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The Thrust of Tort Law Part III The Scientific Environment*

LEON GREEN**

Little imagination is required to forecast the continued growth of social, political, and corporate groups in size, power, and functions. New frontiers for the individual will be achieved more and more through group efforts. The machines we build will be more numerous, more powerful, and more deadly than any we have known. The power of the atom and chemical processes to expand or destroy the life of animal and plant wait only on the laboratories of men dedicated to the search of nature's secrets, and how to make use of them. The experience of our short lives teaches us that population, science, and technology have no place to stop. Today automation takes the jobs of the assembly line, while tomorrow punch tape, microfilm, and the electronic computer will largely supplant the hands and brains of the office clerk and expert. Political, economic, and moral principles are in the flux of revolution everywhere men abide. Many peoples are seeking at any price what they think are the good things of life and would crush into a few years what took centuries for us to achieve.

Assume that we can keep our feet, we cannot escape the buffeting of the storms that follow these power-charged forces. We can find no refuge in space or shelter or death-dealing machines. These can only multiply our necessities and our miseries. Our en-

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vironment will undergo many strains and stresses and fifty years hence we shall not be the same people impelled by the notions we hold today. The future opens so rapidly that we have no time to prepare for it, and history recedes so fast we cannot remember it. Measured by the crowding of events, we live the span of Methuselah's life in the course of a month, if not a day.

What will be the influences of this convulsive environment on the courts and tort law? If the courts in the mid 1800's could not add death as an item of damages to the personal injury action; if they could not rescue the injured industrial employee from the meshes of their own doctrines; if they have been unable to deal successfully with the rising tide of automobile victims; what assurances have we that they can respond to the victims of the more destructive machines and processes of our advancing science?

UNFINISHED BUSINESS

Aside from the new problems pressing down upon us, the courts have considerable unfinished business in the law of torts. There is a host of old problems yet unresolved and many of them are becoming more and more complicated. Nothing more than a start has been made in subjecting governmental units to liability for physical injuries to person and property resulting from the operations they undertake. Must we await legislative action or will our courts follow the lead of the California, Florida and Illinois courts?¹ The liability of manufacturers, suppliers, and contractors is steadily expanding but has not reached a stable plateau. The same is true of the liabilities of charitable institutions, physicians, and surgeons. Wonder drugs, narcotics, cancer cures, plastic surgery, abortions, artificial insemination, birth control, cosmetics, and cigarettes are creating troubled areas of litigation. The depths of psychic injuries are still unfathomed. Agriculture with its insecticides, crop-dusting, irrigation projects, rain-making, soil conservation, and noxious plant life contest the limits of nuisance and negligence law. Industrial landowners and operators who make life miserable for their neighbors will no doubt be subjected to increased liabilities, as will also power, gas, and water services. The protection of merchants and traders against shoplifters, disloyal and thieving employees, piratical practices of competition, with all of their complications will continue

¹ *Muskopf v. Corning Hospital Dist.*, 55 Cal. 2d 211, 359 P.2d 457 (1961); *Hargrove v. Cocoa Beach*, 96 So. 2d 130 (Fla. 1957); *Molitor v. Kaneland Community Unit Dist.*, 18 Ill. 2d 11, 163 N.E.2d 89 (1959).

to require much time of the courts. The protection of ideas, artistic and literary creations, and the liabilities of mass communication media are still to be settled. Rights of citizenship are largely ignored although tort law is at hand in abundance. These and a host of lesser problems give promise of keeping tort lawyers and the courts occupied and their doctrines under stress and strain for as long as we can project our foresight.

EXPANSION OF DOCTRINE

Each of these problems has been and will continue to be rendered more complicated by virtue of the advances made by the harnessing of scientific thought, invention, and discovery. The tort doctrines of trespass, nuisance, negligence, deceit, privacy, defamation, unfair competition, and abuse of governmental power have had to be expanded, quickened, and sharpened to accommodate the litigation of tort claims arising on all fronts. The courts of some jurisdictions have rather consistently made their doctrines exacting and in all probability will make them more exacting in cases to come. They are doing this by extending the reach of duty, defining more understandably the sequences of causal connection, making proof of the violation of duty by the fact of injury itself, and by the removal of protective immunities. The cumulative effect of these extensions requires a defendant in some instances to explain what happened and in others to carry the burden of showing that his conduct did not contribute to the victim's injury but, if so, that it met the standards required by law.² These exactions accelerate the return to the feudal morality of recompense for a victim's hurt, for now morality is reinforced by the fact that we think his reparation good business. This progression is not uniform. There are many courts that still regurgitate the doctrines of the 1800's with many of their restrictions, limitations, and refinements. But the weekly advance sheets reflect the struggle to come abreast the scientific era, though they reflect defeat as often perhaps as they reflect victory. Much time is still required to permit the processes of evolution to replace those who now wield the powers of advocacy and decision before tort law can respond acceptably to the rapidly emerging environment.

