

CHAPTER EIGHT

TECHNOLOGY AND THE LAW: THE AUTOMOBILE

JAMES WILLARD HURST*

I. THE MULTIPLYING EFFECTS OF AN INVENTION

*714 In this chapter we are going to talk about some of the effects that the automobile has had upon the law and some of the effects that the law had upon the automobile. We could undoubtedly open up some worthwhile lines of thought if we talked about the automobile in relation to certain broader problems of which it is a part: for example, the effects of the internal combustion engine or the growth of all types of communication. But we shall have enough on our hands if we stick to the automobile, and even so in the limits of this chapter we can discuss at any length only the relation of the law and the passenger car. This is not merely an arbitrary limitation, however. Of the 32 million registered motor vehicles in the United States in 1940, substantially over 27 million were passenger cars, and a little under four and one-half million were motor trucks. Until the middle 1920s the proportion of trucks to passenger cars was much lower than this. Not only was the passenger car the center of the auto problem as a matter of gross figures; it was likewise the main aspect of the problem that men saw and reacted to. We may properly focus on it when we try to retrace the unplanned paths of the law's responses to the motor vehicle.

Statistics do more to locate than to define, let alone explain, a social problem. But the automobile story is written in figures of Paul Bunyan proportions. If we knew no more than the elementary statistics, their dimensions and the breadth of their categories would tell us much: they would suggest not only that this machine must have posed serious problems of adjustment to the society, but also that these problems must have emphasized (a) the great speed, *715 (b) massive weight, and (c)

* This manuscript was authored by the late James Willard Hurst, Vilas Professor of Law, University of Wisconsin Law School, in 1949. The manuscript has been edited for publication by BJ Ard, Assistant Professor of Law, University of Wisconsin Law School, and William J. Novak, Charles F. and Edith J. Clyne Professor of Law, University of Michigan Law School. The editors are grateful to Professor Hurst's family—especially Thomas Hurst and Deborah Hurst Senter—and many colleagues for their support of this project. For further thanks and explanatory notes—and the remarkable history of this manuscript—see BJ Ard & William J. Novak, *Foreword: Willard Hurst's Unpublished Manuscript on Law, Technology, and Regulation*, 2022 WIS. L. REV. 443.

enormous reach of the automobile's effects upon the way people lived in the United States.

Pace and mass of change are outlined by data on production and use:

	Factory Sales: U.S. Plants			Motor Vehicle Registrations		
	Passenger Cars	Motor Trucks	All Motor Vehicles	Passenger Cars	Motor Trucks	All Motor Vehicles
1895	No data	No data	No data	4	.....	4
1900	4,192	.....	4,192	8,000	.....	8,000
1905	24,250	750	25,000	77,400	1,400	78,800
1910	181,000	6,000	187,000	458,500	10,000	468,500
1915	895,930	74,000	969,930	2,309,666	136,000	2,445,666
1920	1,905,560	321,789	2,227,349	8,225,859	1,006,082	9,231,941
1925	3,735,171	530,659	4,265,830	17,496,420	2,440,854	19,937,274
1930	2,784,745	571,241	3,355,986	23,059,262	3,486,019	26,545,281
1935	3,252,244	694,690	3,946,934	22,562,847	3,664,429	26,227,276
1940	3,692,328	777,026	4,469,354	27,434,979	4,590,386	32,025,365

Factory Sales: US Plants Motor Vehicle Registrations

	Passenger Cars	Trucks	Vehicles	Passenger Cars	Trucks	Vehicles
1895	No data	No data	No Data	4	.....	4
1900	4,192	.....	4,192	8,000	.....	8,000
1905	24,250	750	25,000	77,400	1,400	78,800
1910	181,000	6,000	187,000	458,500	10,000	468,500
1915	895,930	74,000	969,930	2,309,666	136,000	2,445,666
1920	1,905,560	321,789	2,227,349	8,255,859	1,006,082	9,231,941
1925	3,735,171	530,659	4,265,830	17,496,420	2,440,854	19,937,274
1930	2,784,745	572,241	3,355,986	23,059,262	3,486,019	26,545,281
1935	3,252,244	694,690	3,946,934	22,562,847	3,664,429	26,227,276
1940	3,692,328	777,026	4,469,354	27,434,979	4,590,386	32,025,365

*716 In 1940, the Public Roads Administration estimated, the people of the United States traveled 292 billion vehicle-miles by passenger cars, trucks, and buses in this country; 81 per cent of this vehicle mileage was run up by passenger cars. The growth behind this 1940 total could be seen in figures of:

All Rural Roads in the United States

	1904	1914	1924	1934 ¹
Total mileage at end of year	2,151,379	2,445,760	2,941,294	
Of which, surfaced roads were	153,540 (7.14%)	257,291 (10.52%)	470,000 (15.98%)	

and in data on apparent consumption of motor fuel, which went from 102,937,000 barrels in 1920, to 394,800,000 barrels in 1930, to 521,748,000 barrels in 1940.

Other figures suggested how intimately the automobile had reached into people's lives. Passenger cars averaged about one to 5.5 persons in 1930 and about one to 4.5 persons by 1941, better than two for every three families. Another way to picture the diffusion of the motor car was through the shift in price policy. Mark Adams notes that the average wholesale price of a passenger car was \$1,170 in 1900 and \$2,120 in 1908. He shows the price leadership of Henry Ford in a table regarding:

1. The manuscript had not filled the column for 1934. Eds.

Automobile Price Policy and Sales

Year	Ford Price F.o.B. Detroit	Ford Sales: Number of Cars	Ford Profits	Industry Sales: Number of Cars
1909	950 (Model T)	10,660	3,125,876	127,731
1910	780	19,051	4,127,208	181,000
1911	690	34,979	7,288,303	199,319
1912	600	76,150	13,552,239	356,000
1913	550	181,951	27,001,203	461,500
1914	490	264,972	24,923,449	543,679
1915	440	283,161	23,426,662	895,830
1916	360	534,108	57,056,429	1,525,578
1917	450	785,433	26,715,944	1,745,792
1918	525	708,355	30,341,057	943,436
1919	575	537,452	69,924,411	1,657,652
*717 1920	440	1,074,336	53,448,480	1,905,560
1921	355	1,013,958	75,890,836	1,518,061
1922	355	1,351,333	133,248,623	2,369,089
1923	295	2,090,959	99,342,88	3,753,945

An enduring pattern had been set in which the low-priced car dominated automobile production; between 1925 and 1940 never less than two-thirds, and during most of the period over 80 per cent, of new cars sold under \$750 wholesale. From 1921 on, the sale of used cars began to make up a substantial part of the total auto sales in the country. This branch of trade made the motor car available to still wider ranges of low-income people. The average used car price was \$308 in 1923 and \$347 in 1940.

The automobile was deeply involved in the economy. It had become the center of major production and commercial efforts. Capital invested in motor vehicle manufacturing grew from an estimated \$1,204,378,600 in 1920 to a peak of \$1,956,687,661 in 1929, and after the casualties of the depression in the 1930s stood at \$1,334,751,000 in 1940. There was also investment in auto parts manufacture, in the making of tires and the production of petroleum products. In 1924, persons employed directly or indirectly in the industry were estimated to number 3,119,563, of whom 329,563 worked in factories immediately producing motor vehicles; in 1940 it was estimated that 6,466,870 persons were employed directly or indirectly in the industry, with an additional 233,130 persons employed in connection with federal and state road activities. The industry meant employment not only for 679,124 people who made motor vehicles, parts,

tires, and petroleum products, but also for 1,310,724 engaged in sales and service, 3,739,200 who drove trucks, and 142,825 who drove buses.

