SETON HALL LAW REVIEW

Vol. 12 1982 No. 4

NEGLIGENCE VS. NO-FAULT LIABILITY: AN ANALYSIS OF THE WORKERS' COMPENSATION EXAMPLE

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I. INTRODUCTION

The widespread enactment of systems of workers' compensation[1] during the first two decades of the twentieth century was this country's first systemic commitment to principles of "no-fault" liability. The workers' compensation model arose in reaction to perceived deficiencies in the negligence-oriented civil recovery then afforded em-

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Excellent research assistance was provided by Michael J. Sarofeen, Esq., of Hiscock, Lee, Rogers, Henley & Barclay, Syracuse, New York.

Clerical and computer support was provided by the Health Studies Program of the Maxwell School, Syracuse University.

[1] Workers' compensation acts are usually characterized as a "compromise" whereby employees have traded an uncertain, expensive, but occasionally highly rewarding tort action for a certain, inexpensive, but limited recovery of a fraction of lost wages plus medical expenses. The employer has traded potentially open-ended liability for a strict, limited, shared liability system. A. CONARD, J. MORGAN, R. PRATT, C. VULTZ & R. BOMBAGH, AUTOMOBILE ACCIDENT COSTS AND PAYMENTS 75 (1964) [hereinafter cited as A. CONARD]; 1 A. LARSON, WORKMEN'S COMPENSATION LAW 2 (1978); Note, *New Policies Bearing on the Negligent Employer's Immunity from Loss-Sharing*, 29 ME. L. REV. 243, 246-67 (1978); *see* Williams v. Hartshorn, 296 N.Y. 49, 50, 69 N.E.2d 557, 558 (1946).

Today, workers' compensation provisions have been enacted by every state as well as by the federal government. State workers' compensation programs differ significantly as to such features as their elective or compulsory character, the industries covered, the limits on recovery of loss, and whether they wholly replace or merely "add on" to the common law. Typically, however, workers' compensation programs eliminate common law employer liability to injured employees as well as the common law employer defenses. Instead, they provide for certain, no-

ployees suffering work-related injuries.[2] Today, important changes from fault to no-fault principles are in process or are being contemplated in other areas of tort law. For example, in a wave reminiscent of the substantial acceptance given workers' compensation statutes from 1911-1920,[3] no-fault automobile accident liability statutes are in force in twenty-eight states[4] with additional proposals pending.[5] Similar plans have been proposed to offset the problems surrounding

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fault employee recovery for work-related injuries, "ideally" in the amount of 100% of medical expenses and 66⅔% of wage income loss. Recovery for pain and suffering is not allowed. There are frequently ceilings on maximum income loss recovery and limitations on the period of time for which an injured employee may recover even though his losses and income need may continue. See *infra* note 64.

Questions of coverage (liability) and the amount of liability are determined in an administrative proceeding intended to resolve claims in a more expeditious, efficient, and uniform manner, and in an atmosphere less adversary in nature. Nonetheless, considerable litigation regarding questions of coverage and benefits does occur. Brodie, *The Adequacy of Workmen's Compensation as Social Insurance: A Review of Developments and Proposals*, 1963 WIS. L. REV. 57, 63-73; *see* NATIONAL COMMISSION ON STATE WORKMEN'S COMPENSATION LAWS REPORT 99-100 (1973) [hereinafter cited as COMMISSION REPORT]; NEW YORK UNIVERSITY WORKMEN'S COMPENSATION STUDY 9-13 (1960).

Employers are generally required to purchase insurance, post bonds, or make other showing of financial ability to meet potential liability under the various workers' compensation statutes for employee injuries. Furthermore, to the extent they have made payment under workers' compensation, employers or their insurers are typically subrogated to the claims of their injured employees against negligent third parties. The extent to which negligent employers may be held liable, on a theory of contribution or indemnity, to third parties sued by employees on grounds of traditional negligence turns largely on statutory construction, and is an area of the law currently undergoing considerable evolution.

Under federal law, the United States Government is generally required to "pay compensation . . . for the disability or death of [its employees] resulting from personal injury sustained while in the performance of [their duties]." 5 U.S.C. § 8102(a) (1976). Similar legislation requires that common carriers engaged in interstate commerce compensate any employee "suffering injury" while "employed by such carrier." 45 U.S.C. § 51 (1976). Likewise, the Longshoremen's and Harbor Workers' Compensation Act mandates that employees injured while working on "the navigable waters of the United States" be compensated for their injuries. 33 U.S.C. §§ 901-950 (1976).

[2] NEW YORK COMM'N ON EMPLOYERS' LIABILITY, FIRST REPORT 19-36 (1911) [hereinafter cited as WAINWRIGHT REPORT]; *see* E.H. DOWNEY, WORKMEN'S COMPENSATION (1924); Rhodes, *The Inception of Workmen's Compensation in the United States*, 11 ME. L. REV. 35 (1917); *infra* notes 13-19, 27-33 and accompanying text.

[3] By 1920, forty states had adopted compensation acts and on January 1, 1949, the last state, Mississippi, enacted compensation laws. 1 A. LARSON, *supra* note 1, at 39; Brodie, *supra* note 1, at 63.

[4] The states which have enacted such statutes are as follows: Arkansas; Colorado; Connecticut; Delaware; Florida; Georgia; Hawaii; Kansas; Kentucky; Maryland; Massachusetts; Michigan; Minnesota; Nevada; New Hampshire; New Jersey; New York; North Dakota; Oregon; Pennsylvania; Puerto Rico; South Carolina; South Dakota; Texas; Utah; Virginia; Washington; Wisconsin.

[5] *See* Blum & Kalven, *Ceilings, Costs, and Compulsion in Auto Compensation Legislation*, 1973 UTAH L. REV. 341; O'Connell, *Operation of No-Fault Auto Laws: A Survey of Surveys*, 56 NEB. L. REV. 23, 26-28 (1977).

medical malpractice[6] and products liability suits.[7] In New Zealand, an ambitious plan of social insurance against personal injury has been adopted.[8] In the same spirit, systems providing universal no-fault accident insurance have recently been proposed in this country.[9]

Advocates of these proposals point to the uncertainty, expense, delay, and inadequacy of recovery characteristic of litigation in the negligence system. Because, in the public mind, even negligent workers must be given minimum ("poverty level") support, it is argued that the objectionable negligence lottery should be replaced with a compensation program funded by general revenues or by insurance purchased by those who would be litigants in the negligence system. It is further asserted that this change would free congested courts, discourage malingering, and hasten rehabilitation. Moreover, with the elimination of attorneys' fees, it is argued that there will be additional money available to compensate victims.[10]

While conceding that the tort system could be improved, its proponents argue that it is a more equitable and effective deterrent of

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[6] Malpractice reform proposals have largely centered around statutory limitations of damage awards and artibration of claims. Many commentators, however, have proposed that no-fault principles be applied. *E.g.*, Note, *Strict Liability: The Medical Malpractice Citadel Still Stands*, 11 CREIGTON L. REV. 1357, 1371-73 (1978); Note, *Malpractice in Dealing with Medical Malpractice?*, 6 MEM. ST. U.L. REV. 437, 445-52 (1976); *see* Lewis, *Medical Malpractice Reform Legislation*, 1978 ANN. SURV. AM. L. 255.

[7] U.S. DEP'T OF COMMERCE INTERAGENCY TASK FORCE ON PRODUCTS LIABILITY, FINAL REPORT V11-202 to V11-240 (1977); *see* J. O'CONNELL, ENDING INSULT TO INJURY: NO-FAULT INSURANCE FOR PRODUCTS AND SERVICES 141-44 (1975); Birnbaum, *Legislative Reform or Retreat? A Response to the Products Liability Crisis*, 14 FORUM 251 (1978); Freedman, *No-Fault and Products Liability: Can One Live Without the Other?*, 12 FORUM 100, 123-29 (1976); Freedman, *No-Fault and Products Liability: An Answer to a Maiden's Prayer*, 1975 INS. L.J. 199, 203-08.

[8] Franklin, *Personal Injury Accident Compensation in Australia and New Zealand*, 27 STAN. L. REV. 653 (1975); Harris, *Accident Compensation in New Zealand: A Comprehensive Insurance System*, 37 MOD. L. REV. 361 (1974); Palmer, *The Accident Compensation Amendment Act 1974*, 6 N.Z.L. REV. 299 (1975); Palmer & Lemons, *Toward the Disappearance of Tort Law—New Zealand's New Compensation Plan*, 1972 U. ILL. L.F. 693 (1972); Smith, *Products Liability: A Compendium of Reform*, 15 HOUS. L. REV. 871, 890 (1978); Vennell, *The Scope of National No-Fault Accident Compensation in Australia and New Zealand*, 49 AUS. L.J. 22 (1975).

The concept of social insurance to provide compensation to accident victims is not a new idea. Holmes once stated: "The state might conceivably make itself a mutual insurance company against accidents, and distribute the burden of its citizen's mishaps among all its members." O. HOLMES, THE COMMON LAW 77 (1881).

[9] J. O'CONNELL, *supra* note 7, at 73; J. O'CONNELL & R. HENDERSON, TORT LAW, NO-FAULT AND BEYOND 727-30 (1975); Franklin, *Replacing the Negligence Lottery: Compensation and Selective Reimbursement*, 53 VA. L. REV. 774 (1967).

[10] For various views, see G. CALABRESI, THE COST OF ACCIDENTS 1 (1970); Franklin, *supra* note 9; Keeton, *The Case for No-Fault Insurance*, 44 MISS. L.J. 1 (1973); *supra* notes 6-9 & *infra* notes 26-33 and accompanying text.

accidents because it allocates the costs of accidents to those best able to prevent them.[11]

Lacking from most discussion of the fault and no-fault alternatives is the use of empirical comparisons based on the actual operations of the two systems.[12] The purpose of this article is to introduce some empirical tests for assessing the alleged advantages and disadvantages of the negligence and strict liability systems by focusing on a comparison of workers' compensation and traditional negligence. To this end, an analytical framework will be presented which may be used to evaluate the data. Finally, some suggestions will be made as a basis for further evaluation of the "fault/no-fault" controversy.

II. Brief History of Workers' Compensation and the Surrounding Controversy

The nineteenth century industrialization of our economy complicated the causes and increased the risks of accidents.[13] Buttressed by

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[11] See *infra* notes 37 & 91-94 and accompanying text.

[12] We know of only one attempt to compare empirically workers' compensation and the negligence approach: James R. Chelius's study of the effect of employers' liability laws and workmen's compensation on occupational death rates. Chelius, *Liability for Industrial Accidents: A Comparison of Negligence and Strict Liability Systems*, 5 J. Legal Stud. 293 (1976) [hereinafter cited as Chelius, *Comparison*]. The study is limited to an analysis of deterrence effects, exemplified by data on machine-related death. The negligence and workers' compensation systems are not compared in terms of the objectives of benefit adequacy or program efficiency. *See id.* at 306.

In another empirical study conducted by Chelius, evidence is set forth which, according to the author, indicates that a higher proportion of compensation to injured employees is associated with higher accident rates. Chelius, *The Control of Industrial Accidents: Economic Theory and Empirical Evidence*, 38 Law & Contemp. Probs. 700, 714 (1974).

Of course, at the time of the initial enactment of workers' compensation, some empirical data relating to poor recovery and other perceived defects in the common law were available. *See* C. Eastman, Work-Accidents and the Law (1910) (empirical analysis of work-related accidents in Pittsburgh). At that time, however, there was no large data base on the operation of workers' compensation so that meaningful comparisons were not possible.

In comparing workers' compensation and the common law it replaced, the New York Commission on Employers' Liability found that although the inspection and fine system then prevailing in New York did not work to deter accidents (for reasons of inadequate penalties and enforcement budgets), such accident deterrence was provided by civil liability. New York Comm'n on Employers' Liability, Second Report 8 (1911) [hereinafter cited as New York Comm'n Second Report]; *see* Wainwright Report, *supra* note 2, at 5; *infra* note 76. Later studies on workers' compensation generally focused on the operation of the system in isolation rather than comparing it to the common law system it replaced. *See* New York University Workmen's Compensation Study (1960).

In 1972 the National Commission on State Workmen's Compensation Laws sponsored many studies pertaining to workers' compensation recovery. See *infra* notes 42-53 and accompanying text. Yet, the analysis of compensation received and recovery rates was based on hypothetical instances of what injured workers would receive in various jurisdictions rather than on what injured workers actually received.

[13] R. H. Blanchard, Liability and Compensation Insurance 69-75 (1917); 1 A. Larson, *supra* note 1, at 23 (1978); J. Weinstein, The Corporate Ideal in the Liberal State 1900-

the rationale that a worker's wages reflected the hazards of his employment, the tort law during that period has been characterized as protecting developing industries at the expense of injured employees.[14] Although the common law imposed upon employers important duties to promote the safety of employees,[15] three important defenses, namely, contributory negligence,[16] assumption of risk,[17] and the fellow servant rule,[18] effectively insulated from liability even negligent employers. These formidable defenses were reinforced by other factors which had the net result of leaving most employees with little hope of recovery. For example, proving causation became increasingly difficult as the work environment grew ever more complex and technical. Moreover, fellow employees were generally reluctant to testify against their employer, thus making it difficult for the litigating employee to muster favorable testimony. Court proceedings were expensive and protracted and the employer was generally represented by better financed legal counsel. Employees frequently lacked education, fluency in English, and sufficient familiarity with our legal

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1918, 40-41 (1968); MINNESOTA BUREAU OF LABOR, TWELFTH BIENNIAL REPORT 149-50 (1910) [hereinafter cited as MINNESOTA REPORT]; Brodie, *supra* note 1, at 57-59; Frankfurter, *The General Development of Workmen's Compensation Acts*, 13 KY. L.J. 20 (1924-25).