² *Yabara v. Spangard*, 25 Cal. 2d 486, 154 P.2d 687, 162 A.L.R. 1258 (1944) *affirming judgment for plaintiff after remand* 208 P.2d 455 (Cal. App. 1949), and the numerous cases which have followed in its wake: *Weiss v. Axlei*, 137 Colo. 544, 328 P.2d 88 (1958); *Dement v. Olin-Mathieson Chem. Corp.*, 282 F.2d 76 (5th Cir. 1960).

SPECIFIC EXAMPLES

The pace of tort law under the lash of science may be sensed more vividly by the examination of some specific cases. It was long the established doctrine that there could be no recovery for injury or death of an unborn child.³ The child was said to have no existence apart from its mother, no separate personality, and at any rate no reliable proof could be made of its injury before birth.⁴ Biological and physiological science have demonstrated each of these tenets to be false and many courts have recently held that the unborn child is protected from physical hurts as any other person from the time it becomes viable,⁵ and by some courts from the time of conception.⁶

Probably no doctrine was so firmly settled for so long a time as that there could be no trespass other than by the direct impact of a physical tangible thing visible to the eye. Some courts have even refused to recognize destructive force through vibrations or concussion as trespass.⁷ But now comes the Oregon court holding that the invasion of premises by flouride compounds in the form of gases, fumes, and invisible particles that settle on a neighbor's land is a trespass.⁸ Its statement is interesting:

"It is quite possible that in an earlier day when science had not yet peered into the molecular and atomic world of small particles, the courts could not fit an invasion through unseen physical instrumentalities into the requirement that a trespass can result only from a *direct* invasion. But in this atomic age even the uneducated know the great and awful

³ *Bonbrest v. Kotz*, 65 F. Supp. 138 (D.C. D. 1946); *Dietrich v. Inhabitants of Northampton*, 138 Mass. 14 (1884).

⁴ *Ibid.*

⁵ *Cooper v. Blanch*, 39 So. 2d 352 (La. App. 1923); *Keyes v. Construction Service, Inc.*, 340 Mass. 633, 165 N.E.2d 912 (1960); *Palignia v. McDonald*, 101 N.H. 104, 135 A.2d 249 (1957); *Woods v. Lancet*, 303 N.Y. 349, 102 N.E.2d 691 (1951); *White, The Right to Recover for Pre-Natal Injuries*, 12 LA. L. REV. 383 (1952); Note, 1953 U. Ill. L.F. 490.

⁶ *Sinkler v. Kneale*, 401 Pa. 267, 164 A.2d 93 (1960); *Kelly v. Gregory*, 383 App. Div. 542, 125 N.Y.S.2d 696 (1953).

⁷ *Booth v. Rome W. & O. T. RR.*, 140 N.Y. 6, 35 N.E. 592 (1893); *Sherwin v. City of New York*, 188 N.Y.S.2d 203, 159 N.E.2d 600 (1959). For full review of cases see *Bedell v. Goulter*, 199 Ore. 344, 291 P.2d 842 (1953); *Wallace v. A. H. Guion & Co.*, 237 S.C. 349, 117 S.E.2d 359 (1960).

⁸ *Martin v. Reynolds Metal Co.*, 221 Ore. 86, 342 P.2d 790 (1959) *cert. denied* 362 U.S. 918 (1960). *Cf.*, *Reynolds Metal Co. v. Yturbide*, 258 F.2d 321 (9th Cir. 1958). See also *Mountain States Tel. & Tel. Co. v. Vowell Constr. Co.*, 341 S.W.2d 148 (Tex. 1960) for extension of trespass doctrine to an unusual situation. See, *Keeton & Jones, Tort Liability and the Oil and Gas Industry*, 39 TEXAS L. REV. 253 (1961).

force contained in the atom and what it can do to a man's property if it is released. . . .

Viewed in this way, we may define trespass as any intrusion which invades the possessor's protected interest in exclusive possession, whether that intrusion is by visible or invisible pieces of matter or by energy which can be measured only by the mathematical language of the physicist."⁹

A year later the same court faced the problem of protecting an adjacent landowner from the low flight of planes taking off from a private airport.¹⁰ The landowner based his claim on the *Torts Restatement* rule that such flights constitute trespasses subject to a privilege of flight under certain conditions. This rule was rejected by the Oregon court as it has been by other courts. Said the court:

"If the minds of man can invent and operate a flying machine, it ought to be able to devise a rule of law which is adequate to deal with the problems flowing from such inventiveness. This is the challenge of the common law. . . . The decided cases reveal that the same result might well be reached in a given case by following either trespass or nuisance law, but the distinction is not as academic as it may first appear to be. . . . There are. . . . two public interests: (1) in protecting the property right of all landowners, and (2) in protecting the freedom of air travel. The point at which the two interests come into conflict is the point where the unreasonable must give way to the reasonable. . . . We hold that whenever the aid of equity is sought to enjoin all or part of the operations of a private airport, including flights over the land of the plaintiff, the suit is for the abatement of a nuisance and the law of nuisance rather than that of trespass applies."¹¹

Thus the court, under the pressures of modern science, in one case expands, and in the other limits, the most definitely settled doctrine of tort law. In the first it had chosen trespass as its doctrinal vehicle, while in the second it chose nuisance. As I have before inquired during the course of these discussions, I inquire again, what determines the choice of law in the particular case?