By 1940, most passenger transportation was by motorcar; the automobile in that year accounted for nine of every ten passenger-miles of travel outside cities and for three of every four passengers transported within city areas. The *718 people of the United States did about ten times as much moving around in 1940 as in 1921, measured in passenger-miles traveled, and they moved mainly by auto. Samplings by public highway authorities in the late 1930s indicated that 55 per cent of miles traveled and 75 per cent of trips made were for necessity, rather than recreational or social uses. A summary showed the following:

Purposes of Passenger Car Uses

Purpose	MILES		ROUND TRIPS	
	Annual Average Per Car	Percent of Total	Annual Average Per Car	Percent of Total
To Work	1,295	16	179	33
Business Trips	2,662	32	167	30
Shopping	335	4	47	9
Hauling; to Market	64	1	7	1
To School	57	1	9	2
To Church	63	1	12	2
Total Necessity Use	4,479	55	422	77
Recreational and Social	3,707	45	128	23
Total: All Uses	8,186	100	550	100

The depression years of the 1930s proved how deeply the automobile had entrenched itself in the ways of life in the United States. As the first table in this section shows, passenger car registration in the country dropped only a little over two per cent over the 1930–1935 span; at the low point of 1933, the drop was only 10 per cent. Average annual gasoline consumption per motor vehicle was estimated at 623 gallons in 1930, 649 in 1931, 620 in 1932, 625 in 1933, 660 in 1934, and 677 in 1935. New car sales dropped disastrously in the depression, of course (from 4,587,400 factory sales in 1929 to 1,135,491 in 1932); but people held on to the cars they had and used them almost as much as in good times. “Car ownership

in Middletown,” the Lynds found in 1935, “was one of the most depression-proof elements of the city’s life in the years following *719 1929—far less vulnerable, apparently, than marriages, divorces, new babies, clothing, jewelry, and most other measurable things, both large and small”:

Many business-class people regard it as a scandal that some people on relief still manage to operate their cars. No formal effort has been made by relief authorities to discourage car ownership and operation, and . . . people on relief who own cars have been encouraged to use them in various ways to pick up small earnings. Even at the time of the labor-union fervor under N.R.A., local organizers tell one disgustedly, many Middletown workers were more interested in figuring out how to get a couple of gallons of gas for the car than they were in labor’s efforts to organize. While some workers lost their cars in the depression, the local sentiment, as heard over and over again, is that “People give up everything in the world but their car.”

In fact, the Lynds noted, the automobile had become a material influence in the underlying emotional balance of the community. Their analysis corrects a likely distortion of the estimates given above on comparative “necessity” and “recreational” uses of motor cars. The depression taught working people to lose confidence in their ability to earn high incomes, the Lynds found; moreover, the machine had lessened the status and satisfaction once attached to skill on the job.

So you work. Someday you’re going to die. Meanwhile, leisure assumes a simple, direct, and important place in your scheme of things: it’s when you live, and you get all of it you can—here, now, and all the time.

Only by understanding this different focus upon leisure of the lives of those living north and south of the tracks can one appreciate the tenacity with which the workingman clings to his automobile. If the automobile is by now a habit with the business class, a comfortable, convenient, pleasant addition to the paraphernalia of living, it represents far more than this to the working class; for to the latter it gives the status which his job increasingly denies, and, more than any other possession or facility to which he has access, it symbolizes living, having a good time, the things that keep you working. And again, only by understanding how these two groups weigh the importance of work and leisure can one understand the exasperation of the businessman over the workingman’s frequent preference for his

car rather than for the slow, painful process of saving for the future.

***720** If our imagination and knowledge allowed us to see the whole pattern of the social effects of the automobile over the years 1900–1940, we should probably find that it had left no aspect of life untouched. This stood out so much from the varied data in the Report of the President’s Research Committee on Social Trends, in 1932, that the Survey Graphic, reviewing the Report, felt that it could have been subtitled, “The Age of the Automobile.”

If we could see the whole pattern, we should also undoubtedly come to a modest appraisal of the foresight, energy, and competence shown in the law’s response to the automobile. This is the conclusion from looking at the parts of the pattern that we do know something about; there is no evidence that the judgment would be different if we knew the whole.

The following outline lists some hypotheses about important derivative effects that the automobile has had upon the law. Many of these could not be fully documented from presently available data. In total effect, however, the list can more readily be criticized for giving too limited rather than too broad a picture of the interplay of the law and the motor car. The list is organized about functional characteristics of the auto industry and the auto-in-use. There is some duplication of points, because different functional features of the automobile have often converged upon a common result in law.

Some Derivative Effects of the Auto Upon the Law

- I. The automobile industry
 - A. The industry shows the social character of much modern invention; the automobile is an assembly of hundreds of inventions.
 1. Predictability of social change should thus have been increased, for the better ordering of law to meet changes brought by the automobile because the convergence of inventions pointed the way; it was, however, mainly a lost opportunity.
 - *721** 2. Patents were potentially of importance to the growth of the industry; their importance was reduced and their effect channeled through pools, but this fact in itself reflects a way in which the industry had to take account of the law.
 3. Business cycle repercussions spread as such an industry, drawing upon so many sources of production, contributes to the growing interdependence of parts of the economy; government is drawn into more concern for economic stability.

4. Legal devices for private economic planning—contract, license, franchise, parent-subsidary corporation relationships—become important for ordering an industry that thus draws together diverse sources of supply.
 5. Vulnerability of an industry dependent thus upon diverse suppliers and supply markets gives impetus to seeking security through merger or contract, with accompanying questions for anti-trust law policy and taxation.
- B. The auto industry is an outstanding example of machines making machines.
6. The industrial accident hazard is increased; workmen's compensation is imposed by law, and contract systems of plant insurance and company health plans become important.
 7. There is reduced demand for skilled labor and less status and security in the job for the individual worker; the industry situation thus contributed to the type of situation and the climate of opinion that made the law concerned with labor relations and union organization.
 8. Business cycle repercussions spread, also, because such an industry as this, with great capital investment, could only adjust with difficulty to loss of markets; from this came another contribution to the need for government to act regarding the swings of business.
 9. Enormous productive capacity, supportable only by mass markets, heightened this sensitivity to the business cycle, and government's sensitivity to the resulting social disturbances.
- C. The auto industry is the model of mass production methods.
10. The industrial accident hazard is increased, as monotony induces fatigue; this adds another reason for the importance of compensation and private insurance plans.
 11. Loss of status or satisfactions in the job, as the job is set up on the assembly line, becomes a further source of tensions and loss of job security, developing labor relations problems and government's concern with them.
 12. The demand for semi- or unskilled labor promoted more migration of labor, with attendant problems in community adjustment, regarding schools, racial, religious, and rural-urban attitudes.
 13. Enormous productive capacity is also bred of the introduction of mass production methods with the effect of increased sensitivity to the business cycle.
 14. Interdependence of the parts of the economy is likewise fostered by the range of markets drawn upon to supply mass production, with increased sensitivity to the business cycle as a result.

