JOURNAL OF FORENSIC ECONOMICS

Volume IX

Fall 1996

Number 3

Managing Editor

John O. Ward University of Missouri-Kansas City

Production Editor

Nancy Eldredge

Associate Editors

Book Reviews

Robert Thornton Lehigh University

Manuscript Reviews

Thomas Ireland University of Missouri–St. Louis

Technical Reviews

Kurt V. Krueger Institute of Disability Appraisal

Board of Editors

Malcolm R. Burns Litigation Economics, Inc. Ted Miller Urban Institute

Dennis R. Capozza University of Michigan

Jerry Miner Syracuse University

Wolfgang Franz Central Washington University

Gerald Olson University of Missouri-Kansas City

Ralph Frasca University of Dayton

Michael J. Piette Economic Research Services, Inc.

Stephen M. Horner Economic Consulting

A. Mitchell Polinsky Stanford University

Walter Johnson University of Missouri-Rolla Roger Skurski Notre Dame University

B. F. Kiker University of South Carolina Frank Slesnick Bellarmine College

Charles M. Linke University of Illinois Stan V. Smith DePaul University

Robert Trout Foster Associates

The Robin Hood Bias: A Study Of Biased Damage Awards

Brian C. Becker*

I. Introduction

The story of Robin Hood is one of a colorful English bandit during the Middle Ages. This bandit, Robin Hood, and his band of merry men roamed the woods of Sherwood Forest taking food and clothing from the rich and giving it to the poor. Robin Hood, though technically a criminal, was considered a hero by the people of Sherwood Forest and was portrayed as a hero in this story. Robin Hood could be portrayed as a hero because people felt that the rich were oppressive and, therefore, deserved to have their goods taken.

People may still manifest a general dislike (or jealousy) toward the rich, be they individuals or corporations. This paper describes an experiment which will investigate modern day "Robin Hoods" on the juries of American tort cases. More specifically, the jury verdicts rendered against wealthy defendants will be compared with jury verdicts rendered against poor defendants in similar tort cases. Jury awards requiring wealthy defendants to pay more than poor defendants for the same tortuous acts will be considered biased against the rich. Henceforth, this possible bias will be referred to as the Robin Hood Bias. Others, such as Peter Huber, have alluded to a Robin Hood Bias, "If the new tort system cannot find a careless defendant after an accident, it will often settle for a merely wealthy one" (Huber, 1988).

There has been little research done in this specific area of biased damage awards against wealthy defendants, although some has been done in related areas. A questionnaire study showed that "compensation decisions are affected by irrelevant variables" (Ritov, Hodes and Baron, 1989). This study was performed by asking subjects to award compensatory damages to victims of misfortune. They found that these decisions were affected by the manner in which the misfortune was caused. An earlier study with mock juries gave results supporting the hypothesis that "...attitude and outcome knowledge exercise their influence upon the damage award decision" (Casper, Benedict, and Perry, 1987). Both of these studies showed that jurors (or at least the mock jurors used in the studies) displayed the "curse of knowledge" (Camerer, Lowenstein, Weber, 1988). This "curse" states that individuals are unable to disregard certain information when making decisions. This study investigates whether jurors can disregard the specific irrelevant variable of defendant wealth when assessing compensatory damages in tort cases.

A tort is defined as an act done or neglected by one party, the defendant, that causes harm (economically, emotionally or physically) to another party, the plaintiff. Tort cases in the American legal system are classified into in-

^{*}Senior Economist, Economic Consulting Services Inc., Washington, DC. This paper was originally funded by National Science Foundation Grant #SES-8808299. The author wishes to acknowledge the helpful comments of three referees for this article.

tentional and unintentional torts. Other nations have different legal classifications, but this study will only deal with the American system. A tort is considered intentional if it involves a wrong accompanied by some aggravating circumstance (malice, fraud, gross negligence). Specific intent of the defendant is usually enough to classify a tort as intentional. Good faith displayed by the defendant is usually enough to classify the tort as unintentional.