In the absence of statute creating civil liability to victims hurt by irresponsible persons to whom liquor dealers may sell intoxicating liquors, common law courts have consistently denied any remedy against the dealer.¹² Dram shop acts have been enacted by some

⁹ 221 Ore. at 93, 342 P.2d at 793.

¹⁰ *Atkinson v. Bernard, Inc.*, 223 Ore. 624, 355 P.2d 229 (1960).

¹¹ 355 P.2d at 233.

¹² *State ex rel. Joyce v. Hatfield*, 107 Md. 249, 78 A.2d 754 (1951); *Cole v. Bush*, 45 Cal. 2d 345, 289 P.2d 450 (1955) vacating earlier holding, 271 P.2d 47.

states to fill the vacuum, but the decisions of their courts show wide variations.¹³ Lately, a liquor dealer in Illinois served excessive quantities of liquor to the owner and to the driver of an automobile who, while intoxicated, drove into Michigan where they collided with the car of the victim for whose death suit was instituted in the federal court against the liquor dealer. Neither the statute law of Michigan nor that of Illinois provided a remedy for the plaintiffs, but the court as a matter of common law held the Illinois liquor dealer liable on the basis of a willful violation of the statute in serving liquor to intoxicated persons.¹⁴ The court expressly refused to rely on the remedies provided by the Illinois Dram Shop Act. Instead, the early theory of tort law that the commission of an *unlawful* act rendered the defendant liable for the consequences cropped up in this new setting to give the court its footing. New Jersey and Pennsylvania courts have reached similar conclusions.¹⁵ The underlying factor in all the cases is clear. The automobile has added a new dimension to the risks of intoxication and after many assaults on the heavily fortified Maginot Wall of immunity the courts have broken through.

Only recently, the California, Florida and Illinois courts have moved far ahead in removing the long-recognized immunity of governmental bodies against tort actions based on the negligence of employees.¹⁶ The decision of the Supreme Court of Illinois is indeed remarkable for in no other state did the doctrine seem so securely established and for the further reason that the court explicitly limited the operation of the new doctrine to cases arising subsequently to the decision.¹⁷ The controlling factors motivating the court were the injustice of the immunity and the recently discovered uses that can be made of insurance at slight cost to protect the victims of governmental activities, now so vast, without impairing the processes of government. Strangely enough, the reactions of the Illinois legislature under the combined pressures of strong lobbies have in some degree impaired the courageous and intelligent work of the court.¹⁸

¹³ Note, *Illinois Dram Shop Law*, 51 NW. U. L. REV. 775 (1957); Symposium, *Illinois Dram Shop Act*, 1958 U. ILL. L.F. 175-298.

¹⁴ *Waynich v. Chicago's Last Department Store*, 269 F.2d 322 (7th Cir. 1959).

¹⁵ *Rappaport v. Nichols*, 31 N.J. 188, 156 A.2d 1 (1959).

¹⁶ Cases cited note 1, *supra*.

¹⁷ For excellent consideration of "prospective overruling" see Levy, *Realist Jurisprudence and Prospective Overruling*, 109 U. PA. L. REV. 1 (1960); *Parker v. Port Huron Hospital*, 361 Mich. 1, 105 N.W.2d 1 (1960).

¹⁸ See note, 54 NW. U. L. REV. 588 (1960); Trumbull, *Recent Illinois Court Decisions*, 42 CHICAGO BAR RECORD 57 (1960).

During a period of transition such contradictory forces are not infrequently found.

By way of contrast, the legislature of the State of New York some years ago enacted a comprehensive tort claims act for all government operations. The New York courts have fully supported the legislation. Recently, by a four to three decision, the Court of Appeals approved an action for the wrongful death of an informer brought against New York City for negligently publicizing the informer's part in the apprehension of a dangerous criminal and for its failure to provide police protection against attack upon the informer by unknown third persons during a period of danger.¹⁹ Whether the plaintiff on the trial of the case can maintain the action by proof of causal relation and negligence is yet to be determined, but the court extended the city's duty in the particular environment. Likewise, the same court permitted recovery against a radiologist by a patient who had suffered burns from a negligent X-ray treatment and who further suffered cancerphobia as the result of warning by a dermatologist to check the burn periodically as it could be the source of cancer.²⁰ This was emphatic recognition of the dangers which may arise from fear induced by the negligent infliction of bodily harm even though exaggerated by other causes.