- *722 15. Importance of legal devices for private economic planning, (contract, license, etc.), is increased by the network of arrangements needed to feed the assembly line.
- D. Large-scale operations characterize auto production, even in the case of the relatively smaller concerns.
16. Need for legal devices for internal discipline within large corporate organizations, with problems of rights of management and stock-holders, directors and stock-holders, and parent and subsidiary corporations.
 17. Labor relations issues are fostered by the impersonality of dealings between top management and labor, the phenomena of bureaucracy inevitable in such impersonal relations, and the inequality in the parties' bargaining power; these factors contribute to making government aware of labor-management tensions.
 18. Problems of community planning—zoning, traffic, movement toward the outskirts with the accompaniments of “blighted” inner areas, need for added community facilities, and more taxes—are brought by the size of such industries.
 19. The large capital investments involved increase resistance to smooth adjustment to market changes, increasing the tensions of the business cycle.
 20. The concentration of economic power represented in industry of such scale raises anti-trust law problems.
 21. The breadth of power and interests represented by such a scale of industry promotes the development of modern-type pressure groups, seeking to influence government.
- E. The industry was largely self-financed by plowing back earnings.
22. Issues of internal control of corporations were raised between management and stockholders by limited dividend and capital expansion policies.
 23. Relations with suppliers and dealers were affected; the devices of private economic planning (notably contract, license, or dealer franchise) were used in the course of requiring suppliers and dealers in effect to supply much of the industry's working capital.
 24. Tax law was relevant to the possibility of plowing back earnings and the desirability of doing so, compared with paying greater dividends; inheritance taxes became pertinent to planning the continuity and form of such industries.
- F. The industry led in developing a relatively low-cost product for a mass market in durable goods.

25. This is the end result of the technical advance of the industry, which made possible the range of social effect charged to the automobile in the second division of this outline.
 26. The reach of the industry and its dependence on mass purchasing power made the industry a material factor in the business cycle, and government's concern therewith.
 27. The drive toward concentration and large scale of enterprise, with attendant questions regarding anti-trust law policy, came largely from the fact that the industry's chances for profit become so linked to reaching a mass market.
 - *723 28. Extensive distribution channels had to be developed, involving the use of contract, license, and franchise, the protection of trade names, and problems in fair advertising.
 29. Government became concerned in the regulation of auto dealers, issuing licenses to them and requiring certain records.
 30. The industry developed important direct approaches to car buyers through controlling distribution channels and through advertising; the law then became concerned with problems of the buyer's reliance upon the maker's statements as to quality and safety, with resulting issues in the law of torts and sales.
 31. The industry developed installment sales methods as essential to mass distribution. There were problems of the enforcement of installment contracts as between buyer and seller and third parties; problems of registration of car titles under installment contracts; problems of the regulation of interest rates, and the prevention of fraud or overreaching; and the growth of installment selling became a factor in the industry's responsiveness to the business cycle.
 32. Shipping of cars by caravan or carrier trucks called for regulation by license and restrictions on methods of carriage.
 33. A large used-car market came into existence, eventually as a necessary condition of maintaining volume sales; this market had its own problems of buyer-seller contract relations, regulation of credit terms, and protection of buyers with regard to quality and safety under the law of tort and sales.
 34. Government became concerned with licensing of the used-car trade.
- G. Large accessory industries developed, notably those dealing in parts, tires, petroleum products, and road building and road-building equipment.
35. New sources of organized pressure upon government grew from these new interests, notably in the case of the oil industry and the road-builders.

36. The interdependence of elements of the economy was further underlined by this growth, with increased sensitivity to the business cycle.
 37. The legal devices of private economic planning—by contract, license, and corporate ties, for example—became more important.
 38. Community planning problems accompanied the growth of accessory industries in local communities.
 39. Conservation problems developed in connection with the oil industry.
 40. Price regulation became important in connection with the oil industry.
 41. Government found it desirable to regulate, by licensing, the rent-a-car business.
 42. Government found it necessary to impose licensing and record-keeping regulation on garages and dealers in used-car parts as a check on auto thefts.
 43. Employees charged with maintaining or operating autos were forbidden, under criminal penalties, from taking fees or commissions in connection with the sale of parts or rendering of services for such autos.
 - *724 44. Zoning and safety regulations had to be made to deal with garages and filling stations.
 45. New conflicts of small and large dealers were bred out of the competition to serve the auto user, with accompanying repercussions in laws regarding taxes, resale price maintenance, and price discrimination.
- H. The susceptibility of the auto industry to the swings of the business cycle has been noted in various connections above but deserves listing as a distinct characteristic.
46. This contributed to the demand for government intervention to curb the ups and downs of the cycle.
 47. It contributed to the development of large-scale enterprise in the industry, for greater security, as in the tendency to develop “lines” of cars in various price ranges under one company; this course of growth posed questions regarding anti-trust law policy.
- II. The automobile in use
- A. Mobility-to-individual-order is the basic contribution that the automobile made to our ways of life.
48. It gave new or more flexible means for the commission of crimes against persons and property, extending the criminal’s area of operations, facilitating new emphases in types of crime (e.g., bootlegging, kidnapping), and aiding escape.

49. In response, government reorganized its policing machinery largely around the automobile, substituting squad cars for patrolmen and extending the area of police operations not only in cities but also through new types of county and state police activities.
50. It affected the extent and types of extra-legal sex relations through the privacy and mobility it afforded, probably reducing the importance of the professional prostitute and increasing that of the amateur, as well as having impact upon the family and church as regulators of sex relationships.
51. Autos themselves became prime objects of criminal activity: car thefts and traffic violations added up to impressive totals in the total bulk of offenses handled by the law.
52. The auto had diverse affects, hard to weigh in total net impact, upon the family as an instrument of social control that had relieved the law of much regulation; the auto made it easier for family members to flee or evade family control, but it also partly brought the family into a new common center of interest in the joint or shared use of the family car.
53. There was growth of the hotel and tourist cabin business, with resulting problems to law enforcement regarding the use of such places for criminal hideouts and unlawful sexual practices.
54. The auto made for readier communication of ideas and organized movements, with problems for law and order in the fields of public debate, political contest, labor organization, and sound-truck regulation.
55. The possibility of individual choices of times and occasions for moving about, in place of the discipline of regularly scheduled public transportation, created wholly novel problems of traffic control.
- *725 56. Encouragement of mass-spectacle entertainment (e.g., stadium baseball and football games) brought traffic and law-and-order problems.
57. New peak load problems arose for traffic and other law enforcement agencies from the introduction of new mass movements on holidays, weekends, and vacation periods.
58. Health problems grew out of the readier means for carrying human disease about.
59. Plant diseases could more easily be carried from one area to another; agricultural inspection services were needed.
60. The dangers of accidental injury to person and property through operation of motor cars grew to great proportions and created numerous problems for law: development of new doctrines in tort, agency, warranty, and damages, for example;

more complex highway construction and maintenance activities, emphasizing safety; expansion of public rescue and medical facilities and of administrative agencies for testing the safety of auto equipment, and licensing and inspecting drivers.

61. Law had to develop doctrine and agencies to deal with problems of obtaining jurisdiction over transient motorists, regarding civil and criminal liability attaching to their driving conduct while in a given area.
62. Motor vehicles brought severe competition to older means of transport, especially for short-haul passenger traffic, and caused or contributed to financial crises in railroad, street railway, and interurban railway companies, with consequent issues for law in insolvency proceedings and in public regulation of utilities.
63. The mobility of this form of property brought difficulties in adjusting property rights in autos, especially with reference to security titles in autos and the recording thereof.
64. Trucking of farm produce to market brought the need for public regulation of truckers and for marketing agencies that developed to handle this new business.
65. Trucking of mercantile goods from wholesaler to retailer, manufacturer to distributor, and party to subsidiary company brought need for regulation of private and contract carriers.
66. The auto widened the range and increased the varieties of the peddler or travelling salesman and extended the area of metropolitan competition with local merchants; local trade responded with pressures on law to license, if not in effect bar, such competition.
67. Farm producer cooperatives were encouraged by the readier ability of farmers to truck produce to central points; this growth brought demands for legal recognition and support, on the one hand, and on the other for regulation of cooperatives.
68. The hotel business, with new forms such as the tourist cabin grew, giving new importance to the law of innkeepers.
69. Discrimination on racial, national, or religious grounds, in serving the traveling public, became a greater problem; civil rights acts became more common, though the degree of their enforcement was not great.
70. The growth of large-scale enterprise was promoted by the greater ease with which a concern could blanket a sales area employing the motor fleet and the salesman's and serviceman's car; the auto thus made another contribution to the problems of anti-trust law policy.

