconomies arise from the conduct of the defendant, the deterrent exaction needed to achieve ideal equilibrium will normally exceed or fall below the monetary equivalent of the loss suffered by the plaintiff. The resulting dilemma is exemplified by two attempts to internalize externalities, the collateral source rule and early judicial reluctance to burden industrial enterprise with liability for injuries it caused.

The collateral source rule states that payments received from others by an injured individual shall be disregarded when computing the amount he may recover from the person who has injured him. The sums in question are substantial. One summary of compensation to victims of automobile accidents found that only fifty-five percent of the total received was attributable to tort liability settlements; thirty-eight percent came from automobile, medical or life insurance, while social security provided the remaining seven percent.[22] In at least one case, collateral benefits alone amounted to more per week than the average earnings of the plaintiff before his injury.[23] The decision to deter in spite of consequent overcompensation is not unsupported: "If there must be a windfall certainly it is more just that the injured person shall profit therefrom, rather than the wrongdoer shall be relieved of his full responsibility for his wrongdoing."[24] Others disagree: "[A] general rule confining damages to a compensatory level seems infinitely preferable to its opposite. . . . Surely American jurisdictions should now cease to compensate plaintiffs for earnings never lost and expenses never in fact incurred . . . ."[25]

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food and fill myself before going out of the world. The rest I will leave to my family. What better can I do, Sain?"

F. BRODIE, THE DEVIL DRIVES: A LIFE OF SIR RICHARD BURTON 63-64 (1967).

22. A. CONARD, J. MORGAN, R. PRATT, C. VOLTZ & R. BOMBAUGH, AUTOMOBILE ACCIDENT COSTS AND PAYMENTS 147, Tables 4-9 (1964).

23. Foxley v. Olton, [1965] 2 Q.B. 306.

24. Grayson v. Williams, 256 F.2d 61, 65 (10th Cir. 1958).

25. Note, *Unreason in the Law of Damages: The Collateral Source Rule*, 77 HARV. L. REV. 741, 753 (1964).

Because his mortality dictates that he discount future income more highly than would be ideal from the standpoint of the community, and because he attaches a negative value to risks which in the aggregate yield statistically determinate outcomes, the typical individual entrepreneur probably selects a rate of investment below that which would be socially optimal. Need to promote economic development during the early phases of industrialization may have motivated both reliance on fault rather than causation as the usual basis of liability and frequent preclusion of recovery through liberal application of the fellow-servant rule. Entrepreneurial necessity may also have motivated the doctrines of contributory negligence and assumption of risk. Unwillingness to "impose a penalty upon efforts, made in a reasonable, skilful, and careful manner, to rise above a condition of barbarism"[26] appears to have been widespread:

> [M]any of our judges believed that the development of this young country under a system of private enterprise would be hindered and delayed as long as the element of chance exposed enterprisers to liability for the consequences of pure accident, without fault of some sort. . . . Judicial subsidies . . . to youthful enterprise removed pressure from the pocket-books of investors and gave incipient industry a chance to experiment on low-cost operations without the risk of losing its reserve in actions by injured employees. Such a policy no doubt seems ruthless; but in a small way it probably helped to establish industry, which in turn was essential to the good society . . . .[27]

3. *Distributive Criteria.*—All societies temper principles of allocative efficiency with distributive considerations; few would accept a system offering affluence to a minority but bare subsistence to most persons simply because it is purportedly efficient. The persuasiveness of the Paretian standard derives from its independence of interpersonal welfare comparisons. This standard necessarily provides no basis for choice between imputations which give all utility to a single individual and other more balanced imputations. Although Pareto optimality is not conceptually inconsistent with any distributive pattern, certain areas of behavior have traditionally been subject to nonmarket controls. Pervasive use of market criteria would arguably compel reduction of criminal law to tort law; present offenses would be encouraged so long as the perpetrator could compensate the victim for the harm suffered and still profit from his act. This result, however, is precluded by the belief that certain rights or protections should not be rationed on the basis of income.