No doubt the breaking down of doctrinal barriers by *MacPherson v. Buick Co.* has extended the area of tort law further than has any decision in tort history.²¹ The flood of litigation and other baneful forebodings as foretold in 1842 by the English judges in *Winterbottom v. Wright*²² have far exceeded the fears they entertained, and nearly half a century after *MacPherson* its influence is still strong and spreading. A recent decision by the Iowa Supreme Court²³ illustrates how far it has reached. In this case a retail plumber installed a gas heater bought from a wholesale distributor of heaters manufactured or assembled by defendant. Shortly after installation the heater developed troubles and a new valve supplied

¹⁹ *Schuster v. City of New York*, 5 N.Y.2d 75, 180 N.Y.S.2d 605 (1958). See *Weiss v. Fote*, 7 N.Y.2d 579, 200 N.Y.S.2d 409 (1960) for limitations on liability.

²⁰ *Ferrera v. Galluchio*, 5 N.Y.2d 16, 152 N.E.2d 249 (1958).

²¹ 217 N.Y. 382, 111 N.E. 1050 (1916); Prosser, *The Assault upon the Citadel*, 69 YALE L.J. 1101 (1960); Friedman, *Social Insurance and the Principles of Tort Liability*, 63 HARV. L. REV. 241 (1949).

²² 10 M. & W. 109, 152 Eng. Rep. 402 (Exch. 1842).

²³ *Rauch v. American Radiator & Standard Products Corp.*, 104 N.W.2d 601 (Iowa 1960).

by defendant through the wholesaler, thence to the retailer, was installed in place of the original valve which was returned to the wholesaler and through him to defendant. Neither the old valve nor the new was manufactured by defendant but were supplied to him by another manufacturer. The new valve as packaged by the manufacturer was never unpackaged and tested by the defendant or anyone else before it was installed. The gas heater, after the installation of the new valve, was in operation for five years before plaintiff occupied the premises. After she moved in, the gas heater was lighted and put into operation by the local gas supplier. Next morning the water was cold and plaintiff went into the basement to see about the heater. When she turned on the light switch in the basement there was a terrific explosion and plaintiff was seriously burned. Her suit is based on a defect in the valve that was installed to replace the original valve. There was expert evidence that the valve was defective from the time it was manufactured and there was evidence that the explosion was due to the failure of the valve to function. The chief issue was whether the defendant could be held for its failure to inspect and test the valve before it was sent forward from defendant's stock of extra parts. This would have required that it be unpackaged. Nevertheless, the court held that defendant was under the duty to test the valve on the ground that "if it undertakes to replace a part of the heater which fails, it must exercise the same care it was bound to exercise when it installed the part which was replaced." The negligence of the manufacturer of the *valve* did not excuse the manufacturer of the *heater* from testing the spare part.

This holding is not out of line with numerous other cases in which the danger seems less and perhaps even more remote, as, for example, the injury of a plaintiff's eye due to the slipping of a rubber band from a shank of lamb processed by the defendant packing company;²⁴ the inadequate inspection by the manufacturer of a jagged ash tray on a dashboard against which plaintiff was thrown when the driver of the car had to stop suddenly to prevent a collision;²⁵ the giving way of a weld at the foot of one leg of a derrick after fifteen years of safe use;²⁶ and the premature explosion of a dynamite charge, although the plaintiff could not show what happened, whether the dynamite exploded because of some act of plain-

²⁴ Katz v. Swift & Co., 276 F.2d 905 (2d Cir. 1960).

²⁵ Ford Motor Co. v. Zahn, 265 F.2d 729 (8th Cir. 1959).

²⁶ Pryor v. Lee C. Moore Corp., 262 F.2d 673 (10th Cir. 1959).

tiff's co-worker, or the negligent manufacture of the dynamite, or some defect in the cap.²⁷

The point to be stressed in these cases is not so much the fact of liability but the lengths to which courts permit a plaintiff to go in satisfying the requisites of a negligence action. It is rather clear that the seriousness of the injury suffered, the mass production, the mass inspection, and the mass marketing of gadgets which may impose heavy risks on numberless people, plus the manufacturer's capacity to include the risks of injury as a part of the cost of doing business and the availability of insurance to provide protection against such risks, are weighty factors impelling the courts to retool their tort doctrines that once would have cut liability short. Along with this development of negligence law is the much more exacting and more easily administered doctrines of warranty found in food and chemical cases and now being brought over to cases involving mechanical devices.²⁸ Again, I suggest that the earlier and basic concept of recompense is regaining acceptance even though the boundaries of danger are extended much further than our forebears of feudal times could have conceived.

Response to the injuries imposed by our machines is not the only pressure under which tort law has recently come. No one would doubt the tremendous values photography has added to the personality for purposes of publicity, advertising, and entertainment, or the values radio and television have added to the marketing of goods, or the values they have added to the intellectual, artistic, and political talents of thousands of people most of whom would otherwise have withered on the vine. These values, and that of their numerous by-products, to the national economy are beyond estimate. Whether for better or for worse, and as recent as their advent has been, they have already profoundly affected the lives of every American citizen, and their influence has only begun. One of the important functions of the courts in recent years has been to

²⁷ *Dement v. Olin-Mathieson Chem. Corp.*, 282 F.2d 80 (5th Cir. 1950). In this case there were several defendants and several hypotheses, supported by more or less evidence, as to how the dynamite came to explode. The court imposed a heavy burden on defendant to offer some explanation to meet the inference of negligence supported by *res ipsa loquitur*. See also *Haberly v. Reardon Co.*, 319 S.W.2d 867 (Mo. 1958) for another type of hair-breadth liability.