- *726 71. Extensive distribution channels had to be developed,
71. By increasing the ability of customers to come to a large central market, decreasing the advantage of the neighborhood or local merchant, the auto again fostered large scale enterprise; this was a contributing point to the tensions that resulted in laws specially taxing or regulating chain stores or penalizing price discriminations that were thought to favor the big distributor or seller.
 72. Masses of people turned to out-of-doors for sport and recreation, and this brought a vast expansion of businesses serving these demands; along with this went problems of conservation policy and the creation of administrative agencies to enforce such policy, licensing of the taking of game, licensing of the sale of firearms, the need for interstate and international cooperation for the protection of game, the development of great public parks systems by local, state, and national governments, and new problems for local law enforcement created by the conduct of resorts catering to a large transient, pleasure-seeking population.
 73. There was a lessening of the effectiveness of social control outside the law, dependent on individuals' relatively fixed neighborhoods; home, factory, church, and school were no longer necessarily close to each other and no longer necessarily made a common pattern for the norms of conduct.
 74. The mobility given by the auto promoted centralization of government authority, or, demanding it, created tensions when the demand was not met; older, more geographically limited units of government became inadequate to deal with behavior that overleapt their boundaries; central agencies had a more effective reach through the more efficiently decentralized activity of their officials; citizens could more readily come to large scale agencies at central points where lower overhead costs from bigger operations could allow the citizen more efficient and varied services.
 75. A new unit of urban living—the metropolitan area—grew out of the new mobility; unmatched by older local government organization, it presented demands for services and protections that were met only in patchwork fashion in most places.
 76. The cities lost population to suburban areas and suffered depreciated central-area real estate values and loss of tax revenues, at the same time as they faced higher unit costs for public services in their “blighted” districts and demands for new investments to serve the new outlying parts.

77. The auto's mobility required new kinds of roads and their expansion on a great scale; new government activity was called for in planning, building, and maintaining roads, as well as in taxing to support the new road systems.
 78. A great addition to the expanding administrative arm of the government was made by the auto, in the necessity of agencies for its registration, licensing of drivers, administration of taxes on cars, trucks, gasoline, and various forms of business centering on motor vehicles, regulation of auto insurance in all forms, and building and care of highway systems.
- *727** B. The automobile has taken on important meaning for the individual life, in ways that bear upon the law's place in the society.
79. By providing emotional release, some sense of control, freedom, and escape, the auto probably promoted that minimum of general acceptance of the society on the part of people of small means that was required for an emotionally balanced community; thus, it somewhat offset the loss of status and independence that had come with a machine-based society.
 80. The auto also probably supplied some needed sense of status or self-respect in the individual, lessening the sense of class distinction, and giving him a badge of position and reassurance, to offset somewhat the loss of older status and sense of belonging that went with having job skills that counted and ties to a well-knit local community and neighborhood. Both this and the preceding point have particular applications to law, apart from their contribution to the emotional balance of the community. For example, both points help explain the force of the demand for cars that produced the installment sales and financing aspect of the industry; they explain, too, why in the depression relief officials in practice did not try to stop families on relief from owning and running a car.
 81. The auto, with its quickly responsive power, gave a dangerously effective means for extending, or expressing in exaggerated form, certain personality traits of its driver: his over-caution, or his need to show-off, for example, his care or heedlessness of others. This pressed the law to develop and enforce objective standards of conduct in the use of automobiles.
 82. The auto markedly contributed to the individual's sense of privacy and his ability—and increasingly felt right—to live free of many restrictions that family, church, and

neighborhood had imposed; the law thus had to carry added burdens of social control.

83. The auto helped to raise the general expectations, and hence demands, as to the standard of living; it helped thus to form an opinion that the law should act to preserve and advance that standard of living, as by taking positive action to curb the swings of the business cycle.
- C. The automobile became an instrument of everyday living, used for all purposes and on a vast scale; in a decade it ceased to be a toy or a luxury and became a necessity.
 84. This mass use brought traffic problems—not only police regulation, but also zoning, street and highway construction, and community planning.
 85. Parking became a problem of independent weight.
 86. Mass use of the auto brought great expansion of the administrative branch of government, for licensing, etc.
 87. Mass use made pressure for road programs; the law faced problems of constitutionality (use of funds for public or international improvements, diversion of gasoline tax funds to other highway uses, the proper spheres of national, state, and local government), and the need to develop the administrative offices to build and maintain highways and to provide regulations for their use (e.g., speed, regulation of weight and width of trucks, use of tractors, bridge loads).
- *728 88. Motor car uses provided a whole new field for government revenue, with accompanying growth in types of taxes, creation of administering authorities, and disputes over proper use of funds.
 89. It became necessary to provide for computing deductions for expenses of the business use of autos in income tax returns.
 90. Consideration had to be given to the liability of public agencies for torts of drivers of publicly owned motor vehicles.
 91. Problems of reciprocity in legal regulations had to be worked out between states, in view of the general use of motor vehicles for private and commercial interstate travel.
 92. There was new interest in resort to law to preserve the natural beauty along the roads from invasion by roadside advertising and business; both phenomena came from mass motoring.
 93. Conservation of natural resources in oil became a problem as mass use of the auto put unprecedented demands upon petroleum supplies; of secondary consequence, so far as the effects of the automobile are concerned, was the growth of price troubles in the petroleum industry, encouraging wasteful production practices, and making added pressure for government intervention.

94. There was need for wartime regulation of petroleum supplies, tires, parts, and replacement sales because of the extent to which the auto had become essential to the economy.
95. Mass use of the auto gave impetus to formation of new types of associations (notably motor clubs), which fostered adjustment and arbitration of accident disputes, offered insurance, and acted as pressure groups upon government in behalf of motorists, truckers, and common carriers.
96. The auto servicing business grew, especially garages and service stations, and brought problems of licensing, zoning, regulation for public safety, provision of garage owners liens, regulation of the quality and safety of motor fuel.
97. Licensing of dealers in new and used cars and regulation of their financing practices reflected the extent to which auto use had become a concern to masses of the people.
98. Regulation of rent-a-car companies reflected the place of the auto as a device of everyday need and use.
99. Regulation of common carriers by motor vehicle, including buses, trucks, and taxis, expressed the people's dependence upon motor cars.
100. Special regulations had to be made in connection with the use of school buses.
101. Driving schools were regulated.
102. Insurance regulation had to be extended to cover auto casualty insurance.
103. Railroad grade crossing elimination and the sharing of costs, therefor, between railroads and the public purse became an issue for the law.
104. Provisions for the registration of auto titles and legal doctrine governing transfers of title had to be made because of the importance of transactions in automobiles.
- *729 105. Accidents to persons and property growing out of the operation of autos grew to alarming proportions as the use of motor cars spread, and from this came a great diversity of demands upon law: licensing of drivers, testing of equipment, requirement of safe equipment (e.g., safety glass), stipulations for financial responsibility of drivers or owners, traffic regulation, adjustment of court structures and procedures to cope with the flood of litigation, the handling of out-of-court settlements (involving relations of lawyer and client, insured and insurer, injured party and insurance adjuster), and developments in legal doctrine regarding negligence, causation, joint tortfeasors, etc.