Damages refer to the money (sometimes nonmonetary damages are assessed, but these will not be studied here) the jury assesses the defendant to pay to the plaintiff. Unintentional tort cases, such as negligence, lead to only the payment of compensatory damages, while intentional tort cases permit both compensatory and punitive damages. Compensatory damages are the monetary sums the jury concludes are required to compensate the plaintiff for whatever losses the defendant has caused him/her. In theory, punitive damages serve the purpose of punishing the defendant (Ludes, 1961). Punitive damages are awarded in addition to whatever compensatory damage has previously been awarded.

The admissibility of evidence in tort cases is strictly regulated. Only intentional tort cases allow the presentation of the defendant's wealth as evidence. The existence of insurance policies (of the defendant or plaintiff) is prohibited from presentation into evidence during the trial of any tort case. In unintentional tort cases, however, jurors are still likely to have some perception of the defendant's wealth. Perceived wealth could be affected by the occupation of an individual defendant (doctor, custodian, investment banker) or the jurors' familiarity with a corporation name (such as McDonald's or

Chico's Bail Bonds).

Initially, compensatory damages will be examined for a potential Robin Hood Bias. Compensatory damages are meant only to compensate the plaintiff for his losses, and therefore, should be independent of the defendant's wealth. In trying to examine (1) the cause of the Robin Hood Bias or (2) which types of cases/defendants were more likely to cause this bias, the following were examined:

- 1. Insurance: would jurors consider the possibility that a defendant's insurance company would be paying whatever damages are assessed?
- 2. Decision Rating: would jurors consider that the defendant made a "bad" decision that led to the tort and would this analysis of the defendant's decision have an effect on the Robin Hood Bias?
- 3. Type of Defendant: would jurors show more or less bias against an individual versus a corporate defendant?
- 4. Type of Tort: would jurors show more of a bias in the award of compensatory damages when the tort was intentional or unintentional?

This analysis attempts to isolate the Robin Hood Bias both in unintentional and intentional torts. When assessing damages for intentional torts, both compensatory and punitive damages are considered. Before looking for a potential bias in the awards of punitive damages, it is necessary to understand the idea of punishment (the main rationale behind punitive damages). If we compare the punitive damage payments of two defendants (with

different wealth levels) for the same tort, awards of punitive damages are unbiased only if the *penalty* inflicted upon the defendants has the same "punishing" effect on each of them. Measuring individuals' utility functions is an inexact science, but most of these functions display decreasing marginal utility for money (see Nicholson 1985).

The existence of the Robin Hood Bias will thus be difficult to conclude from punitive damages simply because there is no proven method to derive a general utility function for people. Some generalized utility functions have been devised, but none seem to account for all people (see Camerer, 1989, for more details). In fact, an earlier study showed that "punitive damages do reflect the status of the defendant as measured by total assets" (Schmitt, Pritchett, and Fields, 1989). They found that punitive damage assessments increase with the wealth of the defendant.

II. The Survey

Two series of survey tests were performed to identify: (a) if a Robin Hood Bias exists, (b) what factors make up the Robin Hood Bias and (c) the types of tort cases for which any bias is more noticeable. Each of the two types (the "type" distinguishes whether wealthy defendants were seen in the odd or even numbered case summaries) of surveys were correctly completed by 15 subjects in the first series (four others were incorrectly done by not finishing the whole survey, making decision ratings below -100, etc.). Subjects for this first series were recruited by a sign on the main campus walkway (Locust Walk) at the University of Pennsylvania in Philadelphia. Each subject was paid \$3 to complete the survey which took approximately 25 minutes. The subjects were mostly undergraduate students, some were graduate students and others were not students at all.

The second group of subjects to be used for the second *series* of surveys was recruited from an introductory level undergraduate Decision Science course at the University of Pennsylvania. Each of the two types of this second *series* was correctly completed by 15 subjects (five were incorrectly done). For both series, all of the subjects were American citizens between the ages of 18 and 50; therefore, they were all potential jurors in civil courts of the United States. Subjects were recruited in the described manner because this type of recruitment had worked well and efficiently in the past.