[14] FREUND, STANDARDS OF AMERICAN LEGISLATION 21 (1917); Brodie, *supra* note 1, at 58; Calabresi, *Some Thoughts of Risk Distribution and the Law of Torts*, 70 YALE L.J. 499, 516 (1961); Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 29-34 (1972).

[15] These duties were (1) to provide and maintain a reasonably safe place to work and safe appliances, tools, and equipment; (2) to provide a sufficient number of suitable and competent fellow employees to permit safe performance of work; (3) to warn employees of unusual hazards; and (4) to establish and enforce proper safety rules. R. H. BLANCHARD, *supra* note 13, at 43-44; 1 A. LARSON, *supra* note 1, at 28; NATIONAL COMM'N ON STATE WORKMEN'S COMPENSATION LAW, COMPENDIUM ON WORKMEN'S COMPENSATION 11-12 (1972) [hereinafter cited as WORKMEN'S COMPENSATION COMPENDIUM].

[16] Under the doctrine of contributory negligence, employees who through their own negligence contributed to their own accidents and injury, could not recover from their employers even though the employer's negligence was a greater contributing factor to the accident. W. PROSSER, HANDBOOK ON THE LAW OF TORTS, 527 (4th ed. 1971); *see* Schlemmer v. Buffalo, Rochester & Pittsburgh R.R., 220 U.S. 590 (1911); Meunier v. Chemical Paper Co., 180 Mass. 109, 61 N.E. 810 (1901).

[17] According to the assumption of the risk rule, employees were deemed to assume the risk of any accidents resulting from hazards normally incident to their employment and therefore could not recover against an employer. W. PROSSER, *supra* note 16, at 527-28; *e.g.*, O'Maley v. South Boston Gas Light Co., 158 Mass. 135, 32 N.E. 1119 (1893); Conway v. Furst, 57 N.J.L. 645, 32 A. 380 (1895); Kinsley v. Pratt, 148 N.Y. 372, 42 N.E. 986, *reargument denied*, 149 N.Y. 582, 43 N.E. 988 (1896).

[18] The fellow servant rule, existing as an exception to the general principle of respondeat superior, precluded recovery against an employer when the injury was caused by the negligence of a fellow employee. The rule first appeared in England in Priestley v. Fowler, 150 Eng. Rep. 1030 (1837). Soon thereafter, it was adopted in Massachusetts. *See* Farwell v. Boston & Worcester Ry., 45 Mass. (4 Met.) 49 (1849).

system to seek effective assistance.[19] Confronted with these disabilities, the average employee had meager chances of an adequate recovery even in the event that he chose to press his claims.

Prior to the enactment of workers' compensation, dissatisfaction with the negligence system led to judicial[20] and legislative reform aimed at facilitating recovery. At its strongest, the legislative response was to enact "employers' liability statutes" which placed employees in the same position as nonemployees if injured by employers or their agents.[21] The defenses of contributory negligence and assumption of the risk survived this legislative development, but the fellow servant rule was virtually eliminated by employers' liability statutes.[22] Although often limited to specific industries, twenty-five states had adopted employers' liability acts in some form by 1907.[23]

The movement toward improving the negligence system was blunted, however, by a more fundamental departure from the traditional negligence approach in the form of workers' compensation legislation. By 1921, the federal government and all but eight states had passed workers' compensation statutes.[24] These laws generally limited employer liability for work-related injuries to a fixed percentage of lost wages and medical expenses, without regard to fault, and excluded recovery for pain and suffering.[25]

Since its inception in the United States, the workers' compensation system has been widely studied, receiving both support and criti-

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[19] R. H. BLANCHARD, *supra* note 13, at 59, 63, 71 (litigation was protracted; there were problems of proof; recovery was uncertain); CONNECTICUT COMM. REGARDING LEGISLATION REGULATING THE LIABILITY OF EMPLOYERS, REPORT 11 (1909) [hereinafter cited as CONNECTICUT REPORT] (employees lacked sufficient funds and experienced proof problems); E. H. DOWNEY, *supra* note 2, at 5 (employees were uneducated foreigners); C. EASTMAN, WORK ACCIDENTS AND THE LAW 190 (1910) (uncertain, protracted litigation); WAINWRIGHT REPORT, *supra* note 2, at 24, 29, 32-34 (employers had significant advantages due to greater finances and employee unwillingness to testify against employer).

[20] Courts in some jurisdictions, for example, adopted the "vice principle" exception to the fellow servant rule whereby recovery was possible for injury caused by supervisory personnel as opposed to employees. *E.g.*, Lamb v. Littman, 132 N.C. 978, 44 S.E. 646 (1903); Berea Stone v. Kraft, 31 Ohio St. 287 (1877). In other jurisdictions the common law duties, see *supra* note 15, were nondelegable, thus permitting direct actions against the employer for breach of duty. *E.g.*, Northern Pac. R.R. v. Herbert, 116 U.S. 642 (1886); Smith v. Erie R.R., 67 N.J.L. 636, 52 A. 634 (1902). Finally, in some jurisdictions, employees were not deemed to have assumed the risk of employer noncompliance with safety statutes. *E.g.*, Fitzwater v. Warren, 206 N.Y. 355, 99 N.E. 1042 (1912).

[21] *See* R. H. BLANCHARD, *supra* note 13, at 52-53; 1 A. LARSON, *supra* note 1, at 29-32; J. WEINSTEIN, *supra* note 13, at 43.

[22] R. H. BLANCHARD, *supra* note 13, at 52-53; 1 A. LARSON, *supra* note 1, at 29-32.

[23] 1 A. LARSON, *supra* note 1, at 30. *But see* WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 13.

[24] See *supra* notes 1 & 3.

[25] See *supra* note 1.

cism. During the initial movement toward enactment of workers' compensation statutes, numerous arguments were advanced in favor of what was recognized as a "radical departure" from the common law.[26] Inadequacy of compensation was usually cited as the primary reason for the introduction of workers' compensation.[27] Estimates of the percentage of uncompensated injuries in various jurisdictions ranged from seventy percent to ninety-four percent.[28] In addition, advocates of the compensation system asserted that both equitable and societal interests demanded that injured employees be adequately compensated regardless of fault.[29] Many held the view that the cost of such compensation should be one of the employer's costs of doing business.[30] As a corollary, it was believed that the incentive to reduce costs would encourage employers to take safety precautions to protect employees.[31] Additionally, the elimination of fault related issues was

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[26] NATIONAL COMM'N ON WORKMEN'S COMPENSATION LAWS, REPORT 34 (1972); Smith, *Sequel to Workmen's Compensation Acts*, 27 HARV. L. REV. 235, 245-47 (1914).

[27] CONNECTICUT REPORT, *supra* note 19, at 5-9; MASSACHUSETTS COMM'N ON COMPENSATION FOR INDUSTRIAL ACCIDENT, REPORT 46-47 (1912) [hereinafter cited as MASSACHUSETTS REPORT]; MINNESOTA REPORT, *supra* note 13, at 150-52; WAINWRIGHT REPORT, *supra* note 2, at 11-14; Brodie, *supra* note 1, at 57-58; Hannold, *Theory of Workmen's Compensation*, 3 CORNELL L.Q. 264, 264-65 (1918); Wambaugh, *Workmen's Compensation Acts: Their Theory and Their Constitutionality*, 25 HARV. L. REV. 129, 129-30 (1911).

[28] W. PROSSER, *supra* note 16, at 530 n. 32.

[29] It was generally believed that a large portion of accidents were not based on anyone's negligence. R. H. BLANCHARD, *supra* note 13, at 10-11 (between 52 and 89% not attributable to negligence); 1 A. LARSON, *supra* note 1, at 27 (44% of industrial accidents not attributable to negligence); MINNESOTA REPORT, *supra* note 13, at 150 (between one-half and two-thirds of all accidents not caused by negligence).

Concern for compensating victims of accidents not caused by negligence was a major motivation behind the workers' compensation movement. *See* C. EASTMAN, *supra* note 19, at 208; WAINWRIGHT REPORT, *supra* note 2, at 25-26.

[30] R. H. BLANCHARD, *supra* note 13, at 72-78; E. H. DOWNEY, *supra* note 2, at 14-15. "The basic principle of the . . . [Massachusetts Workmen's Compensation Act] is that the cost of injuries incident to modern industry should be treated as a part of the cost of production." MASSACHUSETTS REPORT, *supra* note 27, at 46.

Workers' compensation was viewed by its advocates as a remedial device for a defect in the common-law approach. One major justification for the common law negligence system is the economic theory of an open market society. It was thought that wages of jobs would automatically adjust to the amount of risk involved and, therefore, with higher wages the workman could provide insurance for himself. It was also thought that via market economics, the cost of accidents was actually being borne by the ultimate consumer because the higher wages for high risk jobs caused higher production costs and, therefore, higher prices. The early state commissions found that there was not, however, a significant wage differential between high and low risk jobs and that insurance among workmen was inadequate. WAINWRIGHT REPORT, *supra* note 2, at 26-27; WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 21-22; Wambaugh, *supra* note 27, at 129-30.

[31] As the Massachusetts Commission on Compensation for Industrial Accidents reported:

> The law will operate to prevent injuries. No one can study the history of this subject in other countries without being impressed by the fact that the operation of

a means of obviating costly and sometimes spurious litigation, as well as saving court resources and attorneys' fees.[32] Finally, by putting an end to wide ranging jury verdicts and instead, substituting liability measured by lost compensation and medical expenses, business planning could be undertaken with greater certainty and insurance companies would be in a better position to make decisions concerning risk discrimination.[33]

> compensation laws in several of them has materially reduced the number of injuries in factories and workshops, especially those resulting from machine operation.
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> In Massachusetts this subject has not received so much attention as in some foreign countries. But under the terms of the new law, where every injury carries with it compensation, the employers will realize that it is of the utmost consequence, in a financial as well as a humanitarian way, to prevent the injury. It is believed that it will be possible to decrease very largely the number of accidents, and this aspect of the law is regarded as its most important part.

MASSACHUSETTS REPORT, *supra* note 27, at 46; *see* E. H. DOWNEY, *supra* note 2, at 35; C. EASTMAN, *supra* note 19, at 105-15.

[32] *See* MASSACHUSETTS REPORT, *supra* note 27, at 51. The New York State Commission on Employers' Liability (Wainwright Commission) found in a detailed survey that out of $23.53 million of premiums paid to liability insurance companies only $8.56 million was paid to employees (36.34%). When court costs and attorneys' fees were deducted, it became clear that only a small fraction of the money spent by employers on liability insurance went to injured employees. It was a major purpose of compensation laws to channel more of the money spent by employers for industrial accidents to injured employees. WAINWRIGHT REPORT, *supra* note 2, at 25-27.

The Minnesota Bureau of Labor stated that about 32% of the premiums collected were actually paid to injured workers. The Bureau concluded, however, that the insurance companies were probably not making excess profits due to heavy costs associated with the common-law liability system. MINNESOTA REPORT, *supra* note 13, at 146-49. In addition, the Bureau cited to the following account contained in its preliminary bulletin of October 1909, entitled "Industrial Accidents and Employers' Liability":

> An attorney in New York City who has handled six thousand cases in damage suits, states that in the master and servant cases, the average compensation in these cases either in settlements or indemnities, awarded amounted to three hundred dollars. That makes a total of $1,800,000 which was paid, half of which went to the working-man, the other going to the lawyers. In other words, in these six thousand cases, there was an expenditure of nine hundred thousand dollars ($900,000) which went to the workingman. Now, what did it cost the State of New York in the way of expenses, if not New York City? This same lawyer gives it as his estimate that the courts in New York State and the judicial system in greater New York cost six million dollars ($6,000,000) a year, and that sixty per cent (60%) of the work of that system is represented by accident and liability cases. In other words, the State of New York paid out thirty-six hundred thousand dollars ($36,000,000) [sic] as expenses of procedure assessed upon the public as taxes in order to get into the workingman's hand nine hundred thousand dollars ($900,000) worth of compensation.

Id. at 147.

It is interesting to note that according to one study, the percentage of premiums paid by insurers to automobile accident victims under negligence laws (63%) was not significantly different from the percentage of premiums paid to beneficiaries under no-fault, fire insurance, and health insurance statutes. Spangenberg, *No-Fault: Fact, Fiction, and Fallacy*, 44 MISS. L.J. 15, 34-35 (1973); *see also infra* note 92.

[33] R. H. BLANCHARD, *supra* note 13, at 63-65, 78; CONNECTICUT REPORT, *supra* note 19, at 17; MINNESOTA REPORT, *supra* note 13, at 149.

On the other hand, although ultimately supported by both the National Association of Manufacturers and the American Federation of Labor, early workers' compensation statutes faced notable opposition from representatives of labor who preferred to preserve common law liability in the hopes of continued progress in eliminating employer defenses.[34] Similarly, recent plaintiff-oriented developments in tort law have led some commentators to suggest that the "compromise"[35] struck by the shared liability of workers' compensation should be reassessed.[36] These include developments relating to products liability,[37] comparative negligence,[38] and *res ipsa loquitur*;[39] the rejec-

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[34] *See* J. WEINSTEIN, *supra* note 13, at 43; *see also* Croyle, *Industrial Accident Liability in the Earlier Twentieth Century*, 7 J. LEGAL STUD. 279 (1978); Rhodes, *supra* note 2. In line with this view, support for workers' compensation has been traced to those favoring hidden subsidies to business. Calabresi, *supra* note 14, at 516 (1961); *see supra* note 14.

[35] See *supra* note 1.

[36] *E.g.*, N. ASHFORD, CRISIS IN THE WORKPLACE—OCCUPATIONAL DISEASE AND INJURY 386-422 (1976); Project: *New York Workmen's Compensation Law: Problems and Perspectives*, 26 BUFFALO L. REV. 639, 645-46, 651-52 (1977) [hereinafter cited as Project].