106. The great use of autos by nonowners, acting on behalf of or with consent of owners, both in business and in private affairs, enormously expanded the problems of vicarious liability: the law of master and servant, or principal and agent and bailor and bailee; the family car doctrine; the liability of the holder of a security title in an automobile for acts of its operator.
107. The amount of passenger-hauling by motor car created new problems of host-guest relationship, including not only the host's obligations to guests (including hitchhikers), but also the guest's obligations to share some responsibility for the way in which the car is run as by keeping some amount of lookout.
108. Regulation of hitch-hiking was required.
109. The applicability of search-and-seizure provisions of the Bill of Rights to automobiles had to be considered.
110. The status of the auto under debtors' exemption laws had to be worked out.
111. Liquor regulation and laws and doctrine pertaining to intoxication had to be applied to automobile cases (driver's license problems, liability under dramshop acts, definition of criminal and civil liability of the drunken driver).
112. Anti-noise regulation became of concern with the mass use of the automobile.
113. Labor relations in the trucking industry became of public concern and part of the business of government regulation of labor problems.
114. Old ties between people growing out of common and close location were lost or weakened as the mass use of the auto led people to live at considerable distances from their places of work, play, and worship; this figured in the weakening of forces of social control outside the law and demands upon the law for more intervention in affairs.
115. Use of the automobile and truck (and tractor) on farms had varied repercussions in law; it practically eliminated the horse trade as a subject for disputes at law; it reduced the stock of natural fertilizer, contributing to the development of the manufactured fertilizer industry, with pressures for regulation thereof; it reduced the farmer's self-sufficiency by making him buy fertilizer and gasoline and parts and greatly increased his production for commerce by taking acreage *730 out of production of feed for horses and mules and at the same time increasing the productivity of farms, and in these ways made the farmer more sensitive than ever to market fluctuations, thus breeding pressures for tariffs, government regulation of money, credit, mortgage foreclosures, over-production, and

the business cycle in general; the need to buy gasoline for farm trucks, autos, and tractors stimulated the cooperative movement; the added capital investment in motor vehicle equipment was a stimulus to larger farms, with effects therefore upon the need for farm credit and pressures to keep farm acreage together upon its devolution by will or support contract.

116. The automobile (after it was equipped with the self-starter) contributed to reducing women's housekeeping burdens, added to their independence and scope of activities, and contributed to making them a new source of pressure.
117. Development of the auto trailer for living purposes brought various problems in community adjustment: police regulation, school attendance, taxes, registration, sanitary regulations, and questions of voting residence, for example.
118. The auto was an important factor in the higher standard of living desired by twentieth-century Americans, which tended to lower the birth rate and contribute to the relative aging of the population, with attendant shifts in demands upon government for economic security; of the same tendency was the greater freedom from family ties to which the auto contributed, and which reduced the willingness and ability of children to take care of aged parents.
119. Regional and rural-urban differences in cultures have probably been reduced considerably, with consequent reductions in the differing demands made upon law; similarly, ethical standards of urban areas have been helped to permeate the country, affecting the temper of law enforcement and administration, (e.g., in the declining rural hostility toward the auto driver).

***731** This list could be expanded one hundred times by detailed breakdown of the general points included. Let us consider, for example, the number of penal offenses involving the automobile as these stood defined in the Illinois Revised Statutes of 1941. A liberal interpretation might make applicable to the automobile some early statutes, like those defining the rules of the road for "carriages"; but none of the specific automobile offenses in the 1941 list will be found in the Illinois Revised Statutes of 1901. About a third of them can be found in the Illinois Revised Statutes of 1921. The following list is limited to penal offenses directly relating to dealing in or operating motor vehicles; it does not, for example, include the substantial number of related provisions dealing with duties of public officers, special procedural points in the enforcement of automobile law, administrative sanctions (e.g., suspension or revocation of driver's

licenses), or regulation of the quality, safety, sale, and taxation of motor fuel.

Penal Offenses Growing out of Dealing in or Operation of Motor Vehicles, Illinois Revised Statutes, 1941

A. Registration of vehicles

1. Registration of motor vehicles is required.
2. License plates must be displayed, firmly affixed, kept at a specified level above ground, kept clean.
3. Covering or mutilating license plates is prohibited.
4. Special registration of cars in hands of makers or dealers is required; license plates so issued may not be used by others.
5. Use of fictitious registration number or license is penalized.
6. Upon sale of a car by a person not a maker or dealer, certain registration procedures must be observed.
7. Non-residents must register cars after certain period in state.
8. False description in registration application is penalized.
9. Persons in business of transporting motor vehicles not their own must register to obtain "in transit" license; they must not use such license plates for other purposes.

*732 B. Licensing of Drivers

10. "Chauffeurs" (persons operating cars for pay) must obtain licenses.
11. Non-resident "chauffeurs" must obtain licenses if they operate cars in the state for more than temporary periods.
12. "Chauffeur" must wear a badge.
13. Use of "chauffeur's" badge by other than the person to whom issued is penalized.
14. No one shall employ an unlicensed "chauffeur."
15. No one under 15 years of age shall operate a motor vehicle.
16. Operators other than "chauffeurs" must have licenses; a learner must have a license as such; no one may operate a car in violation of any restrictions stated in his license.
17. Display or possession of a fictitious, cancelled or otherwise legally inoperative driver's or "chauffeur's" license is forbidden.
18. No one shall lend to another or knowingly permit another's use of his driver's or "chauffeur's" license.
19. Use of a fictitious name or false statements in obtaining a driver's or "chauffeur's" license is penalized.
20. Display or representation of another's license to operate a car as one's own is forbidden.
21. No one shall authorize or knowingly permit his car to be driven by an unlicensed person.

22. To operate a car in violation of any licensing requirements, or after revocation or cancellation of a license, is an offense.
 23. To rent a car to an unlicensed driver, or to rent a car without examining and confirming the authenticity of the renter's license to drive is an offense; renters must keep a record of rentals.
 24. Persons under 21 years of age may not operate a common carrier motor vehicle or school bus.
 25. One whose license has been suspended must return such license or license plate to the Secretary of State.
- C. Maintenance of highways
26. Maximum gross loads, width, and length of vehicles, and length of trailers and loads, are specified.
 27. Vehicles with lugs, flanges, etc., may not use improved public highways.
 28. Motor vehicles in general must be equipped with rubber tires.
 29. Non-skid devices injurious to highways may not be used.
 30. To protect the edge of paved highways, heavy vehicles must use a temporary ramp to climb onto the highway.
 31. Speed of heavy vehicles and use of vehicles limited on certain highways when frost is leaving the ground.
 32. Driving over roads marked closed for construction, or injuring "detour" signs, is forbidden.
 33. Travel on highways recently "dragged" is limited.
 34. Trucks are obliged to stop and submit to weighing tests upon order of highway officers.
- D. Traffic regulation: the following conduct is dealt with:
35. Obedience to orders of traffic police.
 36. Obedience to traffic-control signal devices.
 37. Ban on unauthorized signs declaring or purporting to declare traffic regulations, or simulating these.
 - *733 38. Altering, defacing, or destroying traffic signs.
 39. Remaining at scene of accident, furnishing aid and information.
 40. Duty upon striking unattended vehicle.
 41. Duty upon striking fixtures upon a highway.
 42. Duty to report accidents to public authority.
 43. Driving if habitual users of drugs, or if drugged or intoxicated.
 44. Reckless driving.
 45. Speed.
 46. Driving to the right.
 47. Passing vehicles proceeding in opposite direction.
 48. Overtaking vehicles.
 49. Driving on one-way roadways and around traffic islands.