Initially, we considered looking for the Robin Hood Bias in actual tort cases that had already been litigated. This approach proved unfeasible, as we attempted to compare wealthy defendants with poor defendants in similar tort cases (intentional or unintentional) in which the plaintiff requested a comparable amount of money. Unfortunately, it was difficult (and sometimes impossible) to find similar torts and even more difficult to find similar

torts in which the plaintiffs asked for an identical monetary sum.

Even when these two factors (similar tort and amount of suit) in tort cases coincided, other uncontrollable factors differed greatly. Two of these "uncontrollable" factors were the year of the trial and the place of the trial. Possibly the most uncontrollable factor was the quality of opposing attorneys. Since wealthy defendants would theoretically be able to afford expensive (and supposedly, better) attorneys, any Robin Hood Bias seen here would be in spite of this (supposedly) superior attorney quality. Therefore, any test for the Robin Hood Bias shown by comparing real tort cases would have to neglect many uncontrollable factors that are not trivial.

An approach that would at least control for these variables would be to create "fictional" tort cases in which one could impose controls for all of the formerly uncontrollable factors. Ten "fictional" case summaries were created for our surveys. Two series of surveys were analyzed. Information gathered from the first series was used in developing a more focused survey for the second series. In each series there were two survey types (#1 and #2). Each survey contained the ten case summaries; five labeled unintentional torts (numbered 1-5), and five labeled intentional torts (labeled 6-10). Both survey types had the same ten case summaries in the same order except that the wealth of the defendants was different in each survey for each of the case summaries. Survey type #1 had wealthy (perceived or actual) defendants in the odd numbered case summaries, and poor defendants in the even numbered case summaries, while survey type #2 had the opposite. All defendants compared in unintentional tort cases had obvious differences in perceived wealth. This approach of isolating one factor (defendant's wealth in this situation) to test its significance has been suggested in legal writing (Kagan, 1988, as an example).

Beginning each survey is a one-page explanation of intentional and unintentional tort cases with the important concepts written in bold. This accompanying explanation includes a discussion of when juries assess only compensatory damages and when they assess both compensatory and punitive damages. The only rule of evidence cited is the admissibility of evidence establishing the defendant's wealth. Subjects were then asked to act as if they were sitting on a jury considering those legal ideas mentioned in the explanation when completing the survey. To further isolate a possible Robin Hood Bias, subjects were instructed to disregard legal and court fees when

deciding on damage assessments.

Following the page of instructions, the surveys consist of ten tort case summaries, followed by a page of insurance questions, and finally a page for decision rating. The unintentional tort case summaries (numbered 1-5) present the following information: title of the case summary ("Balloon Fun," "Broken Door," etc.), defendant's name (individual or corporation), plaintiffs name, facts about the case (what actually happened), costs sustained by the plaintiff, and the amount for which the plaintiff was suing the defendant. At the end of each unintentional tort case summary, the subjects were asked to state the amount of *compensatory* damages they would award. There is also space for comments at the conclusion of each of the unintentional tort case summaries. In the surveys, these cases are clearly labeled as unintentional torts (although it is conceivable that a juror might consider the tort intentional).

Intentional tort case summaries present the exact same criteria as unintentional torts except for two structural differences. First, the defendant's wealth is stated explicitly. Secondly, in addition to deciding on compensatory damages; the subjects were also asked to state the amount of *punitive* damages they would award. (In actual tort trials, juries may not always distinguish damages as compensatory and punitive, but our subjects were asked to make this distinction so we could isolate a potential Robin Hood Bias.)

After completing the ten case summaries and their respective questions, subjects read a paragraph concerning insurance. The paragraph stated that insurance policies cannot be entered into evidence for any tort case, but many jurors do speculate on potential insurance coverage when assessing

tort damages. The subjects then were asked if they considered insurance in any of the preceding ten cases, in which cases (if any) they considered insurance, and if the consideration of insurance coverage made them award more damages. Insurance testing was done to examine the validity of the following two hypotheses:

- 1. Jurors assess more damages against defendants that are insured.
- 2. Jurors think that wealthy defendants are insured more often than poor defendants.