²⁸ *Henningsen v. Bloomfield Motors, Inc.*, 161 A.2d 69 (N.J. 1960); note, 48 CAL. L. REV. 873; *Spence v. Three Rivers Builders & Masonry Supply Co.*, 90 N.W.2d 873 (Mich. 1958); Symposium, 24 TENN. L. REV. 923-1018 (1957); Prosser, *Assault on the Citadel*, 69 YALE L.J. 1100 (1960).

develop appropriate tort remedies for the protection of these values and also for the protection of those who fall victim to the abuses of these new instruments of communication, and most of the work of the courts is yet to be done.

SERIOUS PROBLEMS

Highway and Air Traffic

More serious and more tragic problems than those we have discussed are pressing for early solution. Currently, the most pressing tort problem involves protection to the victims of the wholesale highway slaughter by the motor vehicle. Here, the courts and negligence law, after an extended period of litigation, have met their most decisive defeat in common law history. Even with the aid of gigantic insurance companies to pay the losses, many, if not most, of the victims of traffic accidents go with little or no compensation from those who inflicted the injuries or from their insurers. The best that state legislatures have done is the requirement of compulsory liability insurance or some other form of financial responsibility. Liability insurance, whether compulsory or voluntary, while providing a solvent defendant, necessitates an almost certain, long drawn-out and expensive lawsuit if the injuries are serious. It also crowds the dockets with so many cases in heavily populated areas that the courts are hopelessly in arrears. The result is that most of the cases never reach trial but succumb to inadequate settlements or rot on the docket.²⁹ And the immunities of negligence law and the hazards of litigation are so great that many injuries are never made the basis of litigation. In the meantime, the insurance companies grow in size and in power and more of the insurance dollar goes for overhead and profit.

A similar impasse in the protection of the victims of air and space travel is in the making. As more and more machines with more and more people and more and greater cargoes take to the air, more and more crashes, fatalities and injuries, and more and

²⁹ Rosenberg & Severn, *Delay and the Dynamics of Personal Injury Litigation*, 59 COLUM. L. REV. 115 (1959); Franklin, Chanin & Marks, *Accidents, Money and the Law: A Study of the Economics of Personal Injury Litigation*, 61 COLUM. L. REV. 1 (1961); See ADAMS, A SURVEY OF THE ECONOMIC-FINANCIAL CONSEQUENCES OF PERSONAL INJURIES RESULTING FROM AUTOMOBILE ACCIDENTS IN THE CITY OF PHILADELPHIA, Vol. 7, ECONOMICS & BUSINESS BULLETIN, TEMPLE UNIVERSITY. Sec. II, ch. 7 and Sec. IV, ch. 12 (March 1958); Lavery & Cook, *The Need for Judges Now*, 42 CHICAGO BAR RECORD 212 (1961).

more claims and lawsuits will follow. If negligence law has proved inadequate for the protection of the highway victim, it cannot hope to meet the needs of jet and rocket victims.³⁰ At present, in both aviation and highway cases, in order to support or refute the partisan recollections of survivors, if any, of the split-second experience filled with fear and horror, proof must be based largely on the reconstruction of the incident by experts from details arrived at by the inspection of the crash or collision scene and its litter, together with nice measurements of time and distance, a full review of weather phenomena, and the most meticulous examination of the fragmentary bodily remains of the victims.³¹ The doctrines utilized in these cases have become so lacking in meaning and so frazzled by refinements that they no longer serve the purpose of guiding judgment of either judge or jury. Their complexity is so great that the results arrived at by appellate courts can only be explained in lengthy opinions phrased largely in terms of metaphysics based on factual detail that no one can vouch for with certainty.³² The reliability of the litigation process comes less and less to be trusted. Even a partisan of tort law must admit its failure to give protection required for the victim whether traveller or other person. Perhaps the chief value served by the litigation of these cases under negligence law and jury trial is the distribution of wealth; the economic welfare of the insurance companies, the lawyers who prosecute and defend, and the vast retinue of investigators, witnesses, clerks, stenographers, judges, publishers, and a score of other groups whose livelihood are thereby sustained in whole or in part. The provision of jobs for a great number of people and the support given the national economy is the best justification that can be found for continuing such a formidable, expensive, and wasteful process. Whether in any case the victim will receive anything, or any adequate compensation for his injuries, is a gamble with the odds heavily against him.

³⁰ The long list of tragedies involving the lives of many persons which have been reported in the daily press in early 1961 will no doubt be multiplied in the years to come.