26. Brown v. Collins, 53 N.H. 442, 448 (1873).

27. Gregory, *Trespass to Negligence to Absolute Liability*, 37 VA. L. REV. 359, 365, 368 (1951).

Intrusion of distributive criteria is also evident in the law of torts. Although an allocative standard would require that the defendant bear the transaction costs of litigation unless such costs are attributable to noncooperation by the plaintiff, the state has assumed a portion of this burden. Punitive damages may be in part disguised compensation or adjustments for externalities. To some extent, however, they appear to implement distributive goals. Absence of nonfault liability seems to a degree similarly motivated, since the likelihood of an individual causing accidental injury is a function of, among other variables, the capital under his control. A more recent bias in favor of persons seeking recovery is partially explained by the likelihood that those from whom recovery is sought will be more wealthy.

### E. Instruments

So long as compensation is possible, the optimal deterrent should seldom diverge from the compensatory ideal. External economies and diseconomies need not be internalized indirectly through adjustment of the damage measure. Where the conduct of the defendant harms others besides the plaintiff, facilitation of recovery by these additional victims would seem appropriate. Gains to third parties should be balanced by payments from those benefited to the defendant rather than by undercompensation of the plaintiff. The law of torts is not a proper redistributive vehicle.

Sometimes, however, the diffuseness of the injuries or benefits attributable to the conduct of the defendant precludes or makes impracticable recovery by or assessment of all affected individuals. Although criminal sanctions or direct subsidies can optimalize incentive in such cases, application of these instruments usually requires legislation or administrative initiative. The burden of adjustment must therefore often be borne by the law of torts. Where such externalities are present, the sum which should be exacted from the defendant to deter unwanted conduct will not be equal to the amount which must be paid to the plaintiff to assure that his utility level is not affected by his injury.

Since $y_1$ will not equal $y_2$, compensatory and deterrent objectives cannot be simultaneously satisfied through use of a single instrument variable. The choice confronting the court reduces to determination of the value of the parameter $a$ in the equation:

$$z = ay_1 + (1 - a)y_2 \qquad 0 \leqq a \leqq 1$$

If $a$ is set equal to unity, the plaintiff is precisely compensated but the defendant inaccurately deterred; if $a$ is set equal to zero, compensation is inexact but deterrence appropriate. Intermediate values of $a$ give varying weights to each factor. In all cases the result is unsatisfactory.

The remedy is obvious. The single instrument variable should be bifurcated so that the number of instrument variables equals the number of target variables. Here z, payment by the defendant to the plaintiff, can be replaced by:

$z_1$ = payment by the state to the plaintiff;

$z_2$ = payment by the defendant to the state.

We may thus write:

$$z_1 = y_1$$

$$z_2 = y_2$$

With this adjustment, choice between competing purposes is no longer required.

## III. CONCLUSION: LAW AND EQUITY

Anomalies in the law of torts have been explained as deriving in part from judicial unwillingness or inability to proliferate instrument variables to accommodate occasional discrepancies generated by otherwise compatible purposes. The theory of economic policy is equally applicable in other areas of the law. For example, it is relevant to analysis of differences between actions at law and proceedings in equity. The judicial decision ideally serves both to do justice between individual litigants and to establish or confirm a rule applicable in resolving other disputes. In equity, the chancellor, limited by professional integrity to a single instrument, his ruling, frequently could not achieve these two goals; the rigidity of much equity doctrine and explicit retention of judicial discretion evidence the necessary compromise. At law introduction of the jury made available a second instrument allowing simultaneous satisfaction of both objectives. Exercise of the power to do justice inherent in the duty of the jury to find facts can mitigate the otherwise harsh consequences of undeviating adherence by judges to rules of law: "The jury, always in criminal cases, and within broad limits in civil cases, is allowed to thwart the law's commands—in effect to find the facts untruthfully—if it is not satisfied with the justness of the

commands as applied to the case in hand."[28] The resulting duality is best demonstrated by *Rex v. Macallister*, decided in 1808, in which a jury avoided imposition of the death penalty by determining that a stolen ten-pound note was worth thirty-nine shillings.[29] Here as in the law of torts restatement of common problems in terms of instrument and target variables offers insight into the determinants of judicial behavior.

28. Hart & McNaughton, *Evidence and Inference in the Law*, in EVIDENCE AND INFERENCE 48, 58 (D. Lerner ed. 1959).

29. G. GOTTLIEB, THE LOGIC OF CHOICE: AN INVESTIGATION OF THE CONCEPTS OF RULE AND RATIONALITY 44 (1968).