50. Driving on roads laned for traffic.
51. Following too closely.
52. Turning at intersections.
53. Turning on curve or crest of grade.
54. Starting parked vehicle.
55. Giving hand signals; methods.
56. Right of way: approaching or entering intersection.
57. Right of way: vehicle turning left at intersection.
58. Right of way: vehicle entering through-highway or stop-intersection.
59. Right of way: entering highway from private road or drive.
60. Right of way: approach of fire engines, etc.
61. Right of way: pedestrians at crosswalks.
62. Right of way: pedestrians at other than crosswalks.
63. Pedestrians must obey traffic control.
64. Ban on hitch-hiking in roadway.
65. Where pedestrian should walk on highways.
66. Right of way: passing streetcar.
67. Right of way: driving on streetcar tracks.
68. Right of way: driving through safety zone prohibited.
69. Obedience to railroad grade-crossing signals.
70. Certain vehicles must stop at all railroad grade crossings.
71. Limits on moving heavy equipment or vehicles over grade crossings.
72. Stopping at through highways.
73. Stopping before emerging from alley or private drive.
74. Parking: manner.
75. Parking: obedience to time limits.
76. Parking: forbidden at fourteen specified places (e.g., by fire hydrants).
77. Moving car into prohibited parked position by other than owner.
78. Parking: at right-hand curb, generally forbidden.
79. Unattended car must be left locked and properly parked.
80. Driving with load obscuring vision.
81. Riding in vehicle in position obscuring driver's vision.
82. Manner of driving through mountainous country.
83. Ban on coasting.
84. Ban on following fire apparatus.
85. Ban on crossing fire hose.
86. Putting glass, etc., in highway; obligation to remove.
87. Meeting or overtaking school bus.
88. Obstructing highway.
89. Maintenance of vehicle's equipment in safe condition.

90. Lamp requirements: number, position, placing on projecting loads.
- *734 91. Use of lamps: when must be lighted; on parked vehicles; dimming.
92. Brakes: required equipment and condition.
93. Horns and warning devices: required equipment and condition.
94. Mufflers required.
95. Rear-view mirrors required.
96. Unobstructed windshield with wipers required.
97. Tires: required equipment and condition.
98. Safety glass required.
99. Flares as required equipment on certain trucks; required use.
100. Required markings and fire extinguishers on explosives carriers.
101. Safety tests for trucks required: for operation; upon sale.
102. Spilling loads on highway.
103. Required couplings for truck trailers.
104. Owner forbidden to direct or knowingly permit operation of a motor vehicle in any way contrary to law.
105. Penalties on those attempting, aiding, or abetting violations of traffic laws.
106. Local government regulations of speed and use of motor vehicles in public parks and cemeteries.
- E. Carriers of passengers or freight (private, contract, and common carriers).
 107. Licenses required for operation as carriers of freight or passengers by motor vehicles, in different categories.
 108. Transfer of such carrier vehicles must be reported.
 109. Local government regulation of certain carrier operations is authorized.
 110. Carriers must pay mileage taxes; penalty for nonpayment or failure to make returns, or for making false returns.
 111. Misrepresentation in obtaining certificates for operation is penalized.
 112. Identification marks must be painted or affixed to truck.
 113. Carriers may not use bills of lading in form other than approved by public authority.
 114. Carriers may not use bills of sale in form other than approved by public authority.
 115. Carriers must comply with public authority's requirements for reports and forms of accounts.
 116. Hours of labor of truck drivers are regulated.

117. Violation of the Truck Act or of administrative regulations issued thereunder is made penal offense.
- F. Preventive regulations: preventing crimes, accidents, uncompensated losses in connection with operation of automobiles.
118. Garages must keep record of license and engine numbers of cars held for sale, rent, storage, or repair and must report altered engine numbers to public authority.
119. Suitable showing of financial responsibility, by bond or insurance, required of private, contract, and common carrier operators of motor vehicles.
120. No person may rent cars without carrying insurance or posting a bond, to meet liability arising out of their operation; bond or insurance must be kept in force.
121. Carrying firearms in car is forbidden when done with criminal intent or by a person of criminal associations.
122. No persons without official authorization may equip an automobile with a shortwave radio receiver.
- *735** G. Crimes against property in automobiles.
123. Use of a motor vehicle without owner's consent is forbidden.
124. Tampering with motor vehicles is forbidden.
125. Destruction or alteration of engine number is forbidden.
126. Possession or sale of motor vehicle with altered engine number or without any engine number is unlawful.
127. Destruction or alteration of special engine number assigned by secretary of state for an engine lacking a number is unlawful.
128. Stealing or receiving stolen motor vehicles is penalized.
129. Person coming into possession of unclaimed car must deliver it to sheriff or municipal officer.
130. No one shall operate a car without a certificate of title having been obtained therefor.
131. No one shall sell a car without obtaining cancellation of old certificate of title and issuance of new one.
132. Alteration or forgery of certificate of title is penalized.
133. False statements in application for certificate of title are penalized.
- H. Dealing in automobiles
134. Maker or dealer selling a car must give bill of sale to buyer.
135. No "chauffeur" or other person having the care of another motor vehicle shall take a bonus or discount for himself in connection with the purchase of supplies or doing of work thereon.
136. No person shall tender a bonus or discount to a "chauffeur" or other person in charge of another's car.

137. License is required for engaging in retail sale of new or used cars, or parts or accessories; no person shall represent that he is in such a business unless he is licensed; he must post his license; he must re-apply if the facts of his business change.

I. Miscellaneous

138. Holder of a license to sell used cars or parts or accessories must keep specified records of transactions.

139. Persons owning or operating motor vehicles used for delivery of goods must provide windshield to shelter driver.

140. Authorized limits of auto races may be set by local government officials.

141. Location and use of public garages and private garages for more than five vehicles may be regulated by cities and villages.

142. Persons engaged in business of providing automobile insurance must comply with stated forms.

143. Resident owners may be required by municipalities to submit cars to safety tests.

144. No one shall place the badge of the American Legion or its Women's Auxiliary upon an auto unless authorized under the rules of those organizations.

145. A person conducting a "community sale" involving goods delivered by motor vehicle must keep a record of the operator, make, and license number of the delivery vehicle.

146. No one shall take protected wild game from an auto or by use of its lights.

147. Transportation of unlawfully taken game by auto is forbidden.

148. No one shall transport or possess alcoholic liquor in any motor vehicle.

II. THE HAZARD TO LIFE AND PROPERTY

A. The Facts

*736 An increasing number of people were killed or hurt, and an increasing amount of property damaged, as the automobile came into mass use. In states that recorded such data, the death rate from automobile accidents rose from 1.8 per 100,000 population in 1910 to 10.4 in 1920, to 24.5 in 1930, fluctuated about this last figure in the next decade, and stood again at 24.5 in 1940. From 1923 through 1930, 201,000 persons died in accidents involving motor cars, from 1931 through 1940, 344,234. Though records were incomplete, non-fatal injuries in automobile accidents showed like increases—from about 150,000 persons in 1913, to 650,000 in 1923, to 1,150,000 in 1930 and never less than the last figure through the ensuing decade. It was hard to estimate the money loss from these accidents. Out of its experience, the National Safety Council suggested that

[a] community or state can roughly determine the cost of all its traffic accidents by this method: Multiply the number of deaths by \$45,000, which is the average cost of a death plus the cost of 35 injuries and 150 property damage accidents.

The Council, for example, put the calculable direct costs of automobile accidents in 1940 at \$1,600,000,000; half of this was property damage, \$570 million was wage loss, \$40 million was medical expense, and \$190 million was the overhead cost of insurance.