³¹ See Calkins, *Grand Canyon, Warsaw and the Hague Protocol*, 23 J. AIR L. & COM., 253 (1956); *Aviation Negligence Institute*, 28 TENN. L. REV. 117-245 (1961); *Symposium of Traffic Accidents*, 3 J. FORENSIC SCIENCES, 5-98 (1958); Townsend, *Modern Concepts in Investigation of Aircraft Fatalities*, 3 J. FORENSIC SCIENCES, 381 (1958); *Deltz v. Greyhound Corp.*, 234 F.2d 327 (5th Cir. 1956); *Texas & P. Ry. v. Watkins*, 243 F.2d 171 (5th Cir. 1957); *Higginbotham v. O'Keefe*, 340 S.W.2d 350 (Tex. Civ. App. 1960); *Buck v. Hill*, 263 P.2d 643 (Cal. App. 1954); *Lawrence v. Nelson*, 113 S.E.2d 241 (W. Va. 1960).

³² See discussion in GREEN, *TRAFFIC VICTIMS: TORT LAW AND INSURANCE* ch. 3 (1958).

Atomic Energy

Not far in the future the energy derived from the atom will be in wide use. We are just now in a transition stage from an environment of great activities and great dangers to a transition of greater activities and greater dangers. The dangers from radiation, pollution of air and water, and the poisoning of plant and animal life are beyond any calculations that can be made. We are certain that we shall contrive devices of safety that will make the uses of this great source of energy available for many beneficial purposes. But the most adequate protective devices will fall short, with devastating effects on many victims. The federal government through the Atomic Energy Commission has assumed broad powers of control of the projects for the production and uses of atomic energy,³³ and there is no doubt that it could provide for liabilities to their victims.

It would seem that Congress should lose no time in taking steps to assume full responsibility for protecting those who may fall victim to any and all operations that may be authorized in this area. It has already gone so far as to require liability insurance for licensees and contractors, and has provided for indemnification by the government in catastrophic disasters.³⁴ There is already considerable literature outlining the applicability of tort doctrines to the various stages and uses of this limitless source of power. But this still leaves liability to be determined by the tort law of the states.³⁵ This seems glaringly unwise. Tort law and jury trial are not designed, and cannot be made to provide protection for injuries suffered individually, or in mass, by a force so destructive over so long a period of time and so difficult to trace. There is no place for the ordinarily prudent man and jury trial in this new world of science. And if liability is to be imposed it should be made definite and complete. In order to avoid most of the difficulties of establishing liability under tort law, loss insurance within reasonable limits to cover death, personal injuries, and property damages should be required as a more certain basis of protection. The principle of life and fire insurance should supplant the uncertainties of liability insurance. This would leave only two issues to be resolved: (1) the fact that the victim's injuries resulted from atomic uses or opera-

³³ See the comprehensive studies of STASON, ESTEP & PIERCE, *ATOMS AND THE LAW*, chs. 2-4 (1959).

³⁴ *Id.*, at 1207 *et seq.*

³⁵ *Id.*, at 1302 *et seq.*

tions, and (2) the amount to be awarded to the victim. There would be difficulties enough in the determination of these issues.³⁶

LOSS INSURANCE

Protection by loss insurance for injuries arising from the operations involved in the production and uses of atomic energy suggests that it could also be employed in protecting those injured in the use of the highway and air space for travel. The federal government has taken jurisdiction over most of the operations involved in aviation. Its regulations are made the basis of tort claims litigated in state and federal courts with liability to be determined by state law.³⁷ It would not be difficult for the federal government to withdraw all claims for injuries resulting from aviation activities, including those now covered by the Federal Tort Claims Act, and require that they be covered by loss insurance. The problems of factual causation and damages would still be left for determination by the courts.

To subject highway travel and its fatalities and injuries to a loss insurance basis, and remove them from negligence law and jury trial may at first blush seem a radical suggestion. It seems so, no doubt, because we are accustomed to consider the actions for personal injury and death in traffic cases as the chief tort litigation of our times. If the only issues left to be determined in a traffic case were those of factual causation and damages there would be a drastic shift in litigation emphasis, but a very desirable shift. The problems and the process would be so simplified that

³⁶ *Id.*, at 572 *et seq.* See Estep, *Radiation Injuries and Statistics: The Need for a New Approach to Injury Litigation*, 59 MICH. L. REV. 259 (1960) excellent discussion of numerous problems. See also, note, 39 TEXAS L. REV. 189 (1960) on *McVey v. Phillips Petroleum Co.*, (unreported) Civil Action No. 11,644 (S.D. Tex. 1959). Here it seems plaintiff, an employee, was subjected to one very pronounced exposure due to defendant's negligence, but thereafter continued to work in defendant's laboratory where he was subjected to further slight but continued exposures. The suit was for damages on account of serious injuries attributed to the pronounced exposure due to defendant's negligence. The jury found for defendant on the issue of causation, noting that the subsequent exposures greatly contributed to or caused the injuries. This raises the question in many cases: should a plaintiff seek to recover for all injuries or simply for those which can be attributed to the negligence of defendant? The difference in stating the issue for jury consideration would be vital. If here the jury had been asked to what extent defendant's negligence contributed to plaintiff's injuries, whether materially or substantially so, the answer might have been different and the damages assessed accordingly. On the general subject see Malone, *Ruminations on Cause-in-Fact*, 9 STAN. L. REV. 60 (1956).