[37] *See, e.g.*, Greenman v. Yuba Power Prod., Inc., 59 Cal.2d 57, 377 P.2d 897 (1963) (manufacturer liable on theory of strict liability in tort although defendant took all possible care in manufacture); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1960) (manufacturer liable on theory of breach of implied warranty without showing of privity of contract or negligence in manufacture). Section 402A of the Second Restatement of Torts (adopted in most jurisdictions) provides in pertinent part: "One who sells any product in a defective condition unreasonably dangerous to the user or consumer . . . is subject to liability for physical harm there caused to the ultimate user or consumer . . . although the seller has exercised all possible care in the preparation and sale of his product." RESTATEMENT (SECOND) OF TORTS § 402A (1977). In large part, the rationale for this approach is the concept of "enterprise liability" also used to support workers compensation. *See id.* § 402A comment c; Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791 (1966). Nevertheless, the question of what is defective is still the subject of much litigation. Hoenig, *Product Designs and Strict Tort Liability: Is There a Better Approach?*, 8 Sw. U.L. REV. (1976); Keeton, *Product Liability and the Meaning of Defect*, 5 ST. MARY'S L.J. 30 (1973). "Strict products liability does not involve as great a departure from ordinary principles of negligence as is sometimes supposed. After all, strict liability requires the showing of a product 'defect.' In suits against the manufacturer, a defect in the product almost always signifies the manufacturer's negligence." Schwartz, *Contributory and Comparative Negligence: A Reappraisal*, 87 YALE L.J. 697, 700 n. 17 (1978) (citing W. PROSSER, *supra* note 16, at 644-49, 672-76).

The legal developments in products liability have led to proposals for a no-fault system along the lines of workers' compensation or no-fault automobile accident systems. *See* J. O'CONNELL, *supra* note 7, at 141-44; Sherman, *Legislative Responses to Judicial Activism in Strict Liability: Reform or Reaction?*, 44 BROOKLYN L. REV. 359 (1978). The arguments made in favor of the no-fault proposals are reminiscent of those made in favor of workers' compensation in the early part of this century. An important difference, however, is that today the most pressing concern seems not to be compensation, but rather the price and availability of insurance. *See* Birnbaum, *supra* note 7, at 253; Byington, *Public Regulation of Consumer Products and Products Liability—The Interface*, 14 FORUM 327 (1978); Schwartz, *Federal Action on Product Liability—What Has Occurred and What May Occur*, 14 FORUM 287, 290-91 (1978); Soloman, *The Asbestos Fallout at Johns-Manville*, FORTUNE, May 7, 1979, at 1976-97. One might infer, therefore, that the civil liability system is now paying well or perhaps "too well."

Absent the intervening arrest of the common law development of employer liability occasioned by the enactment of workers' compensation, much of the reasoning that led courts to hold manufacturers liable for their products after sale may have been applied in the case of employees injured in their manufacture. Project, *supra* note 36, at 649.

For a recent consideration of the legal developments, the problems, and some proposals regarding products liability, see INTERAGENCY TASK FORCE ON PRODUCTS LIABILITY, FINAL REPORT (1977); Smith, *Products Liability: A Compendium of Reform*, 15 HOUS. L. REV. 871 (1978); Titus, *Restatement (Second) of Torts Section 402A and the Uniform Commercial Code*, 22 STAN. L. REV. 713 (1970); Weisgall, *Products Liability in the Workplace: The Effect of Worker's Compensation on the Rights of Third Parties*, 1977 WIS. L. REV. 1035, 1050-51.

The question of the relative performance of products liability and workers' compensation systems is relevant also to important questions involving third party liability for accidents giving rise to liability under both workers' compensation and products liability as well as other forms of traditional tort liability. For example, when an employee is injured by a product in the course of employment, should the third party, whose liability has been greatly expanded by the development of products liability and whose liability insurance costs have sharply risen or become unavailable, be able to receive compensation under contribution or indemnity principles from negligent employers whose liability has been limited under workers' compensation and whose insurance costs are less in comparison? Should negligent employers be subrogated so as to collect from negligent third party manufacturers, when under common-law principles they might, depending on the jurisdiction, be barred from such third party assistance? Should common-law liability of manufacturers to employees of other firms be eliminated and should those employees be restricted to an expanded workers' compensation program with the negligent manufacturers contributing in proportion to their degree of responsibility for the injury, or with the employer being assigned the employee's claim against the third party as a means of financing workers' compensation insurance? The question of liability between negligent employers and third parties for injuries to employees is an area of law which is currently the subject of significant evolution and controversy. It has proceeded largely in terms of statutory construction of the scope of the exclusive remedy provisions of the various workers compensation statutes and the law of indemnity and contribution in the particular jurisdiction. It would seem, however, that legislative reform in this area will inevitably involve, at least in part, an evaluation of the performance of workers' compensation and traditional civil liability. For various comments and proposals, see Bernstein, *Third Party Claims in Workers' Compensation: A Proposal To Do More with Less*, 1977 WASH. U. L.Q. 543; Cohen & Dougherty, *The 1972 Amendments to the Longshoremen's and Harbor Workers' Compensation Act: An Opportunity for Equitable Uniformity in Tripartite Industrial Accident Litigation*, 19 N.Y.L.F. 587, 606 (1974); Davis, *Third Party Tortfeasors' Rights—Where Compensation Covered Employees Are Negligent—Where do* Dole *and* Sunspan *Lead?*, 4 HOFSTRA L. REV. 571 (1976); Mitchell, *Products Liability, Workmen's Compensation and the Industrial Accident*, 14 DUQ. L. REV. 349, 396-97 (1976); O'Connell, *Financing First-Party No-Fault Insurance by Assignment of Third Party Tort Claims*, 1978 INS. L.J. 207; [hereinafter cited as O'Connell, *Financing First Party No-Fault*]; O'Connell, *Workers' Compensation as a Sole Remedy for Employees but Not Employers*, 1977 LAB. L.J. 287 [hereinafter cited as O'Connell, *Workers' Compensation as a Sole Remedy*]; O'Connell, *Transferring Injured Victims' Tort Rights to No-Fault Insurers: New "Sole Remedy" Approaches To Cure Liability Insurance Ills*, 1977 U. ILL. L.F. 749 [hereinafter cited as O'Connell, *"Sole Remedy"*]; Comment, *The Effect of Workers' Compensation Laws on the Right of a Third Party Liable to an Injured Employee To Recover Contribution or Indemnity from the Employee*, 9 SETON HALL L. REV. 238, 300-02 (1978).

[38] Over the last decade, the doctrine of comparative negligence has gained a significant increase in popularity. In 1971, only seven states applied the doctrine. Today, at least thirty-two states apply comparative negligence in one of two forms: "pure," where plaintiff's recovery is reduced by the ratio of his negligence to the sum of his and the defendant's negligence; or "modified," which also provides for proportionate recovery but denies recovery where the plaintiff's negligence is equal to or greater than one-half of the total negligence. Schwartz, *supra* note 37; Comment, *The Pennsylvania Comparative Negligence Act: The Fifty-One Percent Solution*, 50 TEMP. L.Q. 352, 356-58 (1977).

tion of custom as controlling in determining standards of care;[40] and the increase in jury awards.[41]

In 1972, the National Commission on State Workmen's Compensation Laws found that workers' compensation plans "are in general neither adequate nor just in terms of five objectives of a modern workers' compensation program."[42] The five objectives listed were: (1) "broad coverage of employees and work-related injuries and diseases;" (2) "substantial protection against interruption of income;" (3) "provision of sufficient medical care and rehabilitation services;" (4) "encouragement of safety;" and (5) "an effective system for delivery of the benefits and services."[43]

The Commission rejected such alternatives as a return to civil damage actions[44] or absorption of workers' compensation by social security,[45] and instead recommended as "essential elements" of workers' compensation[46] virtually universal employee coverage,[47] increased

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The development of comparative negligence may have an impact upon the area of products liability. Although most states follow section 402A of the Second Restatement of Torts in denying as a defense inadvertent contributory negligence, the allowance of comparative negligence to decrease a products liability award may be regarded more favorably. *See* Schwartz, *supra* note 37, at 698; Note, *supra* note 1, at 257.

[39] *See* Jaffee, *Res Ipsa Loquitur Vindicated*, 1 BUFFALO L. REV. 1, 14-15 (1951).

[40] *See* W. PROSSER, *supra* note 16, at 166-68.

[41] *See* COMMISSION REPORT, *supra* note 1, at 119; R. RABIN, PERSPECTIVES ON TORT LAW 1-3, 61-63, 96-98, 139-43, 211-13 (1976); Franklin, *supra* note 9, at 786; Note, *supra* note 1, at 251; Project, *supra* note 36, at 652.

[42] COMMISSION REPORT, *supra* note 1, at 119.

[43] *Id.* at 15, 35.

[44] In rejecting the return to civil damages, the Commission reasoned:

> One possible alternative is to rely on negligence suits. From the worker's standpoint, this option may be somewhat more attractive than it was 50 years ago, when workmen's compensation was first widely adopted, because the plaintiff's burden subsequently has been eased in negligence suits. Other reasons, however, have convinced us that, for workers and others, workmen's compensation is preferable to negligence actions. For example, the issue of negligence is particularly elusive in the work setting. Most studies of work-related impairments stress the intermingling of employee and employer responsibility in a substantial proportion of accidents. The determination of negligence tends to be expensive and the outcome uncertain. Payments tend to be delayed when negligence suits are prosecuted, and overcrowded court dockets would compound the delays. Some workers eventually would receive damage awards in excess of workmen's compensation benefits, but others would receive no protection. Moreover, even when the worker succeeded in winning monetary damages, the litigation could be a substantial deterrent to successful rehabilitation.
>
> We conclude that damage suits are a distinctly inferior alternative to workmen's compensation.

Id. at 119-20.

[45] *Id.* at 119-21.

[46] *Id.* at 26.

[47] *Id.* at 26, 45-48.

maximum benefits,[48] more coverage for occupational disease,[49] and continuation of payments during disability for life.[50] The Commission estimated that implementing the essential elements of reform would increase costs by approximately two percent to sixty-two percent but that the reforms could be met in forty-six of the fifty-one jurisdictions by less than a fifty percent increase in workers' compensation costs.[51]

Response to the Commission report has been in the form of recommended modifications in workers' compensation benefits rather than suggestions for change in the basic structure.[52] While conceding inadequacies and inequities in workers' compensation, many advocates of no-fault systems point to workers' compensation as an example of the superiority of the no-fault liability approach as compared to negligence.[53]

III. Reparation Systems

To evaluate the operation of tort and no-fault systems, it is essential to understand that each is part of a network of public and private institutions that can be termed "reparation systems."[54] These systems serve to compensate injured victims, either as such or as members of other groups of beneficiaries eligible for compensation by reason of disability, age, need, employment contract or practice, or insurance contract.

Reparations systems in the United States may be grouped into four general categories: (1) "legal liability systems" (*e.g.*, tort, work-

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[48] *Id.* at 26, 60-64, 71.

[49] *Id.* at 26, 50.

[50] *Id.* at 16, 65, 72.

[51] *Id.* at 143-46.

[52] *See, e.g.*, Benson, *Impact of Proposed National Workmen's Compensation Acts on Ohio Workmen's Compensation*, 4 Ohio N.U.L. Rev. 269 (1977); Brainerd, *1977 Workmen's Compensation Legislation*, 6 Fla. St. U.L. Rev. 471, 476-82 (1978); Wright & Rankin, *Potential Federalization of State Workmen's Compensation Laws: The Kansas Response*, 15 Washburn L.J. 244 (1976); Comment, *Proposed Federal Workmen's Compensation Legislation: A Comparative View*, 6 Case W. Res. J. Int'l L. 121 (1973); Comment, *Amendments to the Alabama Workmen's Compensation Law*, 7 Cum. L. Rev. 123 (1976); Note, *The Changing Face of Illinois Workmen's Compensation: In Search of a Workable Response to Federal Guidelines*, 8 Loy. U. Chi. L.J. 543 (1977); Comment, *Workmen's Compensation: National Commission on State Workmen's Compensation Laws: Import for Oklahoma*, 26 Okla. L. Rev. 446 (1973).

[53] *See, e.g.*, Chelius, *Comparison*, *supra* note 12; Henderson, *Should Workmen's Compensation Extend to Non-Occupational Injuries?*, 48 Tex. L. Rev. 117, 129-57 (1969); O'Connell, *Financing First-Party No-Fault*, *supra* note 37; Soble, *A Proposal for Administrative Compensation of Victims of Toxic Substance Pollution: A Model Act*, 14 Harv. J. on Legis. 683, 718-20 (1977).

[54] As a useful organizing concept, we adopt Conard's idea of "reparations systems." See A. Conard, *supra* note 1, at 75-107.

ers' compensation, and no-fault automobile accident systems); (2) "social insurance" which is funded by compulsory payments made by the "insured" parties; (3) "uninsured public programs" such as welfare and veterans' benefits funded by tax revenues; and (4) private "voluntary loss or disability insurance" systems such as life, health, accident or disability insurance, and uninsured formal and informal "sick leave" programs.[55]

For purposes of providing some background, this section of the article will briefly define the competing "legal liability systems" mentioned above and describe their general objectives in order to establish a basis for later comparing these "liability systems" in terms of how well they achieve those objectives.