On the last page of the survey, subjects rated the decisions made by the defendants that led to their tortuous acts. Decisions made by each of the ten defendants were rated by each subject on a scale from (-100) to (+100) where (-100) was considered an inexcusable decision and (+100) was considered a perfect decision that merely preceded a bad result. This decision rating consideration comes from the idea of an outcome bias (Baron and Hershey, 1988) which basically states that people take outcomes into account when evaluating decisions. Decision rating was considered in order to test the hypothesis that wealthy defendants are judged more strictly (their decisions are rated lower) than poor ones.

The second series of surveys was exactly the same as the first with the following five exceptions:

1. A manipulation check was done on the perceived wealth of defendants by asking the subjects to estimate the defendant's wealth in each of the unintentional tort case summaries. This task was made simpler by offering them choices of wealth (\$50,001-\$100,000, for example).

2. Most of the unintentional tort case summaries had the amount of suit dramatically increased.

3. The entire page on insurance was left out.

d

ıt

ıt

- 4. After completing the tort case summaries, subjects were asked explicitly if they considered defendant wealth, which case(s) they considered it, and which case(s) they considered it most.
- 5. After completing the tort case summaries, subjects were asked explicitly if they felt wealthy defendants should pay more punitive damages and why.

A Robin Hood Bias would be seen as a result of these surveys if the wealthy defendants in the ten cases were assessed more money in *compensatory* damages than the poor defendants. Additionally, the amount of bias involving corporate defendants (cases 1, 2, 3, 4, 6, 8, and 10) will be compared with the amount of bias in cases involving individual defendants (cases 5, 7, and 9). Another comparison will be made between unintentional torts (cases 1-5) and intentional torts (cases 6-10). Punitive damages will be examined also, but it is doubtful whether any conclusions about the Robin Hood Bias can be drawn from their results. Thus, the two survey series can be summarized as follows:

	First Series	Second Series
Unintentional Tort Cases	Cases 1-5	Cases 1-5
Intentional Tort Cases	Cases 6-10	Cases 6-10
Manipulation Check on Perceived Wealth?	No	Yes
Relatively Small Amounts of Suit for Unintentional Tort Cases?	Yes	No
Insurance Questions?	Yes	No
Decision Rating Questions?	Yes	Yes
Explicit Question on Consideration of Wealth?	No	Yes
Explicit Question on Whether Wealthy Should Pay More Punitive Damages and Why?	No	Yes
Number of Subjects	15 each for 2 types (wealthy or poor defendants in odd numbered cases)	15 each for 2 types (wealthy or poor defendants in odd numbered cases)
Cases with Corporate Defendants	1, 2, 3, 4, 6, 8, 10	1, 2, 3, 4, 6, 8, 10
Cases with Individual Defendants	5, 7, 9	5, 7, 9

III. Results

Before listing the results, it is important to keep in mind that only compensatory damages can show a definite Robin Hood Bias. Punitive damages were considered in these surveys for consistency and to check for a possible reverse Robin Hood Bias. We used responses from the 60 completed surveys (30 from each series) to make three types of tests: Tests to see if, in fact, a Robin Hood Bias does exist, tests to decide which factors make up this bias, and tests to discern the types of cases in which the Robin Hood Bias was more (or less) prevalent. The results of these tests are described below.

IV. Compensatory Damages

To determine whether the Robin Hood Bias existed, we compared compensatory damage assessments between the wealthy and poor defendants for all ten case summaries. Since the responses were non-parametric in nature (e.g., awards with different orders of magnitude), a rank sum analysis was performed. For both series, the 30 responses (15 responses for each of two types of surveys) for each case were ranked from 1-30 (30 pertaining to the highest compensatory damage award). A Mann-Whitney rank statistic¹ was computed for each of the ten case summaries (Lehmann, 1975).² This statistic, along with its mean (112.5) and variance (581.25) gave an estimated z-statistic for each case. Such a procedure was designed to locate a Robin Hood Bias when the sum of the ranks for poor defendant survey types were significantly below those of the wealthy defendant survey types. To

 $^{^{1}}$ This has been shown to be an effective and powerful way to compare ranked items.