The automobile problem came to dominate the field of accidental personal injury. The National Safety Council pointed to this comparison among the different main causes of accidental deaths:

	1913	1930	1940
Motor Vehicles	5%	29%	33.3%
Falls	18%	18%	25%
Drowning	10%	8%	6%
Railroad	15%	7%	5%
Burns	11%	6%	8%

Experience did not show a rapid or satisfactory social adjustment to this new accident source. Between 1925 and 1940, *737 it is true, deaths per 100 million miles travelled showed a general tendency to decline. The figure was a little over 19 in 1925, went to 16 about 1932, climbed back to a lower peak of a little over 18 by 1934, but from then on fell steadily to 12.5 in 1940. Over these years people were increasing their motor vehicle mileage; thus, from an estimated 252 million vehicles in 1936, the

figure went to 302 million in 1940. Apparently, we were getting a growing amount of transportation service out of the motor vehicle at a relatively decreasing cost in life. But from other aspects, the accident costs did not appear to be in so encouraging a trend. Deaths per 10,000 registered motor cars, 1925–1940, went from about 11 in 1925 in a generally higher curve to a little above 14 in 1934, and then slanted down again to 11 in 1940. If the mileage curve suggested some improvement in the hazards of vehicles-in-use, the curve relative to registrations suggested at least less progress in terms of dangers from drivers-in-operation. And automobile accident deaths per 100,000 population over this 1925–1940 period, as we have seen, showed a generally upward curve. The human cost of motor vehicle use, relative to population, stood substantially higher at the end of the period.

B. Repairing the Damage

*738 How did the law respond to the growing hazard to life and property presented by the mass use of the automobile? By mid-twentieth-century, it had had the problem on its hands for about forty years, taking as the starting point in 1909, when Ford introduced “Model T.” The outstanding fact of that forty-year span was the law’s preoccupation with the problem of compensation for damage done, and, conversely, its relatively limited attention to prevention of damage. The next sub-section gives some details of the growth of preventative legal regulation in this field. Here let us note that not until the middle 1920s did many states begin the elementary preventive work of building a reasonable traffic code; not until the middle 1930s was any substantial attention turned to preventive effort; and as late as 1942, a careful survey, soberly declaring that “[t]he United States has the greatest and most costly automobile accident problem in the world,” concluded that “in spite of our spasmodic efforts to control it, we have not made much impression on it.”

This accident problem was a product of a machine society—of the interplay of many drivers and much driving, relatively inexpensive and dependable but also faster and heavier cars, and a vastly extended mileage of all-weather roads. But the law’s excessive concern with compensation, at the expense of prevention, was not a response natural to the thought and action of science or technology. We must not romanticize about the amount of forethought and planning that have gone into our scientific and technical progress; our technical means, particularly, have grown more by rule-of-thumb than according to long-range plan. Nonetheless, a self-conscious ideal and measure of success, in a society increasingly scientific and technical-minded, was to make things work. This meant, to take thought to cut costs, waste, friction, and interruptions in the flow of whatever was in process. Certainly, the great rise in the material standard

*739 of living that affected all ways of life in the United States after 1870 did not come because men gave their main attention to mopping up the debris of breakdowns. Hear a spokesman of this machine society: To Andrew Carnegie, “[t]he saving that the community makes is the root of wealth in any branch of material development . . . [A] young man’s labour or service to the community creates wealth just in proportion as his service is useful to the community, as it either saves or improves upon existing methods.”

Automobile accidents did not present an isolated instance. In other cases, the law lagged by at least a generation in applying to machine-age issues the natural machine-age emphasis on preventing trouble rather than on picking up the pieces after trouble had fallen. This so often happened that we may fairly call it a leading characteristic of the law’s reaction to the first fifty years of the technological advance after 1870. Chapter VII discussed certain positive effects of science and technology on the law. At this point we see a case where the law had positive effect, if not on science and technology themselves, at least on the course of their influence in human relations.

Consider, for example, industrial accidents. The law first marked the impact of this issue in the United States in 1841 and 1842, in the South Carolina and Massachusetts decisions that adopted the fellow servant rule. For some thirty years, nothing happened except the elaboration of common law rules dealing with recovery of damages for such injuries and the enactment of laws permitting recovery under these principles in cases of wrongful death. The next thirty years, after 1870, saw widespread legislation. But the overshadowing attention was given to employers’ liability laws, which simply tinkered with the elements of the suit for damages, limiting or abolishing the employer’s array of defenses (contributory negligence, assumption of risk, and the fellow servant rule). Starting in the late ’70s—by the most conservative count at least twenty years after the Northern United States had a full-grown problem of industrial working conditions on their hands—legislatures began the *740 general adoption of factory safety laws. For another thirty years these made a most faulty body of preventive regulation: (1) They were spotty and uncoordinated; they dealt with particular problems as these chanced to get attention, making a hodge-podge of laws about fire escapes, seats for women workers, safe scaffolds, engine-room speaking tubes, machine guards, toilets, overcrowded workshops. (2) They were timid or unthinking to the point of being innocuous, so far as concerned enforcement. They were usually content with making violation a misdemeanor. Enforcement thus must be by cumbersome criminal proceedings dependent on the initiative of a local prosecutor who was untrained in safety matters, busy with more familiar kinds of criminal cases, and not likely to discount the ill-will of local industry. By the ’80s, some states had factory inspectors, but they did not back them up with

enough staff or money or with effective administrative remedies. Seventy years after the industrial accident problem first marked the law and about forty years after it had become a first-rank problem in social and economic loss and human suffering, the real beginning was made on preventive regulation. Because of the scope of their relief, the first workmen's compensation systems, after 1911, immediately drew full attention to the problem of accident prevention in industry. The new industrial commissions worked as much at the framing and enforcement of systematic safety codes as they did at the administration of compensation.

A similar lag in the type of approach taken to problems of a technical society marked such diverse fields as consumer protection, crime, and domestic relations. From the 1870s on, developments in large-scale production, transportation, and cheap printed matter were building wider markets; at the same time, an increasing part of the population was becoming dependent upon money income and the exchange of money for needed goods and services. There were more buyers, and there was less face-to-face dealing of producer or distributor and buyer. In the face of these trends, for a generation the only consumer protection at law was by actions for damages—for negligence, for fraud and deceit, for breach of contract or of warranty. About the turn of the century, under pressure of farmer-producers, most states created administrative offices to police the adulteration of foodstuffs by processors. But the growth of markets had made the protection of consumers largely a national issue. We can measure the tardiness of the response in federal law by taking as a conservative dating point 1879, when began the first major effort to get legislation. It took until 1906 to win the uphill fight against states' rights, apathy, and commercial interest. The Food and Drug Act then put on the books was a major step toward adequate prevention of fraud and peril to consumers within its range. Even within its scope, however, it was of limited effectiveness, and it took another thirty-two years to get new strength in the law, by amendments of 1938. Outside of the food and drugs field, the consumer had little preventive protection against false or misleading advertising until the creation of the Federal Trade Commission in 1914; here, again, substantial force had yet to be added to the regulation as late as 1938.

Tensions peculiar to an urban-industrial society produced new types and reaches of crime—notably, juvenile delinquency at one extreme and business or “white collar” crimes at the other—and new economic and social strains upon marriage. The sketch of changes in court organization, in Chapter Four, dates the slow adoption of preventive-administrative technique alongside the conventional emphasis on penalty and reparation. From the baseline of 1870, we have to look to 1899 for the first real juvenile court experiment and to 1920 for its general adoption; as to business crime, we have already noted the example of the tardy provision

for preventive *742 regulation affecting pure food and drugs and false and misleading advertising. Special response in law to the pressure that urban life was thrusting on marriage came in the first domestic relations courts in 1910, 1911, and 1914. That there was an urgent public interest in urban housing, from the standpoint of juvenile delinquency and broken homes, did not become an idea of real force until the 1930s, through crowded states and cities had earlier tinkered with tenement safety and sanitary regulations. Planned use of education, consultation, and publicity, in place of conventional criminal prosecution or divorce or separation proceedings as means of handling social tensions did not bulk large in legal regulations until after 1910.