A. *The Tort System*

Within the context of this paper, the tort system[56] refers to the body of law governing accidental injury but excluding no-fault systems as described below. It includes instances of "strict liability" that have developed through judicial decisions, such as in cases of ultra-hazardous activity and manufacturing. It also includes the residual common law governing employers' liability to employees where workers' compensation legislation has not totally eliminated it. It is thus the broad, somewhat amorphous, evolutionary system generally understood as the common law of tort, where fault plays a significant (though in the case of strict liability, a diminished) role in establishing judicial determinations of liability for economic losses and pain and suffering without imposing maximum limits on, or exclusions from, recovery.[57] It is administered in our courts, governed by traditional rules of evidence and championed by attorneys, typically for contingent fees ranging from twenty-five percent to forty percent, but most often thirty-three and one-third percent, of the recovery.[58] In addition, by virtue of the collateral source rule,[59] payments for losses made

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[55] We have somewhat departed from Conard's categories for the sake of simplicity.

[56] *Cf.* Franklin, *supra* note 9, at 778. *See generally* W. PROSSER, *supra* note 16, at 139-525.

[57] *See generally* W. PROSSER, *supra* note 16, at 139-525.

[58] J. O'CONNELL, THE INJURY INDUSTRY AND THE REMEDY OF NO-FAULT INSURANCE 37-53 (1971); *see infra* note 79.

[59] *See* Maxwell, *The Collateral Source Rule in the American Law of Damages*, 46 MINN. L. REV. 669-95 (1962); Moceri & Messina, *The Collateral Source Rule in Personal Injury Litigation*, 7 GONZ. L. REV. 310, 319 (1972). The rule is stated as follows: Benefits received by the plaintiff from a source wholly independent of and collateral to the wrongdoer will not diminish the damages otherwise recoverable from the wrongdoer. 22 AM. JUR. 2D *Damages* § 206 (1965).

The rule has been criticized, *e.g.*, Note, *Unreason in the Law of Damages: The Collateral Source Rule*, 77 HARV. L. REV. 741-53 (1964), but it is recognized in all jurisdictions except Alabama. J. STEIN, DAMAGES AND RECOVERY, PERSONAL INJURY AND DEATH ACTIONS 288 (1972).

to victims by other sources do not diminish the liability of the tortfeasor.[60]

B. *No-Fault Liability*

No-fault systems[61] (including workers' compensation) are those which allocate, without regard to fault, the costs of a defined set of accidents to a defined set of parties having a relationship to the accident. To the extent they apply, no-fault systems eliminate tort liability. Parties liable (*e.g.*, drivers, employers) may be required to purchase insurance providing compensation to victims or to qualify as self-insurers. The insurance premiums are adjusted according to risk. Recovery may be limited to only a percentage of actual losses (or an absolute maximum) and there may be no recovery for pain and suffering. Simpler, less adversarial procedures for determining liability are substituted for the rigors of litigation. Payments from collateral sources are frequently applied to reduce the no-fault liability.[62]

Workers' Compensation

As used in this article, workers' compensation refers to a typical workers' compensation program.[63] In reality, these programs differ among states as to such features as their elective or compulsory character, the industries covered, and the limits on recovery of loss. Typically, workers' compensation programs eliminate employers' common law liability for employment-related injuries as well as the common law defenses to recovery. Instead, they provide for "certain" employee recovery, without regard to fault, in the amount of one hundred percent of medical expenses and from fifty percent to (and increasingly) sixty-six and two-thirds percent of pre-injury wage income, but no recovery for pain and suffering. There are frequently ceilings on the maximum income loss recovery and limitations on the period of time for which an injured employee may recover even though the income loss and need may continue. The system is usually adminis-

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Against a solid majority, a few cases hold that insurance proceeds paid under employer financed policies are not from a collateral source and may be considered to reduce employer liability. *Id.* at 306-11.

[60] *See infra* notes 150 & 151 and accompanying text.

[61] There is no single definition of no-fault systems. Such systems are variously described, defined, and proposed for different purposes. *See* G. CALABRESI, *supra* note 10, at 3-15; J. O'CONNELL, *supra* note 7, at 10; J. O'CONNELL, INDUSTRY AND THE REMEDY OF NO-FAULT INSURANCE 114-116 (1971); Blum & Kalven, *supra* note 5; Keeton, *supra* note 10, at 8-12.

[62] *See infra* notes 150 & 151 and accompanying text.

[63] *See supra* note 1.

tered by a government agency which conducts proceedings where rules of evidence, procedure, and choice of law are relaxed and the adversary nature of the process is minimized to the extent possible. Employers are required either to purchase insurance or to qualify as self-insurers. The right to sue third parties survives, and insurers and employers who have made payments under the program are reimbursed from, and frequently have the right to control, third-party litigation.[64]

C. *Objectives*

Liability systems, as with all reparation systems, are enacted to achieve four principal purposes.[65] First, the systems are aimed at providing compensation to the individual who has suffered a loss. Second, reparation systems attempt to allocate the costs of injury. In this respect, liability systems are distinguishable from other reparation systems because of their special emphasis on deterrence. Liability systems are used to allocate costs among those parties responsible for the hardship so as to deter future accidents and promote safety, whereas this deterrence objective is not a primary allocational principle in other reparation systems. Third, reparation systems are intended to promote efficiency in providing compensation to the victim. Finally, these systems are utilized to satisfy the popular sense of equity.[66]

The objective of providing adequate compensation relates to how fully compensation payments cover losses. Thus, the extent to which a reparations system provides "adequate" compensation for accidental injury or death can be measured by comparing compensation payments to the losses that, absent compensation, are borne by the victim.[67]

Cost allocation, the second objective of reparation systems, refers to the method in which both the direct and indirect costs of accidental injury are distributed among parties involved with the injury. One objective of cost allocation, emphasized most in connection with lia-

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[64] For various descriptions of significant common features of workers' compensation systems, see 1 A. LARSON, *supra* note 1, at 1-2; WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 29-40.

[65] *See* A. CONARD, *supra* note 1, at 75-107; *cf.* G. CALABRESI, *supra* note 10, at 29.

[66] As has been noted, goals of reparation systems are not always fully consistent; frequently, one cannot improve output of one goal without sacrificing output of another goal. N. ASHFORD, *supra* note 36, at 389-93, 407-10; *see* G. CALABRESI, *supra* note 10, at 29.

[67] "Compensation" consists of the payment of the direct costs of accidents which are incurred by the victims. *See infra* notes 69 & 70 and accompanying text.

bility systems, is to encourage safety and deter accidents by imposing cost burdens on those who can reasonably be expected to avoid such liability in the future.[68]

Direct costs arising from an accidental injury or death include: (1) wage losses suffered by the victim; (2) medical care and rehabilitation costs of the victim; (3) pain and suffering imposed on the victim and on persons closely related to the victim; (4) damages to physical capital (*e.g.*, auto damages, damages to production machinery, inventory, etc.); (5) losses of output due to the reduction of productivity of persons other than the victim; and (6) administrative costs of the reparation system involved.[69]

The indirect costs of accidents include welfare losses and the costs of prevention. Welfare losses are incurred if the utility of persons not directly involved in the accident is reduced in consequence of the accident. If, for example, the treatment afforded victims offends others in society the welfare of the nonvictims is thereby reduced and this loss becomes a social cost of accidents.[70] The costs of prevention are comprised of expenditures made to prevent accidents. These expenditures also constitute indirect accident costs because in a less risky environment these resources could be employed to produce other goods and services.

The third goal of reparations systems is to provide the most efficient method for determining losses and awarding appropriate compensation. In the fault/no-fault debate the distinction between administrative costs and administrative efficiency is often blurred. Administrative costs and administrative efficiency refer to different system characteristics. One cannot meaningfully compare administrative efficiency without considering the comparative administrative costs relative to the differing outputs of each system. Cost differences may or may not be desirable depending upon how the different outputs are valued. A comparison of the administrative costs of workers' compensation, for example, to the tort system it replaced is a measure of the relative efficiency of the two systems only if the results produced by the two systems are identical, and yet the systems are designed to produce different results. Thus, in comparing the administrative efficiency of the two systems by reference to administrative costs, it is necessary simultaneously to relate the differences in those

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[68] G. CALABRESI, *supra* note 10, at 68-94; A. CONARD, *supra* note 1, at 88-92; *see supra* note 61.

[69] *See* G. CALABRESI, *supra* note 10; A. CONARD, *supra* note 1, at 137-45.

[70] *See* G. CALABRESI, *supra* note 10, at 28.

costs to the differences in compensation, incentives for safety, and equity which are effected by the two systems.

From a practical standpoint, the administrative costs associated with the tort system include court fees, attorney and expert fees, and collection costs.[71] Other administrative costs can include the costs of settling cases out of court and the costs of determining which cases are without merit.

Although not inconsiderable litigation still ensues on questions of coverage, no-fault systems seek to avoid most of these costs by replacing the common-law adversary process with administrative processes.[72] Most particularly, they seek to eliminate attorneys' fees, viewed as by far the single greatest component of the administrative costs of the tort system.[73] Additionally, no-fault systems attempt to replace judges and courtrooms (thereby freeing them to ease other backlogs) for lower-cost, specialized, agency personnel and facilities.[74]

Many advocates of no-fault systems implicitly conclude that these reductions in administrative costs are passed on to victims as increased compensation compared to that under the tort approach.[75] This is not necessarily true, but it is one of the issues that should be empirically tested.

Reaching an equitable result from the point of view of all parties involved is the fourth objective of reparations systems and is a question which permeates every decision made under the law. While the importance of principles of justice and equity is without question, we wish to note that these principles are not, at least within the scope of this article, susceptible to empirical evaluation. It is our hope, however, that the conceptual framework and empirical analysis set forth in this article will be helpful in making just decisions in evaluating competing liability systems.

IV. The Evaluation and Comparison of Competing Liability Systems

In evaluating the competing liability systems three principles should be remembered:

1. The evaluation of the relative merits of liability systems depends upon the viewpoint of the evaluator. The optimum system,

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[71] Essentially, then, we include within administrative costs the costs of determining the rate and extent of liability and the cost of enforcing the liability imposed or agreed upon.

[72] See *supra* notes 1 & 10 and accompanying text.

[73] See *supra* notes 9, 10 & 32 and accompanying text.

[74] See *supra* notes 1 & 6-10 and accompanying text.

[75] See *supra* note 32.

viewed by the society as a whole, may be less attractive to a private party. In general, individuals are interested in minimizing their own costs, and only society has a primary interest in minimizing overall costs.

2. The systems do not operate *in vacuo*, but are superimposed on an existing network of reparations programs.[76] As such, the compensation, deterrence, efficiency, and equity goals of these programs sometimes conflict.

3. Different elements of administrative costs must be analyzed in terms of how they qualitatively and quantitatively affect the objectives of compensation, safety incentives, and equity.

With these principles in mind, we will now compare the operation of workers' compensation and tort law from both a theoretical and an empirical approach.

A. *Theoretical Analysis*

The extent to which competing reparation systems serve the interdependent, and sometimes conflicting objectives of compensation, deterrence, economy, and justice, may differ considerably in theory and in practice. The purpose of this section is to analyze in theory the expected results of workers' compensation and the traditional negligence system.

If one assumes that deterrence, efficiency, and equity objectives are equally satisfied under each system, then from society's viewpoint the preferable system is the one that most adequately compensates victims. In evaluating the competing systems, society will first want to know the expected aggregate amount of loss of all types left uncompensated. Further, it might want to know how the distribution of uncompensated loss is related to the nature, severity, and probability of injury, the class of victims, and various social purposes.[77]

Unfortunately, our empirical evidence sheds light only on expected recovery, with some differentiation in terms of severity of injury, and we have structured our equations accordingly. Neverthe-

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[76] The operation of reparations systems should also be analyzed in the context of other systems of deterrence. Negligence and workers' compensation systems have been called systems of general deterrence. In contrast, "specific" deterrence systems provide penalties, in the form of fines and imprisonment, for injury-related violations of care and other prescribed duties. *See* G. CALABRESI, *supra* note 10, at 95-129. As with compensation from other sources, the existence and enforcement of specific deterrence must be considered in assessing the desired mix of system goals. We do not, however, have any data on the specific deterrence issue; and apart from this reference for the sake of completeness, we shall not consider specific deterrence.

[77] N. ASHFORD, *supra* note 36, at 391, 406, 411-16; COMMISSION REPORT, *supra* note 1, at 35. *Compare* Keeton, *supra* note 10, at 1-3 *with* G. CALABRESI, *supra* note 10, at 31-33, 39-67 *and* W. BLUM & H. KALVEN, PUBLIC LAW PERSPECTIVES ON A PRIVATE LAW PROBLEM 471-72 (1965). *See generally* Blum & Kalven, *supra* note 5.

less, we submit that data on expected recovery is important for at least four reasons. First, the expected recovery is a measure of the compensation available under the particular system for the entire class of victims. Next, a portion of the uncompensated losses falling upon welfare-eligible persons will be financed by general tax revenues. Third, a portion of uncompensated losses will be borne by relatives and friends of the victim—individuals who are unconnected with the accident. Finally, some uncompensated losses may be assumed by charities, thus depleting resources which could be used for other charitable assistance.

Assuming for the moment that the risk of injury is exogenous to the mode of reparations, the potential victim's choice between no-fault liability (or workers' compensation) and negligence can be represented as the difference between the expected benefits available through each system in the event of an accident. From the potential victim's viewpoint, the best system is the one that results in the greatest expected net compensation.[78]

The recoveries under each system may be analyzed by employing symbolic equations. Given the following definitions and assumptions:

N = Negligence approach;
S = No-fault approach;
B = Compensation benefits received by victim if injured;
π = Probability of recovering economic losses ($_S$ assumed to = 1);
π' = Probability of compensation for pain and suffering (π_S' assumed to = 0);
K = Maximum percentage of economic loss that victim is permitted to recover;
E = Probability factor;
T = Transaction costs borne by victim (T_S assumed to = 0);
WL = Wage Loss;
Med = Medical Costs;
PS = Pain and suffering;[79]

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[78] This proposition assumes that the victim attaches no differential value to uncertainty or risk of recovery. There is a substantial body of commentary which discusses and debates the extent to which individuals attach differential value to the risk or uncertainty of receiving an expected level of benefits. Some individuals may prefer a low-risk, low-yield expectancy while others will prefer a high-risk chance at greater recovery, though both alternatives may have the same expected value. For example, a 50% chance of receiving $400 creates the same expected value as a 100% chance of receiving $200.