³⁷ *Griggs v. County of Allegheny*, 82 S. Ct. 531 (1962); *United States v. Causby*, 328 U.S. 256 (1946).

most of the time and expense now required to deal with a case would be eliminated,³⁸ and the gamble that everyone involved in tort litigation must now take would be removed. The dangers, injuries, and fatalities of the highway will in all probability continue to be greater in number and perhaps more serious for the individual and his family for some years to come than will those that result from aviation and atomic energy. The federal government has already contributed enormously to the construction of our highways and will contribute more in the future. With better and endless highways, more powerful machines, greater speeds, and more traffic, the toll of injuries and death will continue to rise. The states will continue to provide the police protection and no doubt the penalties for traffic violations will become more severe and more certainly imposed. But in order to provide certain and uniform protection for the victims and their families of our highly mobile population that knows no state lines, the federal government can and should require a uniform insurance coverage that would eliminate most of the difficulties and injustices of the present unreliable and chaotic administration of negligence law.

JURY TRIAL

In each of these three areas—highway, aviation, and atomic energy—the doctrines of tort liability and jury trial would have no place in administering claims based on loss insurance. We have the experience of admiralty jurisprudence and workmen's compensation as a basis of assurance that modifications of tort law can be made successfully. We also have the experience of the English Commonwealth of Nations in which jury trial in all negligence actions is now practically unknown. Jury trial is not without merit in cases involving relatively simple and infrequent risks with which people generally are well acquainted. It is out of place in a highly mechanized and scientific age involving risks which recur in such frequency and variety as to defy control by any doctrines, rules, and formulas the courts can devise or that can be administered with promptness and consistency.

Feudal tort law could not respond to the activities of the industrial revolution. The tort law of the nineteenth century cannot be made to respond to the dangerous enterprises of the scientific revolution. Its ponderous, tardy, unpredictable and expensive pro-

³⁸ GREEN, *TRAFFIC VICTIMS: TORT LAW AND INSURANCE* ch. 4 (1958) proposal and discussion of loss insurance.

cess of jury trial cannot respond to the yearly holocaust of a million and more victims of the highways and airways, and the victims of atomic energy to come. The losses from highway and airway traffic are already catastrophic and the losses as a result of the production and uses of atomic energy are certain to become so. Hence it is believed that liability should be made equally certain for all victims in these areas of danger with maximum limits provided for death and personal injuries within which damages may be assessed by the courts. While full recovery for many victims may not be achieved, at least substantial awards would be made in all cases relative to the injuries suffered.³⁹

PATTERNS OF INSURANCE

The patterns of insurance coverage do not present an insoluble problem, but are to be worked out by the joint participation of the insurance companies, the automobile industry, the aviation industry, Atomic Energy Commission, Civil Aeronautics Board, and such other government officials as may be empowered to act in such an undertaking. The manufacturers and operators of the machines of highway and air travel, and the producers and operators who make use of atomic energy should establish insurance funds under government supervision for their respective victims with provision for governmental indemnification in catastrophic losses beyond the limits of insurance. The users and consumers of the several products and services would pay their share of the costs of the insurance provided through such charges as determined to be fair by those empowered to inaugurate the several plans. Whether along the lines here suggested or otherwise, practical plans can be developed. Moreover, practical plans must be developed. We cannot much longer delay the choice of something better than tort law. Nor can we push the choice aside on the basis of costs. "We the people" ultimately foot the bill whatever the arrangement whether that of negligence law and jury trial or that of insurance. The only issue is what pro-

³⁹ See *Ibid.*, for method of administration suggested for traffic injuries. The most stubborn problem of tort law is the determination of damages in actions for personal injury and death. No substitute has been found for the judgment of judge and jury. See McCORMICK, *DAMAGES* 21-29 (1935); Kalven, *The Jury, the Law, and the Personal Injury Damages Award*, 19 OHIO ST. L.J. 158 (1958). Awards differ greatly from period to period and from jurisdiction to jurisdiction. See note, *The Inadequate Award in West Virginia*, 60 W. VA. L. REV. 339 (1958); also note the heartening opinion of Smith, J., in *Wycko v. Gnodike*, 361 Mich. 331, 105 N.W.2d 118 (1960).

tection shall we get for what we pay—protection for all or protection for only a more fortunate few?