²Such a procedure essentially sums the ranks of the compensatory damage responses for the respondents that filled out a survey with the poor defendants (this particular procedure then divides that sum by 2).

compare more than one case at a time, we summed the z-statistics from each case to get a new z-statistic.³

This method was initially used to compare all ten cases at once and, using a one-tailed test, showed (z=-1.7, p<.042) that there was a positive bias concerning compensatory assessments against wealthy defendants in the

first series. The second series was more convincing (z=-3.8, p<.001).

Since a significant Robin Hood Bias was found, we searched for factors that made up this bias. Specifically insurance and a potential decision rating bias were examined. Of the 30 subjects questioned in the first series, only six said they considered insurance in any of the ten case summaries. Only one of these six stated insurance affected his decision on damage payments. This particular respondent said large companies could absorb judgment costs (damage payments) more easily because they would be insured. The other five responding subjects said they considered if the plaintiff were insured and that this consideration did not change their judgment. These six subjects said that they considered insurance policies in a combined total of 16 cases. Of these cases, only seven had wealthy defendants. With such few responses, these results can only speculate as to the role of insurance.

Both groups of subjects were asked to rate the decision of the defendant. A difference in rating between poor and wealthy defendants for the same exact tort might explain some of the Robin Hood Bias. However, summing the Mann-Whitney z-statistics for the decision ratings showed no significance at all (z=.53, p<.70) in the first series or the second (z=-.39, p<.35).

Finally, we were interested in which types of cases showed the most consistent Robin Hood Bias. Comparisons were done on the awards of compensatory damages in two different ways: intentional versus unintentional torts, and cases with corporate defendants versus cases with individual defendants. Comparisons of the relative significance of the Robin Hood Bias with unintentional versus intentional torts proved to be very interesting. Summing the z-statistics for the unintentional tort cases (numbers 1-5) showed only a slight Robin Hood trend (z=-.65, p<.258) for the first series, but a strong bias (z=-2.83, p<.002) in the second. A similar test performed on intentional torts (cases 6-10) proved quite significant (z=-1.8, p<.037) for the first series and even more so (z=-2.51, p<.006) for the second.

Comparing the respective significance of the Robin Hood Bias was also performed for individual defendants versus corporate defendants. Summing the z-statistics for those cases with individual defendants (cases 5, 7, and 9) showed a significant Robin Hood Bias existed in both the first (z=-1.6, p<.066) and second series (z=-2.60, p<.005). Test results done on only those cases with corporate defendants only showed marginal significance at best (z=-1.0, p<.151) in the first series, but strong results (z=-2.81, p<.002) in

the second.

V. Punitive Damages

While no conclusion can be drawn from higher punitive damage assessments against wealthy defendants regarding the Robin Hood Bias, tests

³We can do this because the sum of independent normal distributions is itself a normal distribution. We assume that the cases in the survey are independent. They may not be exactly independent, but due to the nature of the survey, they could be either positively or negatively correlated

were performed merely to determine whether such higher payments were in fact assessed. By totaling the Mann-Whitney statistics for punitive damages in each of the last five cases, our results, as expected, proved significantly in the first series (z=-5.4, p<.001) and the second (z=-4.03, p<.001) these subjects assessed more punitive damages against the wealthy defendants.