In this article, for simplicity, we frequently compare expected values as though victims and society were risk neutral. We do not mean, however, to make judgments on questions of individual risk preference; rather, our purpose is to provide some information that would be important to people who are concerned about risk and distribution of benefits.

[79] Our assumptions ($\pi_S = 1$, $T_S = 0$, $0 < K_S < 1$) are those frequently adopted for simplicity in discussions of the no-fault approach. We assume that every victim is compensated for some fraction of his economic loss; that his costs of recovery are zero and that no compensation is

then the expected recovery under a tort system would be represented by the following equation:

$$(1)\ E(B)_N = \pi_N\,(WL + MED) + \pi_N'\,(PS) - T_N$$

Expected recovery under a no-fault system (where we have assumed $\pi_S' = 0$ and $T_S = 0$) would be:

$$(2)\ E(B)_S = \pi_S K_S\,(WL + MED) + 0 - 0$$

The difference in expected benefits between negligence and no-fault then is:

$$(3)\ E(B_N - B_S) = \pi_N\,(WL + MED) - \pi_S K_S\,(WL + MED) + \pi_N'\,(PS) - T_N$$

If we adopt the simplifying assumption that the transaction costs in negligence suits can be represented by attorneys' contingency fees, then:

$$(4)\ T_N = (1 - K_N)\,(\pi_N)\,(WL + MED) + (1 - K_N)\,(\pi_N'\,(PS))$$

where K_N is equivalent to the proportion of benefits to be paid to the victim. If attorney fees are taken into account, then the difference in net compensation to the victim between tort and no-fault systems would be:

$$(5)\ E(B_N - B_S) = (\pi_N K_N - \pi_S K_S)\,(WL + MED) + \pi_N' K_N\,(PS)$$

These equations focus attention on the fact that, in evaluating the two approaches, the no-fault limit on recovery is, from the victim's viewpoint, a deduction from his recovery just as the attorney's fee is in a negligence suit.[80] If the two proportions of recovery are equal (*i.e.*, $K_S = K_N$), then potential victims need not consider transaction costs in their evaluation of the two alternatives. Instead, as described below, they would compare the probabilities of recovery under each system and the expected compensation for pain and suffering under negligence. The comparisons may be facilitated by additional assumptions related to K_S and K_N. First, it should be noted that according to the foregoing equations, we have assumed a "composite" K operating to limit the victim's recovery to a composite percentage of total losses comprised of the separate components of lost wages and medical costs. In negligence cases, if we assume a typical attorney's fee of thirty-three and one-third percent,[81] which operates to limit the victim's

provided for pain and suffering. Chelius, *Comparison*, *supra* note 12, at 301; Franklin, *supra* note 9, at 794; Keeton, *supra* note 10, at 45; O'Connell, *"Sole Remedy"*, *supra* note 37, at 750-51.

[80] Blum & Kalven, *supra* note 5, at 396-99.

[81] UNITED STATES DEPARTMENT OF TRANSPORTATION, ECONOMIC CONSEQUENCES OF AUTOMOBILE ACCIDENT INJURIES 49 (1970) [hereinafter cited as DEPARTMENT OF TRANSPORTATION].

recovery both as to wage losses and medical losses, then the limitations on recovery for wage losses ($K_{N(WL)}$) and the limitations on recovery for medical losses ($K_{N(MED)}$) are equal. Thus, under our present assumptions, $K_{N(WL)} = K_{N(MED)} = K_N = .67$. However, for our strict liability alternative if we assume the "ideal" recovery limit under workers' compensation of sixty-seven percent of wage loss and one hundred percent of medical costs, then $K_{S(WL)} = .67$ and $K_{S(MED)} = 1$;[82] and the composite K_S will equal the weighted average of .67 and 1, depending on the magnitude of the separate losses related to wages and medical costs.

Recalling that we have assumed $\pi_S = 1$, we can now rearrange equation 5 and incorporate our additional assumptions as follows:

$$(6)\quad E(B_N - B_S) = [(\pi_N)(K_N) - \pi_S(K_{S(WL)})]\,(WL) + [(\pi_N)(K_N) - \pi_S (K_{S(MED)})]\,(MED) + \pi_N'(K_N)(PS)$$

$$(7)\quad = [(\pi_N)(.67) - 1(.67)]\,(WL) + [(\pi_N)(.67)\text{-}1(1)]\,(MED) + \pi_N'(K_N)(PS)$$

For our hypothetical worker, the choice between being covered by workers' compensation or the negligence system is determined by the extent to which the (presumably) lower expected recovery for wage loss and medical costs under negligence (taking into account the probability factor) is offset by the expected recovery under tort for pain and suffering.

This example is purposely simplistic. It ignores several facts: (1) that there are legal fees and other transaction costs to some victims under workers' compensation;[83] (2) that the average compensation for wage loss is less than sixty-six and two-thirds percent even in states where the ideal has been adopted as the maximum (*i.e.*, $\pi_S(WL) < .67$);[84] (3) that all injured workers, even in cases where an application for workers' compensation is made, do not receive workers' compensation benefits (*i.e.*, $\pi_S < 1$);[85] (4) that some workers' compensation claimants who receive benefits do not recover one hundred percent of

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[82] CHAMBER OF COMMERCE OF THE UNITED STATES, ANALYSIS OF WORKERS' COMPENSATION LAWS 19-20 (1979) [hereinafter cited as CHAMBER OF COMMERCE].

[83] Controverted claims often involve attorneys for both the employer and the employee. Many cases also involve the costs of appeal. *See supra* note 1.

[84] Although the maximum allowable compensation for lost income is 66⅔ percent for almost every state, workers with few or no dependents and workers' survivors receive less than 66⅔% in a great number of states. *See* CHAMBER OF COMMERCE, *supra* note 81, at 18-23; WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 32.

[85] Questions of whether a particular employee or a particular injury is covered by a workers' compensation law and whether the employee can, therefore, receive any compensation still exist and are often resolved against the employee. *See generally* CHAMBER OF COMMERCE, *supra* note 81, at 3-17; WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 29-31.

their medical expenses; (5) that, under negligence, attorneys' fees may exceed thirty-three and one-third percent of the award;[86] (6) that liability insurance may be purchased.[87] Further, the equations assume that victims are neutral in their preference as to differential risk[88] and delay[89] in the receipt of payments. Apart from questions of risk preference, on which we have no data, we believe that the net bias of our assumed facts tends to overstate the compensation provided by workers' compensation as compared to negligence.[90]

Safety Objectives

In evaluating the deterrent effects of cost allocations it is generally assumed that the potential risk avoider will invest in prevention up to the point where marginal costs and benefits are equal.[91] Proponents of negligence systems argue that by imposing liability in terms of fault, the most efficient risk prevention will be promoted.[92]

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[86] DEPARTMENT OF TRANSPORTATION, *supra* note 82, at 49.

[87] *But see infra* note 95.

[88] *See supra* note 78.

[89] The expected benefits in the equations are expressed in terms of present value, but such present valuation assumes a standard market rate rather than a rate which may apply to persons with varying degrees of immediate need for compensation.

[90] The effect of the bias inherent in our assumptions, together with additional biases implicit in our comparative data, is discussed more fully in the Summary and Conclusion *infra*.

[91] *See* R. POSNER, ECONOMIC ANALYSIS OF LAW 1-10 (1972); Calabresi & Hirschoff, *Toward a Test for Strict Liability in Tort*, 81 YALE L.J. 1055, 1057-59 (1972); Croyle, *supra* note 34; Epstein, *A Theory of Strict Liability*, 2 J. LEGAL STUD. 151 (1973); Posner, *Strict Liability: A Comment*, 2 J. LEGAL STUD. 205 (1973).

[92] *Compare* Posner, *supra* note 91 *with* Calabresi & Hirschoff, *supra* note 91 *and* Schwartz, *supra* note 37. *See generally* Posner, *supra* note 14.

Not considered in the foregoing discussion or elsewhere in the article is the question of insurance. It is often argued that the availability of liability insurance frustrates the accident deterrence function of reparations systems. It is argued that with insurance, the cost of an accident allocated to the party causing the injury does not represent the victim's losses. Rather, the cost is only equivalent to the present value of any premium increase. Additionally, the contention is made that insurers are poor risk discriminators and, thus, the premium differential between low risk and high risk injureds does not reflect the difference in the expected costs of their actions. R. POSNER, *supra* note 91, at 154; NEW YORK COMM'N, SECOND REPORT, *supra* note 12, at 15; Posner & Rosenfield, *Impossibility and Related Doctrines in Contract Law: An Economic Analysis*, 6 J. LEGAL STUD. 83, 90-92 (1977). It is also argued that, premiums are such a low proportion of total cost that they provide insubstantial economic incentives to safety promotion. N. ASHFORD, *supra* note 36, at 397, 402-07, 417; WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 289; Blum & Kalven, *supra* note 5; Kulp, *The Rate-Making Process in Property and Casualty Insurance—Goals, Techniques and Limits*, 15 LAW & CONTEMP. PROBS. 493, 494-95 (1950).

Insurance may dilute the deterrent effect of negligence-based compensation; but liability insurance is also available, and in fact a requirement, under most no-fault liability systems. Although we cannot empirically test these questions, to compare the dilutionary impact of insurance on the deterrence objectives of tort and no-fault systems, several critical questions would have to be answered: (1) to what extent is insurance purchased as a means of coverage; (2) how accurately do the insurance rates reflect actual risk of loss and liability; (3) who bears the costs of uninsured losses?

The economic principles noted here are frequently described in connection with the formulation of "negligence" by Judge Learned Hand in *United States v. Carroll Towing Co.*[93] On the strength of this formulation, some commentators have taken all negligence law to be founded in economic principles of efficiency and social utility. Thus, for example, Richard Posner has suggested that rather than compensation: "the dominant function of the fault system is to generate rules of liability which, if followed, will bring about an efficient level of accidents and safety."[94]

There is, however, some reason to believe that notwithstanding the efficiency considerations of the negligence system, optimum deterrence may be better achieved by imposing relatively greater costs on nonvictims and relatively lower costs on victims. In this regard, it is important to distinguish between negligence which causes self-injury and negligence which causes injury to others. Commentators have persuasively argued that the fear of pain and suffering is the primary

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In each instance, it may be argued that the dilutionary impact of insurance on deterrence will be less under negligence than under no-fault systems structured along the lines of workers' compensation. It is generally recognized that liability insurance is more frequently required under workers' compensation systems than under negligence systems. Consequently, such insurance is more frequently purchased by parties facing potential workers' compensation liability than those facing possible tort liability. *See* Blum & Kalven, *supra* note 5.

Furthermore, the ceilings and limitations on workers' compensation recovery should occasion a reduction in rates for workers' compensation coverage due to the more limited and predictable potential liability. The result is that the insurance premiums paid to cover workers' compensation liability do not reflect the costs of losses which exceed the recovery limitations and are borne by the injured employees. In contrast, under the tort system, where there are no such limitations on recovery, insurance rates are set to reflect the full range of anticipated losses for comparable accidents. As such, the rates under negligence will presumably be either higher than the comparable rates for workers' compensation coverage, or (by reason of "uninsurable" risks) such rates may not be offered at all. Thus, where available under the negligence system, insurance premiums would seem to reflect more accurately the total risks of injury.

Finally, under workers' compensation the worker bears the costs of uninsured losses above the statutory limitations; whereas under negligence, it is the negligent party who bears the cost of uninsured losses. Thus, to the extent that insurance has a dilutionary impact on the deterrence objective, its dilutionary effect would seem to be greater under workers' compensation than under negligence.

[93] 159 F.2d 169 (2d Cir. 1947). In this landmark case, Judge Learned Hand discussed the duty "to provide against resulting injuries" as "a function of three variables": (1) the "probability" that a dangerous condition will be created; (2) the "gravity" of the potential injury should the dangerous condition exist; and (3) the "burden" imposed by taking "adequate precautions" to avoid the dangerous condition and possible injury. Judge Hand then translated his analysis into "algebraic terms": "if the probability be called, P; the injury, L; and the burden, B; liability depends upon whether B is less than L multiplied P, *i.e.* whether $B < PL$." *Id.* at 173.

[94] Posner, *supra* note 14, at 33. After all "cost-justified" safety alternatives have been employed, the party liable will either pass the cost to others or absorb it. In the case of employer liability, any losses not avoidable by cost-justified safety alternatives will be reflected in prices. Thus, consumers are given the choice of financing the reparations or purchasing other goods or services. *Id.*

deterrent to self-injury negligence, and that beyond this strong, instinctive deterrent, cost-based deterrence is not substantial.[95] In other words, as compared with an individual's own fear of pain and suffering, the prospect of economic loss experienced by that individual as a result of the injury is insignificant or, at least, appreciably less significant. Cost incentives, therefore, might have greater effect if incremental costs are allocated to one or more nonvictims. Given the imprecision inherent in determining negligence and the appropriate level of economic incentives to promote safety, the foregoing distinction suggests that the preferable system, in terms of promoting safety, is the one which provides (or errs, if at all, by providing) greater incentives for cost-based deterrence to nonvictims who, as a result of their activities or financial relationship, are sufficiently related to the accident as to be able to initiate or promote safety measures.