Obviously, such a proposal lies beyond the range of any power or any doctrines the courts have at their command. The first and most important step is *congressional* action.⁴⁰ The problems have no respect for state boundaries and are too large and too far flung to submit to the control of state legislatures; their reach is too short even if they could be induced to take action. The safety and welfare of every one of our 180 million people are involved, to say nothing of the property losses. We have long been accustomed to the political cry of "states-rights." It is usually raised by those who fear they will have to submit to law in some area where they want no law. They never raise the cry when the national government extends its protection to them. Both the federal and state governments belong to us, the people. They are not enemies. If one cannot provide what we need there is no reason why we should not make use of the other so long as it has the power. In our own time we have known many problems beyond the powers of the states. In many instances the national government has been able to take over with great benefits to all of us.

We have already gone further in the direction of making the national government the protectorate of our economy and general welfare than most of us realize, and as the interests of "we the people" become more interdependent we shall have to rely more and more on Congress and our national machinery of government. It is time that our understanding and teachings were catching up with our practices and necessities. We have dwelt too long in the dreams and myths of our youth. A new day—a revolutionary environment powered by our science, our technology, our wealth, and our institutions of industry is already upon us demanding a similar revolution in our thinking and in the uses we make of our national government. As so aptly put by W. H. Ferry in his study, *The Economy Under Law*, "While the physical and international world has been evolving with dizzy speed, we have been content with a political outlook and an attitude toward law dating from before the first world war."⁴¹ This does not mean that the states are to be down-graded and pushed aside in our system of government. There

⁴⁰ The legislation would be based on the general welfare and commerce clauses of the Constitution.

⁴¹ See text accompanying note 2, *supra*.

are numerous functions that only the state can adequately perform, but it should not be asked to perform functions beyond its powers. National legislation in the area of tort law does not mean that the state courts will be relieved of their jurisdiction to administer the law, but only that the legislation to give effective protection must be uniform and the geographical coverage complete.⁴²

SUMMARY

What happens in the law of torts in the course of the professional life of one person is but a small segment of its total history. Yet, subject as it is to the influences of environment, its character may undergo great change in that short period. In the last fifty years so much has happened in tort law that its movements have registered almost continuous violent tremors on the tort teacher's seismograph. Not a thing in the tort's area has been left unmoved. Nevertheless, there are some facets of tort law which throughout most of its history have retained enough consistency to become somewhat well defined and to give it stable character.

First, the adjustment of the individual case between the litigants is its primary concern. This adjustment, however, is modified by concern for future cases between other parties and though the environments may differ, the courts are anxious to retain consistency in their decisional adjudication. This urge for consistency is a weighty influence in the particular decision and in the development of tort law. Not infrequently it may counteract the pull of environment for a long period.

Secondly, the litigation process has always been the heart of tort law—an adversary argumentative method by which the factual data may be presented and the issues of fact and law formulated so as to focus the arguments of advocates, judges, and jurors in their consideration of the merits of the case and its determination. While the process itself is subject to the pull of environmental change, it is the most stable aspect of tort law. But since it permits so wide a range of considerations and judgments, the decisional product can never be known for sure until the process has done its work. Here the pull of environment with all of its many factors makes most guesses of the outcome of the particular litigation, even by the experts, wide of the mark.

⁴² *Ibid.*

Thirdly, as a result of the long history of intensive litigation in tort cases, a great mass of principles, theories, rules, and formulas, which for brevity's sake we call doctrines, with their tremendous networks of substantive and procedural apparatus, have been developed so that in most controversies brought to court opposing advocates and the judges of trial and appellate courts may have a wide choice of law by which to focus arguments in support of decision. Needless to state, the choice of doctrine will be dictated by the ends the advocates hope to achieve and by the decision the court may deem to be just for the parties, consistent with the other considerations that impel judgment. It is here that advocates and judges seem to devote most of their energies in the litigation process and certainly where law teachers and law students devote most of their energies in the study of tort law. In fact, the devotion to doctrine is so possessing of advocate, judge, teacher, and student as frequently to blind them to the other important factors that should influence judgment.

Fourthly, the ultimate objective of this massive development of process and law is the recompense or reparation of the injured victim by the one whose conduct has inflicted the injury. This objective also may be greatly compromised and even denied by the pull of environment which comprehends the good of the rest of us. But also, by the same influence, the reparation of the victim may be reinforced by responsibility of the group, and, in extreme cases, by the punishment or the restraint of the wrongdoer.

Finally, we know that the litigation process of tort law can run its course and no longer function successfully in providing protection for the victims of our scientific environment. Here, it must be replaced by some other process better attuned to the risks involved. This was done in the case of the industrial employee. It seems imperative that it be done in behalf of the victims of the highway, the airways, and in the large-scale uses of atomic energy—protection somewhat in keeping with the inevitability of the risks such as is made for death or loss by fire, the loss of employment, illness, hospitalization, social security, and the ravages of old age.⁴³ That in these special areas tort law is being pushed to the brink, can scarcely be doubted. Whether the brink and beyond will be its

⁴³ See Friedman, *Social Insurance and the Principles of Tort Liability*, 63 HARV. L. REV. 241 (1949).

destiny, no one can foretell. Tort law seldom anticipates the need for protection. It must await the unfolding of the environment and our capacity to respond to it, and even then, its thrust is reserved for the specific case.