VI. Discussion

After the existence of the Robin Hood Bias was shown to exist in these results, the survey responses also considered (1) the factors that make up this bias and (2) the types of cases where the bias is more prevalent. Many factors could contribute to the Robin Hood Bias, but the only factors that were explicitly tested in this survey were insurance policy considerations and decision rating. Insurance policies played no role in the minds of most (80%) of our subjects when evaluating the cases (subjects considered insurance in only 16/300 or 5.3% of the cases). However, in our test, each subject filled out the survey alone, while actual juries consist of 12 (on occasion, six) members who are required by law to deliberate with one another. For approximately 5% of the jurors on specific cases, insurance was considered. If we use this 5% as a base for the probability that a specific juror on a specific case will consider insurance, we can compute that, on average (based on a binomial distribution of jurors where each selection of a juror is independent and identically distributed), approximately 54% (i.e., $(.95)^{12} = .54$) of all regular 12-person juries will not have any members considering insurance policies. By this argument, approximately 46% of all decisions for damage awards in tort cases may be affected by the consideration of insurance policies. Insurance companies can take note of the fact that although many juries may consider the possibility of insurance policies, in most cases they do not actually know if the defendant or plaintiff is insured nor have these results proven that jurors would affirmatively assess higher damage awards due to the presence of insurance.

Neither survey series' results supported our decision rating hypothesis that "bad" decisions made by the defendant would lead the juror to assess a higher damage award. That is, there is no statistically significant correlation between the subjects' ratings of the defendants' decisions and the amount of compensatory damages assessed. This task of asking subjects to quantify the decisions made by defendants possibly proved too difficult or vague for the subjects; hence, the subjects' ratings may not have been an accurate indication of their true feelings regarding the decision of the defendant. With a simpler type of question for the subjects, we may have reached different results, but we cannot yet conclude that a decision rating bias contributes to the Robin Hood Bias.

Certain types of cases brought out the Robin Hood Bias more strongly than others. A striking difference occurred when comparing unintentional with intentional tort cases in the first series. The subjects showed a strong Robin Hood Bias when evaluating the intentional torts, but only a slight Robin Hood "tendency" (not statistically significant enough to be called a bias) for unintentional torts. This discrepancy may partially be explained by the monetary amounts involved in the two types of suits. Unintentional tort suits ranged only from \$2,400 to \$39,000. Intentional tort suits ranged, on the other hand, from \$168,000 to \$5,400,000. The second series hoped to account for this discrepancy by increasing the unintentional tort case suits to

the same monetary range as the intentional ones. These results showed a Robin Hood Bias for both types of torts.

There was no statistical difference in the Robin Hood Bias between individual and corporate defendants. Future research may be better able to iso-

late any potential differences between these types of defendants.

The surveys and test results suggested the presence of a Robin Hood Bias, in which jurors (in this case, subjects) consider the irrelevant factor of defendant wealth when making compensatory damage decisions. While the differences in compensatory damage assessments between wealthy and poor defendants likely suggests a bias, there may be at least one other "economically rational" explanation. Potential jurors may estimate damages as "a range" of values. Within this range, they may then discriminate using a marginal utility argument; i.e., the wealthy defendant should pay more, so an amount closer to the high end of the range should be assessed. While this is only a theory at this point, it can be directly tested in future research.

How do *punitive* damages enter into this Robin Hood Bias? These damages are quite obviously assessed more heavily against wealthy defendants than poor ones, but this does not necessarily prove any bias exists due to utility theory. Our subjects' responses have provided a small list of reasons

for assessing wealthy defendants' larger punitive damages:

1. Full payment will not be made by a poor defendant, so it is useless to assess him large punitive damage payments.

2. Each defendant should be punished equally which can only be done by assessing wealthy defendants large payments.

B. Deterrence is a function of wealth.

4. Large (wealthy) corporations have lawyers on their payroll and, therefore should be more responsible.

Many papers address the question of economic efficiency concerning these punitive damage awards. The "responsibility principle" for payment basically states the party who caused the damage is responsible for both compensatory and punitive payments, while the damaged party is entitled to all payments since they were responsible for bringing the case to trial (Pigou, 1920). This principle was defended by the following argument: no payment would occur had the plaintiff not sued the defendant; therefore, the plaintiff should be entitled to all payments, both compensatory and punitive (Page, 1986).