In the context of workers' compensation, this preference for greater cost allocation to the nonvictim may be even more persuasive. Proponents of increased cost allocation to employers under principles of workers' compensation argue that the employer is in a position not only to avoid risks where his own negligence is involved, but also to influence the conduct of other potential risk avoiders. (*e.g.*, employees and products manufacturers) Therefore, the increased employer incentives under workers' compensation rules may have a greater effect than cost allocation under negligence principles.[96]

Administrative Efficiency

In theory, the workers' compensation model is structured more cheaply than negligence systems because it reduces the costs of determining fault and damages.[97] Although the empirical resolution of this question is not within the scope of this paper, we would like to discuss briefly the criteria for such an evaluation in the hope of reducing some of the confusion surrounding the efficiency concept in the fault/no-fault debate.

It is important to recognize that the unqualified comparison of relative costs implies that the alternatives considered produce the same results—namely, some combination of compensation, deterrence, and equity. As previously noted, however, the systems are

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[95] *See* E. H. DOWNEY, *supra* note 2, at 36-37; C. EASTMAN, *supra* note 12, at 216-17. *But see* J. CHELIUS, WORKPLACE SAFETY AND HEALTH 56-57 (1977).

[96] *See* WORKMEN'S COMPENSATION COMPENDIUM, *supra* note 15, at 24; *supra* note 31.

[97] As previously noted, however, whether these costs correspond to greater efficiency depends on the outputs of the two systems and on how one values those outputs if they are different.

designed to produce different results. Many commentators support the notion that the negligence approach provides inadequate compensation and incurs higher costs than no-fault plans. It is argued, therefore, that the higher administrative costs can best be justified by a demonstration that such costs help provide more efficient accident deterrence.[98]

In comparing negligence with no-fault, we believe that these conclusions should be reconsidered. As previously noted, the inadequacy of compensation argument is generally limited to discussions of the performance of negligence systems alone and is not supported by its proponents with any comparative empirical data on the operation of the competing systems. Moreover, the expected reduction in costs due to the elimination of attorneys' fees is rarely compared to any estimate of increases in administrative costs attributable to growing bureaucracies.

In evaluating the competing systems, one might also conclude that attorneys' fees in negligence cases are "expensive" by looking at the relation of fees to awards.[99] One of the outputs of the negligence process is the determination of fault. Attorneys' fees, therefore, must be considered in relation to both successful and unsuccessful claims. To the extent that certain claimants are justifiably denied compensation under negligence rules, such findings are a beneficial output of the system inasmuch as recovery is intended to be limited to those truly deserving. In other words, compensation awards do not represent the total output of the negligence system from society's viewpoint and the comparison of costs to awards understates the true efficiency of the system by ignoring a valued output that the system has produced.

One should not infer from this discussion that we have decided that negligence is the more efficient approach. Our objective is merely to suggest that the issue is not so completely resolved as many suggest.

B. *Empirical Analysis*

As previously noted, the debate over tort and no-fault systems generally has not focused on any consideration of comparative empirical data on the operation of the two liability systems.[100] In this section, we compare information from three sources to evaluate benefit adequacy, deterrence, and transaction costs under the alternative systems.

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[98] R. POSNER, *supra* note 91, at 152-54.

[99] *See, e.g.*, WAINWRIGHT REPORT, *supra* note 2, at 29.

[100] *See supra* note 12 and accompanying text.

Data from a 1976 Survey of Workers' Compensation Clients, based on a five state sample of seriously injured workers (all of whom received a workers' compensation award) is used as a measure for the distribution and magnitude of wage losses and the adequacy of workers' compensation benefits. Recovery ratios and transaction costs obtained from a 1969 study of compensation to automobile accident victims are used as proxies for what injured workers might expect to receive under a contemporary negligence approach to occupational injury. The measure of compensation reflected in the two samples is also analyzed in terms of severity of injury by matching data sets from specific categories of losses. Reference is also made to fragmentary information on recoveries for occupational injuries prior to the introduction of workers' compensation plans. By reason of limitations in our data, our evaluation of benefit adequacy does not compare recovery for medical costs but is restricted to wage loss recovery.

The results are not, in any sense, a complete test of the relative merits of no-fault and tort liability systems. They do, however, demonstrate that conventional wisdom and traditional assumptions regarding no-fault and negligence systems should be reconsidered, and would be enhanced by more focus on empirical analysis.

The Health Studies Survey of Workers' Compensation (1976)

TABLE 1

A COMPARISON OF THE ADEQUACY OF WORKERS' COMPENSATION BENEFITS WITH NEGLIGENCE SYSTEMS INJURED WORKERS 1976

	1.	2.	3.	4.	5. NEGLIGENCE 6.		7.
	WAGE LOSS	AVERAGE ANNUAL WAGE LOSS	WORK. COMP. BENEFITS	K_i (π, K_i)	HYPOTHETICAL AWARDS 6% STANDARD	HYPOTHETICAL AWARDS 30% STANDARD	N
EMPGRP A	$3,111,048	$3,899	$211,523	.07	$186,663	$ 933,314	798
EMPGRP B	2,278,182	9,261	152,470	.10	136,691	683,455	246
EMPGRP C	1,824,111	9,550	269,185		109,447	547,233	191
TOTAL	$7,213,341	$5,841	$633,178	.09	$432,801	$2,164,002	1,235

SOURCE: SYRACUSE UNIVERSITY—THE HEALTH STUDIES PROGRAM, WAGE LOSSES AND WORKERS' COMPENSATION BENEFITS—THE SURVEY OF WORKERS' COMPENSATION RECIPIENTS (1976).
Hypothetical Awards calculated by applying recovery ratios (6 %-30 %) for occupational injuries cited in W. PROSSER, HANDBOOK ON THE LAW OF TORTS 530 n. 32 (4th ed. 1971).

The Health Studies Survey was conducted by the Health Studies Program of the Maxwell School, Syracuse University, under the auspi-

ces of the Federal Interdepartmental Task Force on Workers' Compensation. The Survey collected data on a wide range of worker characteristics and experiences.[101] For the purposes of this article, we confine our discussion to the collected data on wages, wage losses, and benefits. The data is compiled from interviews with 1,693 seriously impaired workers, representing the population of such workers in the five states studied.[102] Injured workers who applied for but did not receive workers' compensation benefits are not represented by the sample. The 1976 interviews were conducted from five to eight years after the injury, thereby permitting time for the completion of transitional activities and adjustments.

Wage losses were estimated as the difference between wage income earned in 1976 and an estimate of the wage income that would have been earned had the person not been injured.[103] The use of potential rather than pre-disability wages to estimate wage loss is similar to the method typically applied in tort liability suits and to the method used in the 1969 auto study.[104]

The five states surveyed are among the most liberal, in terms of workers' compensation benefits, in the United States.[105] Thus, apart from the bias of the assumptions discussed above, inherent in our data is an overstatement of the adequacy of workers' compensation benefits for seriously injured workers relative to the national average.

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[101] For a complete description of the survey and sample design, see 7 Makarushka, Chollet & Frankel, The Health Studies Survey of Workers' Compensation Recipients in New York, Florida, Wisconsin, Washington, and California: Survey Design and Administration, Interdepartmental Task Force on Workmen's Compensation Research and Technical Assistance Reports (June 1979) (available from U.S. Government Printing Office). For a complete discussion of benefit adequacy, see 6 Johnson, Cullinan & Curington, The Adequacy of Workers' Compensation Benefits, Interdepartmental Task Force on Workmen's Compensation Research and Technical Assistance Reports (June 1979) (available from U.S. Government Printing Office) [hereinafter cited as Johnson].

[102] Those interviewed had permanent impairments equivalent (by reference to the AMA Guide) of 10% or more of total bodily capacity.

[103] The method of wage loss estimation is described in detail in Johnson, *supra* note 101. *See also* Johnson, Curington & Cullinan, *Income Security for the Disabled*, 18 INDUS. REL. 173 (1979).

[104] The data used in our discussion relates to those who suffered wage losses in 1975 (the "loss year") whether or not workers' compensation benefits were received in that year. Additionally, workers' compensation benefits for permanent partial disability are limited in duration and had expired for 780 of the 1693 persons who received benefits for some period prior to 1975. Consequently, the 780 persons suffering wage loss but not receiving any compensation in 1975 are included in the data.

Lump sum awards were prorated from the time of the accident to the year in which the injured person became 65 years old. *See* Johnson, *supra* note 101.

[105] The five states used were New York, California, Florida, Wisconsin, and Washington.

The workers' compensation sample is classified into three groups. The first group (EMPGRP A) consists of persons who worked for wages for all or part of the year 1975. The second group (EMPGRP B) is composed of those who returned to work at some time following their accident but who had not worked at all for twelve months or more prior to time of interview. Persons in the last group (EMPGRP C) had not worked at any time after their accident. In general, EMPGRP A persons are younger and better educated than the others, equally impaired as those in EMPGRP B, but less severely impaired than persons in EMPGRP C. Notwithstanding their equal impairment to those in group B, EMPGRP A workers are more adaptable and hence, more employable.

The Department of Transportation (DOT) Survey of 1969

In 1969 the Westat Corporation, under the auspices of the United States Department of Transportation, interviewed 1,037 persons who had been "seriously injured" in auto accidents. The definition of "serious injury" includes a large number of cases in which the severity of injury is much less than that in our workers' compensation sample.[106] Comparisons, however, are based on persons with total economic losses of $10,000 or more. This category represents wage losses equivalent to those of the 1976 Workers' Compensation Survey.[107] The data that we present on compensation is net of attorneys' fees.

Pre-Workers' Compensation Negligence

The data contained in Table 1 under "Negligence" is based on estimates of the amount of recovery which would have been awarded workers had their claims been litigated under traditional negligence rules prior to the enactment of workers' compensation laws. From the early estimates that seventy to ninety percent of pre-workers' compensation injuries went uncompensated, we assume that only six to thirty percent of injured employees recovered.[108] For simplicity, we also initially assume that each worker who did receive an award recovered one hundred percent of his wage loss[109] and that no plaintiff received compensation for pain and suffering.[110] Finally, we assume that the

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[106] DEPARTMENT OF TRANSPORTATION, *supra* note 82, at 11. The complete study includes fatalities, an additional sample from court files, and a sample of insurance carrier claims. The report contains a complete description of the survey and sample design.

[107] See *infra* note 120.

[108] *See* W. PROSSER, *supra* note 16, at 530 n.32.

[109] This assumption is relaxed in the penultimate paragraph of the next section.

[110] This assumption has the effect of overstating the compensation for wage loss, as such, provided under a negligence system.

average loss of those employees who did not recover is equal to the average loss of those who did recover.

Comparison of the Health Studies Survey and Pre-Workers' Compensation Negligence Results

Before comparing in detail the workers' compensation and automobile negligence recoveries, we offer a rough comparison of the workers' compensation data and the fragmentary pre-workers' compensation negligence data described above. As the data in Table 1 indicate, a six percent recovery rate results in a lower total wage loss compensation than that now provided by workers' compensation. In total, the hypothetical awards under the six percent standard are approximately sixty-eight percent of the total workers' compensation benefits in 1975. At the thirty percent upper limit of recovery based on the experience of the early 1900's, the total wage loss compensation is nearly three and one-half times the amount provided by workers' compensation.

These comparisons are very approximate at best and are seriously weakened by the assumptions discussed above. On the other hand, consider the fact that the six percent to thirty percent recovery ratios are cited as evidence of the inadequacies of negligence systems in the early 1900's and that we have applied them to workers in the most liberal workers' compensation state plans in the 1970's. Based on this fact alone, one would expect that the comparison would indicate a clear superiority, in terms of wage loss compensation adequacy, for workers' compensation. Instead, we find that except at the lower levels of the estimated recovery rate under "old" negligence systems, the negligence approach might generate more adequate levels of wage loss compensation. In terms of our data, for example, the point at which workers' compensation and negligence generate equal wage loss compensation occurs when only about nine percent of negligence claimants recover.

Our discussion has so far assumed that those who received negligence awards recovered one hundred percent of their wage losses. If one were to assume that successful negligence claimants recovered only fifty percent of those losses then the equal wage loss compensation point would occur at an eighteen percent recovery rate.

If it serves no other purpose, this comparison is useful as a warning against concluding that one approach is superior to the other by reference to the theoretical inadequacies of either approach considered in isolation.

Comparison with Contemporary Negligence Systems (1969 DOT Survey)

TABLE 2

CLAIMS AND AWARDS UNDER AUTOMOBILE NEGLIGENCE

1. TOTAL ECONOMIC LOSS	2. NUMBER OF PERSONS	3. NUMBER OF CLAIMANTS	4. NUMBER RECEIVING TORT SETTLEMENT	5. π_N PROBABILITY OF RECOVERY FOR ALL CLAIMANTS	6. AVERAGE ECONOMIC LOSS*	7. AVERAGE NET TORT RECOVERY	8 K_N PERCENTAGE OF RECOVERY FOR SUCCESSFUL CLAIMANTS	9 $\pi_N K_N$ PERCENTAGE OF RECOVERY FOR ALL CLAIMANTS
$10,000-24,999	28,491	21,899	15,038	.69	$16,625	$10,665	.64	.44
$25,000 +	31,139	23,199	12,845	.55	77,385	7,897	.10	06
TOTAL	59,630	45,098	27,883	.62	44,616	9,174	.21	13

SOURCE: 1 U.S. DEPARTMENT OF TRANSPORTATION, ECONOMIC CONSEQUENCES OF AUTOMOBILE ACCIDENT INJURIES (1969).

* Calculated for persons who received settlements.

A more meaningful and more detailed basis for comparison is provided by the data from the DOT survey. As we have indicated, the experience of seriously injured persons under the negligence approach to auto accidents is used as an indicator of how workers might fare under a contemporary negligence approach to occupational injury. The data is sufficiently detailed to permit us to examine separately the probability of recovery and the amount of recovery.