Payment by means of the "responsibility principle" has had a number of opponents, though. Ronald Coase (1960) suggested that this type of payment scheme is not the most efficient economically. Arguments have also been made against punitive damages that parties should only be entitled to payments that reinstate them to their initial wealth (and utility) level (Schwartz, 1986).

VII. Conclusion

If the results of these surveys are any indication, today's jurors have removed Robin Hood's work from Sherwood Forest and transplanted it into America's courtrooms. Such a Robin Hood Bias for compensatory damages does not accord with the definition of economic rationality.

Since this paper only reports on the results of a small survey, further research is necessary to (a) confirm that the Robin Hood Bias exists, (b) determine the types of cases where it is pervasive, and (c) discover what causes the bias. Such research could begin with a branching off of these surveys and a deeper look into insurance policy considerations and decision rating. Insurance could be studied further by giving groups of twelve people one survey to see if a high percentage of these mock juries actually do consider insurance. Another insurance study might consider the potential insurance policies of the plaintiffs. Decisions of juries could also be investigated in more depth by considering stricken evidence and its impact on compensation decisions.

Research should also be conducted on factors not addressed in these surveys. One factor is the anonymity of defendants, specifically large corporations, which should be irrelevant when computing compensatory damages. It would be interesting to see the results of modified surveys which would explicitly instruct the subjects to disregard the defendant's wealth (actual or perceived) when evaluating compensatory damages. In fact, jurors disregarding testimony has previously been studied concerning stricken evidence (Sue, Smith and Caldwell, 1973; Wolf and Montgomery, 1977; Caretta and Moreland, 1983).

One more question comes to mind. What types (wealthy, elderly, male, etc.) of people display this bias the most? Simple demographics done on the subjects could test this theory. Age and gender don't have any intuitive reason for increasing the bias, but it seems likely that wealthy jurors will be less biased because they should not be envious of the wealthy defendants.

References:

Baron, J., and J. C. Hershey, Outcome Bias in Decision Evaluation, (working paper), University of Pennsylvania, 1988.

Settings: An Experimental Analysis, (working paper), 1988.

Caretta, T. R. and R. L. Moreland, "The Direct and Indirect Effects of Inadmissible Evidence," Journal of Applied Social Psychology, 1983, 13, 291309.

Casper, J. D., K. Benedict, and J. L. Perry, Jury Decision Making, Attitudes, and the Hindsight Bias, Working Paper No. 17, 1987, The Dispute Resolution Center, J. L. Kellogg Graduate School of Management, Northwestern University.

Coase, R., "The Problem of Social Cost," Journal of Law and Economics, 1960, 3, 1-44.

Huber, P., Liability, 1988, Basic Books, Inc.

Kagan, S., "The Additive Fallacy," Ethics, October 1988, 5-32.

Lehmann, E., Non-Parametrics: Statistical Methods Based on Ranks, 1975, Holden Day Publishing Co.

Ludes, F. J., Corpus Juris Sciendum, West Publishing Co. Inc., 1961.

Nicholson, W., Microeconomic Theory, The Dryden Press Edition, 1985, 3rd Edition.

Page, T., "Responsibility, Liability, and Incentive Compatibility," *Ethics*, October 1986, 240-263.

Pigou, A., The Economics of Welfare, MacMillan and Co., 1920.

Ritov, I., J. Hodes, and J. Baron, Biases in Decisions About Compensation for Misfortune, Working Paper, 1989.

Schmitt, J. T., S. T. Pritchett and P. Fields, "Punitive Damages: Punishment or Further Compensation," The Journal of Risk and Uncertainty, 1989, 453-466. Schwartz, A., Responsibility and Tort Liability, October 1986, 263-270. Sue, S., R. E. Smith, and R. Gilbert, "Biasing Effects on Pretrial Publicity on

Judicial Decisions," Journal of Criminal Justice, 1974, 2, 163-171.
Wolf, S. and D. A. Montgomery, "Effects of Inadmissible Evidence and Level of Admonishment to Disregard on the Judgments of Mock Jurors," Journal of Applied Psychology, 1977, 13, 291-309.