It is useful at the outset to reiterate our prior theoretical equation describing the difference in net compensation between fault and no-fault systems:

$$(5)\ E(B_N - B_S) = (\pi_N K_N - \pi_S K_S)\ (WL + MED) + \pi_N' K_N\ (PS)$$

If we make the assumption that π_N'' represents the composite probability of recovery under the negligence approach to auto injury,[111] then the difference in compensation between negligence and no-fault can be represented by the following equation:

$$(8)\ E(B_N - B_S) = \pi_N'' K_N\ (WL + MED + PS) - \pi_S K_S\ (WL + MED)$$

As in the case of the workers' compensation/negligence model, this equation demonstrates that some of the added benefits which negligence provides (B_N) are attributable to compensation for pain and suffering. Unlike the recovery ratios for workers' compensation, which pertain to wage losses but not medical losses, the negligence data provides recovery ratios in the form of total recovery to total

[111] We also assume that π_N'' does not vary with the use of attorneys.

losses. Our analysis of the negligence data assumes that the recovery-to-loss ratios for wage loss compensation are the same as the ratios for total losses. We have previously assumed total recovery for medical loss under workers' compensation.

The Compensation Objective

As indicated in Table 2, there were 59,630 persons seriously injured in auto accidents who suffered economic losses of $10,000 or more. Of this total, approximately seventy-six percent (45,098) made a claim for damages.

The data on this group of claimants is used to calculate the probability of recovery (π''_N) and the proportion of benefits received as compared to losses for those who received negligence awards (K_N). These estimates can be compared to the corresponding variables contained in Table 1 (Workers' Compensation Benefits) in order to determine the differences in recovery between the two systems. However, in the discussion that follows, because we have no data for the recovery ratios for medical expenses under workers' compensation, we take workers' compensation wage loss recovery data as a measure of total recovery and describe it symbolically as K_S rather than the more precise $K_{S(WL)}$. This approach has the effect of assuming that recovery ratios for medical expenses are equal to the recovery ratios for wage losses. Thus, our comparisons will understate the compensation adequacy of workers' compensation if the recovery ratios for medical costs are higher than those for wage losses, as they are generally designed to be under workers' compensation. The degree of overstatement will depend not only on the differences, if any, in recovery ratios, but also on the proportion of medical losses to total losses. Where the medical losses are small compared to wage losses, the overstatement will be proportionately reduced.

If we assume that injured workers suing under a tort system would have been as successful as the auto accident claimants in terms of their recovery, it is clear from our figures that the average net wage loss compensation for all tort claimants would have been greater than what was received from workers' compensation. That is, the average ratio of compensation to losses for the entire group of successful negligence claimants is approximately .21,[112] whereas the comparable ratio of benefits to wage losses for the entire group under workers' compen-

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[112] This figure is indicated in the last column, bottom line of Table 2 and is arrived at by setting up a ratio of Average Net Tort Recovery to Average Economic Loss: $\frac{9,174}{44,616}$

sation is .09.[113] This greater average recovery is achieved, however, at the expense of eliminating benefits to unsuccessful negligence claimants. As indicated in Table 2, only sixty-two percent of the total number of claimants were compensated. Consequently, thirty-eight percent of all claimants failed to recover any benefits.[114] Conversely, we have assumed that one hundred percent of the injured workers in Table 1 received some recovery, though it is a lesser percentage (nine percent) of total wage loss.[115]

By multiplying the probability of recovery experienced by all negligence claimants by the average recovery of successful negligence claimants, we can calculate the expected recovery of all negligence claimants ($\pi_N K_N$)[116] and compare it to the expected recovery under workers' compensation where we assume that all claimants recovered (*i.e.*, $\pi_S K_S = K_S$).[117] The results show expected recovery for all negligence claimants to be thirteen percent of losses[118] as compared to a nine percent wage loss recovery rate under workers' compensation.[119]

With our data, it is possible to distinguish between the different wage loss categories. According to the auto negligence figures, approximately sixty-nine percent of claimants in the $10,000 - $24,999 category received compensation (*i.e.*, $\pi''_N = .69$). For those claimants who recovered, the average award equalled sixty-four percent of the average loss (*i.e.*, $K_N = .64$). In the largest wage loss group ($25,000 +), both the probability of recovery ($\pi''_N = .55$) and the proportion of loss compensated ($K_N = .10$) were substantially lower.

In the workers' compensation context, it is reasonable to assume that EMPGRP A of Table 1 will experience a total economic loss that is comparable to the $10,000 - $24,999 category in the auto accident data. Likewise, EMPGRP's B and C are most like the auto accident claimants in the $25,000 + category.[120] Consequently, the workers'

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[113] This figure is computed by examining the ratio of Total Workers' Compensation Wage Loss Benefits to Total Wage Loss (Table 1): $\frac{633,178}{7,213,341}$

[114] It should be noted that this group of uncompensated claimants creates a cost to society since welfare payments and/or funds from charities, friends or relatives may provide needed compensation.

[115] Note also that if the injured workers' experience under a negligence system paralleled that of the seriously injured victims of auto accidents, the hypothetical negligence system would only compensate approximately one-half (55%) of the injured workers with the largest losses, *i.e.*, those with minimum losses of $25,000.

[116] See Table 2, bottom line, column 9.

[117] See Table 1, bottom line, column 4.

[118] See Table 2, bottom line, column 9.

[119] See Table 1, bottom line, column 4. Note that our calculation also assumes that unsuccessful claimants had the same average economic losses as the successful claimants in the comparable wage loss categories.

[120] As previously indicated, the great majority of EMPGRP B and C employees had permanently withdrawn from the labor force as of the time of the workers' compensation survey. The

compensation recipients in employment Group A experienced a .07 ratio of benefits to wage losses ($K_S = .07$)[121] as compared to the .64 ratio of recovery to losses ($K_N = .64$) experienced by successful tort claimants situated in the lower loss category.[122] On the other hand, EMPGRP's B and C together were compensated at a rate of ten percent of their wage losses (*i.e.*, $K_S = .10$)[123] as compared to the equivalent ten percent rate experienced by the compensated tort claimants in the $25,000+ wage loss category.[124] Again, by multiplying $\pi_N K_N$ for the different loss categories and comparing them to the K_S for the corresponding workers' compensation wage-loss categories, we find that expected recovery for all negligence claimants in the smaller loss category is forty-four percent,[125] compared to seven percent for workers' compensation;[126] whereas for the larger loss category, expected recovery under negligence is six percent[127] as compared to ten percent under workers' compensation.[128]

A number of inferences can be drawn from these comparisons. One is that the negligence approach, as compared to the workers'

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average annual wage losses in these categories were $9,261 and $9,550 respectively in 1975. This means that workers in both categories would reach the total average economic loss figure for the $25,000+ DOT injury category in less than 8.4 years ($77,385/9,261; $77,385/9,550)—less than 5 years beyond the 1975 loss year of the workers' compensation survey, yet still within the projected average work life of the group. When medical losses under workers' compensation are taken into account, the average DOT loss figure for the $25,000+ category would be attained even sooner. We consider EMPGRP A injuries in the Workers' Compensation Survey to roughly equal the injuries in the $10,000–$24,999 total economic loss category in the DOT study on the basis of the following reasoning. Workers in EMPGRP A sustained average annual wage losses of $3,899 (Table 1, column 2) compared to an average total economic loss of $16,625 sustained in the $10,000–$24,999 category in the DOT Survey (Table 2, column 6). Thus in 4.26 years ($16,625/$3,899) of average annual wage loss, EMPGRP A workers would have reached the $16,665 average net recovery experienced in the $10,000–$24,999 loss category. Based on data collected during the workers' compensation survey we know that by the loss year (1975—one year before the survey and generally four years after the year of injury), most EMPGRP A employees had returned to work and were no longer sustaining annual wage losses. By assuming an average disability period of three years for EMPGRP A employees, we arrive at an average loss figure in the range of $11,697. Thus, when medical losses under workers' compensation are taken into account, we believe it is reasonable to conclude that EMPGRP A workers sustained wage losses most like those in the $10,000–$24,999 DOT wage loss category; and that few, if any, losses of EMPGRP A employees approached the $77,385 average losses sustained by claimants in the $25,000+ loss category of the DOT data.

[121] See Table 1, top line, column 4. This figure is arrived at by computing the ratio of workers' compensation benefits (top line, column 3) to wage loss (top line, column 1): $\frac{211,523}{3,111,048}$

[122] See Table 2, top line, column 8.

[123] See Table 1, second line, column 4.

[124] See Table 2, middle line, column 8.

[125] See Table 2, top line, column 9.

[126] See Table 1, top line, column 4.

[127] See Table 2, middle line, column 9.

[128] See Table 1, second line, column 4.

compensation alternative, tends to better compensate those with somewhat smaller losses. A second inference is that for the largest losses, the ratio of compensation to losses for successful negligence claimants is identical to that for injured workers in the comparable wage loss category.[129] The third result is that the total wage loss recoveries under either system are less than one half of the total losses incurred (nine percent in the workers' compensation context and twenty-one percent with respect to successful automobile negligence claimants).

The award to loss ratio under negligence increases as one moves into the less than $10,000 category of economic loss. It would appear, therefore, that the negligence system provides greater wage loss benefits than workers' compensation for high probability, low cost accidents.[130] Since most injuries result from these accidents, it is not suprising that one finds that total wage loss benefits under negligence are greater than those under the strict liability approach. Consequently, from the viewpoint of potential victims facing the full array of risks of injury, the negligence system would be preferred in terms of wage loss. One must, of course, realize that potential victims may value the reduction in uncertainty inherent in a no-fault approach to such an extent that they are willing to sacrifice some of the potential benefits under negligence. The only valid test of that question would be to permit those at risk to make such a choice.[131]

For persons facing risks of severe (high loss) injury, the expected wage loss recovery would appear more attractive under workers' compensation than under negligence although neither approach compensates victims for more than ten percent of their wage losses.

The data is not sufficiently general nor the method of comparison so rigorous as to support a claim that the results permit rigorous statistical inferences. On the basis of the empirical evidence, however, one cannot infer that the shift from negligence to a no-fault liability system has resulted in more adequate compensation for injured workers.[132]

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[129] One should not make too much of the equality, since the procedure is, of necessity, approximate. It would be sufficient, for our purposes, to view the ratios as not being widely different.

[130] It should be noted that no-fault automobile statutes frequently apply only to large claims. Thus, common law recovery is often denied where our data show it is most favorable to victims. *See* J. O' CONNELL & R. HENDERSON, *supra* note 9, at 907-15.

[131] Mishan, *Evaluation of Life and Limb: A Theoretical Approach*, J. POL. ECON. 687, 703-05 (1971).

[132] In the foregoing analysis, we compared the expected recovery for successful claimants and all claimants under both systems and provided further breakdown in terms of severity of injury. However, from the viewpoint of the potential victim, it might be suggested that a more meaningful comparison of the systems is the expected recovery whether or not a claim is filed. Unfortunately, neither of our sets of data provides any information on the extent of recoveries of

The Deterrence Objective

We cannot, from the available data, determine the most efficient method of promoting risk avoidance through cost allocations between employer and employee. Yet, judged against the explicit or implicit ideals of each system, it appears that both workers' compensation and negligence allocate too much of the accident costs to employees and too little of those costs to employers.

Under the ideal standard of workers' compensation, employers (either directly or through their insurance premiums) are expected to bear 2/3 of the wage losses.[133] The data in Table 1 shows that $6,580,163[134] or 91.2% of such total annual accident costs were not paid through workers' compensation in the five states examined. As

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persons who did not file claims. Yet, the DOT study does furnish data, which together with some speculative assumptions may be used to further compare the two systems. Specifically, the negligence data shows that 14,532 persons, almost 25% of those injured, failed to file claims.

This percentage is roughly constant for both categories of injury (23% for the low-loss category and 26% for the high-loss category). Many reasons may exist for the failure to file a claim under the negligence system. These include: (1) the receipt of a settlement without the filing of a claim; (2) the determination by the claimant or his counsel that the claim was not entitled to compensation or would not be worth prosecuting; and (3) ignorance of rights under the negligence system.

Proponents of the negligence system might argue that the effective threat of filing a claim coupled with the higher expected recovery will occasion many settlements with a lower attendant administrative cost borne by the victim. Conversely, supporters of no-fault liability might argue that a substantial number of the nonclaimants receive no settlement for their negligence claims but would have been compensated under the "universal" coverage of workers' compensation.

If we assume, contrary to the most likely probability, that none of the nonclaimants received settlements, and if we further assume that the average losses for the nonfilers within each category of loss were no different from the average losses of the successful claimants, than by dividing the number of successful claimants by the number of persons injured we can calculate the probability of recovery (π''_{NT}) and the expected recovery ($\pi''_n \cdot K_N$) for all persons who sustained injuries in Table 2, in a way that understates the compensation provided by the negligence system. Further, if we assume that all injured persons file claims and recover under workers' compensation, then the probability of recovery and expected recovery for all persons facing injuries under both systems is as follows:

	$\pi''_N \cdot$	$\pi''_N \cdot K_N$	$\pi_S K_S$
Low Cost Injuries	.53	.34	.07
High Cost Injuries	.41	.04	.10
Total	.47	.1	.09

We see from these figures that even under these assumptions so unfavorable to the operation of negligence principles, the expected negligence wage loss recovery is once again superior to workers' compensation benefits for the entire range of accidents and for the higher-probability, low-cost accidents, but is decidedly inferior for the lower-probability, higher-cost accidents.

[133] See *supra* note 64 and accompanying text.

[134] This result was arrived at by subtracting total workers' compensation wage loss benefits from total wage loss:

7,213,341
− 633,178
6,580,163

such, only 8.8% of those losses were borne by employers through workers' compensation. Since the states studied are among the most liberal in terms of coverage and benefits, one would expect the national average for employer-assumed wage losses to be even lower.

By comparison, defendants in the DOT study (taken as proxies for employers) were able to avoid only eighty-seven percent[135] of claimant losses. In other words, thirteen percent of such losses were provided for by negligence defendants. This suggests that in allocating wage losses the negligence system provides somewhat greater safety incentives than those provided by workers' compensation, though it appears that under either system employees may be overinvesting and employers may be underinvesting in safety.

It is true, of course, that workers' compensation plans are based on shared strict liability. Workers are expected to bear a share of accident costs, thereby inducing workers to avoid accidents. This objective is typically expressed by the statutory provisions limiting workers' compensation benefits to some proportion of pre-injury wages. The actual maxima vary among states but as previously mentioned, a frequently expressed "ideal" standard is sixty-six and two-thirds percent of pre-injury wages (not tax adjusted). The data in Table 1 shows, however, that the proportion of wage loss allocated to workers is far in excess of the thirty-three and one-third percent suggested by the ideal standard.[136]

Thus, the data indicates that the negligence system better meets the ideal allocational goals of workers' compensation than does workers' compensation itself.

According to the putative efficiency-oriented principles of the negligence approach to recovery, all wage losses of successful claimants should be imposed on employers at fault.[137] Yet, considering the negligence data in Table 2 as the proxy for a negligence alternative to workers' compensation, we find that only twenty-one percent of losses of the successful claimants would be imposed on negligent employers[138] with seventy-nine percent of such losses being imposed on the nonnegligent victims. In allocating wage losses, the workers' compen-

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[135] See Table 2, bottom line, column 9.

[136] See Table 1, bottom line, column 4.

[137] This proposition assumes that principles of comparative negligence are not involved. See *supra* note 38. In a comparative negligence jurisdiction, it might be impossible to assess empirically the allocation of costs in terms of a systemic ideal because of the difficulty in determining what proportion of uncompensated losses, if any, was not traceable to the fact finder's determination of the relative contribution of the victim's negligence. Consequently, efficiency considerations taking into account comparative negligence rules are beyond the scope of this analysis. This indeterminancy may also be operating *sub rosa* in pure negligence systems; but if so, it does so contrary to the expressed ideal.

[138] See Table 2, bottom line, column 8.

sation data in Table 1 falls even shorter of an efficient deterrence objective by allocating only nine percent of the wage losses to employers, and by imposing ninety-one percent on employees.[139]

Thus, judged against the sixty-six and two-thirds percent employer allocational ideal of workers' compensation, and the one hundred percent allocational principle of pure negligence, both systems overallocate costs to the victims and underallocate such costs to the nonvictims. Judged by either standard, the workers' compensation system errs more in the wrong direction than does the negligence alternative.

Based on the belief that dollar for dollar, one "buys" more incremental deterrence from nonvictims than from victims,[140] the negligence data appears superior to the workers' compensation alternative.[141]

C. *The Impact of Other Reparations Systems*

TABLE 3

PAYMENTS FROM SOCIAL AND PRIVATE INSURANCE TO INJURED WORKERS 1975

	1. WAGE LOSS	2. WORK. COMP. BENEFITS	3. SOCIAL INSUR.	4. EMPLOYER/ UNION PLAN	5. NON-COMPENSATED LOSS
EMPGRP A	$3,111,048	$211,523	$ 331,034	$ 38,116	$2,530,375
EMPGRP B	2,278,182	152,470	426,795	123,252	1,575,665
EMPGRP C	1,824,111	269,185	371,943	56,601	1,126,382
TOTAL	$7,213,341	$633,178	$1,129,772	$217,969	$5,232,422
%	100%	9%	16%	3%	72%

SOURCE: SYRACUSE UNIVERSITY—THE HEALTH STUDIES PROGRAM, WAGE LOSSES AND WORKERS' COMPENSATION BENEFITS—THE SURVEY OF WORKERS' COMPENSATION RECIPIENTS (1976).

As previously discussed, one cannot assess the operation of workers' compensation or negligence-based recovery in terms of their objectives without considering the effect of other reparation systems.[142] The general impact of such systems is to reduce victim safety incentives by supplementing the compensation received without directly

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[139] See Table 3, bottom line, column 2.

[140] See *supra* notes 95 & 96 and accompanying text.

[141] These comparisons on deterrence should be tempered by the recognition that the allocation of medical and other losses and the resulting deterrent effect may be substantially different.

[142] See *supra* note 76 and accompanying text.

allocating costs to nonvictims who would otherwise be liable according to the ideals of legal liability systems.[143]

As indicated in Table 3, a substantial portion of the payments which injured workers may expect to receive come from social and private insurance programs. Workers received approximately 27.5% of their annual wage loss from all sources. Of this total, approximately nine percent was from workers' compensation, 15.7% from social insurance, and three percent from private insurance or labor union pension and disability plans. In the following discussion, we describe these programs and analyze data relating to their operation which was provided by the 1976 Workers' Compensation Survey.

Social Insurance

Although social insurance was not an important institution during the early years of workers' compensation, it is an enormously important one now. In the context of disabled employees, the major type of social insurance is Social Security Disability Insurance (DI).[144] During 1975, the workers represented by our five state sample received $1,129,772 in income from public programs.[145] From data not presented in Table 3, we know that almost one-half (forty-six percent) of this amount came from DI.

For purposes of this article, perhaps the most important fact concerning the DI program is that it supplied nearly as much income to these injured workers as did workers' compensation ($519,695 vs. $633,178).[146] All other public programs combined, including welfare programs, paid $610,053 to the injured workers in 1975.

Thus, workers' compensation benefits represented only thirty-two percent of all benefits paid in 1975.[147] In addition, it is important to realize that although they compensate victims as do other reparation systems, neither DI nor any of the other public programs allocate the costs for such payments specifically to employers through the tax structure because the tax rates do not differentiate among employers on the basis of the firm's accident rates.

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[143] See *supra* notes 65-68 and accompanying text.

[144] DI eligibility need not be work-related. It is based on the accumulation of a requisite number of quarters of covered employment and the satisfaction of medical criteria adjusted for the age and occupational experience of the claimant. Benefit amounts are based on predisability earnings and are adjusted to reflect the number of dependents in the disabled person's household.

[145] See Table 3, bottom line, column 3.

[146] It should be noted, however, that since eligibility is based on permanent and total disability, no DI benefits were paid to persons in Employment Group A.

[147] 633,178
1,908,919

As indicated in Table 3, the net effect of social insurance payments to the injured worker is to increase the adequacy of compensation and theoretically to reduce the victim's economic incentives for safety. Yet, given the fact that workers still bear a large portion of the wage losses from their injuries (in addition to pain and suffering), it is probable that the reduction in workers' incentives is not very significant. More importantly, the increase in compensation entails no increase in costs to firms in which accidents occur. Thus, social insurance effectively subsidizes the costs of accidents to these firms. For any inherent level of risk, firms that have an above average number of accidents receive a larger subsidy than their less risky counterparts.

Private Insurance

The role of private wage loss insurance is less well understood, but it is nonetheless another important source of compensation to injured workers. In 1975, a total of $217,969 was paid to the workers we studied by private employer insurance plans or by labor union pension and disability plans.[148] Employer insurance plans are normally purchased by the employer for the workers' benefit in lieu of higher money wages. Union plans are largely financed by the workers. Depending upon relative bargaining power, the costs of such plans may or may not be shared by the employer. To the extent that the costs of these forms of insurance are not borne by employers, the cost incentives for safety are limited to the workers.[149]

The Impact of the Collateral Source Rule

Workers' compensation benefits and some private plan benefits are offset by DI benefits. Under a negligence system, however, by virtue of the collateral source rule, the payments from social insurance and private insurance not paid by the employer would not reduce the employer's liability.[150] Therefore, in considering the impact of other reparations systems on workers' compensation and negligence, one should remember that less of the collateral source payments will be received by workers' compensation victims than by successful negligence plaintiffs and consequently such payments will have the effect of further reducing the incentives placed on employers under workers' compensation as compared with those under negligence systems. When payments from other reparation systems are taken into account

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[148] Unfortunately this data cannot be separated according to source (*i.e.*, employer vs. union plans).

[149] A. CONARD, *supra* note 1, at 33.

[150] See *supra* notes 1 & 59.

and the rules for allocating those payments among the parties are considered, the result is that less compensation is allocated to the injured, and lower economic safety incentives are allocated to the nonvictims under workers' compensation than under the negligence alternative.[151]

V. Summary and Conclusion

We have attempted to contribute to a better understanding of the relative merits of no-fault and negligence systems by clarifying the issues relevant to a reasoned evaluation of the two approaches. In addition, we have presented data that permits an approximate comparison of how persons covered by a well-known no-fault system such as workers' compensation might fare in terms of wage loss recovery under a contemporary negligence approach.[152]

Taking the data at face value, we can offer certain observations. First, the negligence approach to occupational injury provides a higher expected wage loss recovery than workers' compensation for most types of injuries, and for all injury taken together, but a lower

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[151] It appears then that the performance of workers' compensation could be improved by applying to the system the collateral source rules generally applied in negligence. *But see* Bernstein, *supra* note 37, at 543; Epstein, *Coordinating Workers' Compensation Benefits With Tort Damage Awards*, 13 Forum 464-79 (1978); O'Connell, *Workers' Compensation as a Sole Remedy, supra* note 37.

[152] At this point, it may be beneficial to recall the simplifying assumptions we made in this article and point out the limitations in our data which may bias or qualify the results set forth in our analysis.

In this regard, there are several factors which have the effect of overstating the compensation provided by workers' compensation as compared with negligence: (1) The administrative costs of workers' compensation was assumed to be zero: (2) All workers who applied for workers' compensation were assumed to have been compensated; (3) All workers' compensation beneficiaries recieved ⅔ of their wage losses; and (4) The workers' compensation data is drawn from five of the most generous jurisdictions and are therefore more favorable in terms of compensation than the typical workers' compensation system in operation.

In addition, the following assumptions effect a bias in favor of understating the compensation provided by workers' compensation as compared to negligence. (1) Recovery-to-loss ratios for workers' compensation are limited to wage losses and do not include medical losses or benefits; (2) The only administrative cost considered to be borne by plaintiffs was the cost of attorneys' fees; and (3) All negligence awards were considered compensation awards with no awards for pain and suffering.

We are uncertain as to the bias occasioned by the following additional assumptions: (1) victims are neutral in terms of their preferences as to differential risk of recovery; (2) their time value of money is no different from that suggested by market rates; (3) the average losses of unsuccessful claimants and persons who did not file claims in the case of negligence were equal to the average losses of those who filed and recovered; and (4) the automobile negligence data is a fair proxy of how the negligence approach to occupational injury would have evolved had it not been replaced by workers' compensation. *But see supra* notes 34-41 and accompanying text.

Taken together, we believe that the net bias from the foregoing factors tends to overstate the advantage of workers' compensation in terms of compensation adequacy.

expected wage loss recovery ratio for lower probability, higher cost injuries. Although under negligence total wage loss recovery would be larger for the low cost accidents and for all accidents taken together, a substantially higher proportion of injured workers would receive no compensation in all three of the categories. Inasmuch as employers bear less of the costs of accidents under workers compensation than under negligence (nine percent vs. thirteen percent), it might be suggested that broader distribution of payments to a greater number of injured workers under workers' compensation programs has been achieved at the expense of nonnegligent workers who could expect greater recovery under negligence rules and not at the expense of employers who pay less under workers' compensation than under negligence, and who likewise might be seen as enjoying a subsidy financed by nonnegligent workers.

The operation of workers' compensation and the negligence alternative must be considered in the context of other reparations systems. Available data indicates that such systems serve to enhance the compensation adequacy of victims under both systems, although less under workers' compensation than under negligence. But such systems generally fail to allocate the corresponding costs to parties which the competing liability systems (if they operated according to their expressed or implicit ideals) may hold liable. Rather, it seems that the additional compensation for injured employees is paid by taxpayers and insurance, financed only in small part by employers. If the various systems were coordinated so as to achieve a higher portion of compensation through negligence and workers' compensation rather than through social insurance, employers would be provided with greater incentives for safety. Conversely, to satisfy the compensation adequacy objective through social and private insurance might be seen to dilute deterrence objectives. Under negligence rules, the operation of the collateral source rule seems in theory to preserve for the victims more payments from other reparations systems, whereas contrary principles in typical workers' compensation programs apply such payments to reduce employer obligations, thus simultaneously reducing compensation benefits and employer economic safety incentives.

It also appears that the savings of attorneys' fees under the no-fault approach is not reflected by higher wage loss benefits to the average workers' compensation client. While a variety of reasons for this fact can be advanced, it is clear that the data does not support the claim that, by eliminating the costs of determining fault, the wage loss benefits to victims are increased.

Although no-fault liability and negligence differ in terms of the deterrence provided by cost allocation, the differences are overshad-

owed by the more fundamental conclusion that benefits are such a low proportion of the total costs of accidents that neither system is likely to provide significant employer cost-based deterrence based on wage loss allocation.

We suggest that the debate on fault and no-fault approaches would be enhanced by additional research on the allocation of all costs, and that more attention should be given to the measurement of the full administrative costs of both approaches and to the consideration of the influence of social and private insurance on compensation and deterrence.

Perhaps the most remarkable observation which can be made is that despite approximately three-quarters of a century of public concern and controversy, one cannot conclude, on the basis of data generally cited to demonstrate the superiority of workers' compensation over negligence, that workers' compensation has effected an improvement in terms of the wage loss compensation and deterrence objectives over the evolving negligence system it replaced.