There was nothing inevitable about this extent of lag in the law's use of controls natural to society built on applied science and technology. There were some signs that the lag grew less. The airplane and the radio both took on commercial importance from about 1920. Both presented serious problems in the collision of private and public interests. The airplane offered new hazards to life and property. The radio early offered a different sort of traffic problem: many people wanted to use a number of channels that were limited by nature. Traditional legal doctrine offered analogies to handle each issue by the award of damages for invasion of private interest. But as early as the Air Commerce Act of 1926, Congress put reliance in preventive administrative regulation to deal with the air safety problem. For all the shortcomings of this beginning effort, it followed the rise of the problem with a speed unmatched in the history of industrial or automobile safety. And the first main strengthening regulation in this field came, not after a thirty- or forty-year lapse, but within twelve years, in the Civil Aeronautics Act of 1938. The pace of advancing preventive regulation in radio traffic control was similar: the first main step in the *743 Federal Radio Commission of 1927, the decisive strengthening legislation in the Communications Act of 1934.

Why should there have been the lag in preventive response to the automobile accident problem and these other troubles that seemed so naturally induced by a machine society? And what light might be cast on this question by the contrasting examples of air and radio regulation?

First, it is clear that emphasis upon repairing rather than preventing damage was inherent in the situation so long as the main job was left to the courts. The injunction could afford some advance protection to property interests. Otherwise, the traditional equipment of the courts fitted them only to grant and enforce compensation for damage done. The "judicial power" vested by constitutions was not a roving commission to anticipate trouble, but rather to act on the facts off trouble when parties brought them before the courts. The courts, moreover, lacked the funds, staff, experience, and time for special inquiry with which to do more. They could not search out the roots and the prevention of unexpected troubles that came with living under conditions set by technics. Yet in most states

as late as 1940, both in handling accident litigation or traffic violations, the courts still held the field, after nearly a generation of mass use of the motor car. This could not but give a set to thought and action in this field of law, preoccupying them with the main type of court-administered remedy. The example suggests why twentieth-century thinking began to emphasize early action in a trouble area by the more flexible and resourceful legislative and executive agencies. The price of continued judicial predominance was apt to be inertia or impotence in the development of more effective means to implement public policy.

*744 Plainly, however, this reliance on the courts was itself the mark of deeper influences. One of these was an idea of public policy that sprang from the abundance and promise of the machine. The Industrial Revolution had opened up infinite roads to material progress; society would move best by encouraging as many people as possible to explore these roads; the law should be cautious about adding to the inevitable risks of these explorations by the regulations and liabilities it set. Lord Abinger sensed this much of the tempter of the age when in Priestly v. Fowler (before the English Court of the Exchequer in 1837), he refused to hold an employer liable for injury done to one of his employees by a negligent fellow servant, because “[i]f the master be liable to the servant in this action, the principle of that liability will be found to carry us to an alarming extent.” Men were firm in their confidence that the machine plus free ingenuity in its use spelled progress. Let progress run; if some loss went with it, this would be relatively minor and should be made up after the event and within careful restrictions. This view had classic expression from another English judge, whose view had been sharpened by the vision of a more dramatic generation of industrial empire than Abinger had seen. Contract was the instrument the law put in men’s hands to work out this technical abundance. In 1875—appropriately enough, in a case that upheld a contract for the sale of future inventions—Sir George Jessel, Master of the Rolls, observed,

It must not be forgotten that you are not to extend arbitrarily those rules which say that a given contract is void as being against public policy, because if there is one thing which more than another public policy requires it is that men of full age and competent understanding shall have the utmost liberty of contracting and that their contracts when entered into freely and voluntarily shall be held sacred and shall be enforced by Courts of Justice. Therefore, you have this paramount public policy to consider—that you are not lightly to interfere with this freedom of contract.

Early automobile cases showed how taken-for-granted was *745 this confidence in the gifts of the machine. With striking unanimity, the courts ruled that, despite its noise, smoke, and hair-raising twenty-miles-an-hour speed, the automobile was as much entitled as more familiar vehicles to the use of the highways. Even more significant was their refusal to borrow the ready-to-hand common law precedent that made the owner of an inherently “dangerous instrument” liable regardless of fault for damage that it did when operated by a servant or when it broke bounds, or otherwise fulfilled its natural propensity. In the leading case, in 1905, the Indiana Supreme Court said that one could not be held guilty of negligence as a matter of law for using an automobile on the public highway:

Because novel and unusual in appearance, and for that reason likely to frighten horses unaccustomed to see them, is no reason for prohibiting their use. In all human activities the law keeps up with improvement and progress brought about by discovery and invention, and, in respect to highways, if the introduction of a new contrivance for transportation purposes, conducted with due care, is met with inconvenience and even accidental injury to those using ordinary modes, there can be no recovery, provided the contrivance is compatible with the general use and safety of the road.

The danger, said the courts, was not inherently in the automobile, but in how it was used. So spoke the Georgia Court of Appeals in an influential opinion of 1907:

It is insisted, in the argument, that automobiles are to be classed with ferocious animals, and that the law relating to the duty of the owners of such animals is to be applied. It is not the ferocity of automobiles that is to be feared, but the ferocity of those who drive them. Until human agency intervenes, they are usually harmless. While, by reason of the rate of pay allotted to judges in this State, few, if any, of them have ever owned one of these machines, yet some of them have occasionally ridden in them, thereby acquiring some knowledge of them; and we have, therefore, found out that there are times when these machines not only lack ferocity, but assume such an indisposition to go that it taxes the limits of human ingenuity to make them move at all. They are not to be classed with bad dogs, vicious bulls, evil-disposed mules, and the like.

The abundance that swelled from applied science and technics originally fostered this presumption in favor of let-things-alone. *746 At

least two other characteristics of the machine society delayed questioning of it.

First, important social consequences of technological change developed with great speed. From 1900 to 1920 the manufacturers' problem was to make enough cars to meet the demand. With the depression of 1921, capacity sales of new cars began to be possible only because users were getting accustomed to trading in an old for a new car; by 1922, there were three trade-ins to five new-car sales; by 1923 there was a trade-in with over three of every four new-car sales; and by 1929 the trade-in was the center of more than four of every five new-car sales. The used-car market made the auto available to hundreds of thousands of persons who could afford to spend only between \$100 and \$400 for a car. In about seven years it created a mass of car owners who by definition were financially irresponsible. The trend had climaxed long before there was any substantial attention to what it implied for the adequacy of the traditional suit for damages as a means of handling the accident problem.

In the second place, the general result of technological change was typically a material advance that was large and widespread. This made the accompanying costs seem smaller than they really were. Also, it tended to cover up the fact that the costs might fall with unfair or crushing burden on a few people. Let us recall only one symbolic aspect of the data summarized in the first section of this chapter: the people of the United States found the automobile so useful and satisfying that between 1916 and 1940, while total passenger movement by public carriers declined about 12 per cent, total private automobile transport increased from 18 to 476 billion passenger-miles, and it accounted for nine out of every ten passenger-miles of travel outside of cities and for three of every four passengers transported within urban areas. "On the whole, the mobility of the American people, measured in passenger-miles traveled, was ten times greater in 1940 than in 1921." On the other side of the ledger was an annually increasing toll *747 of deaths numbered in tens of thousands, injuries in hundreds of thousands, and money losses in hundreds of millions of dollars. All this made dry reading. And consciousness of it tended to be buried beneath the daily felt utility of the machine whose use was running up these costs, apparently for somebody else to pay. Naturally the general consciousness felt even less the private hardship and tragedy behind the statistics:

Male head. Fatal. Went behind in rent. Daughter trying to support self and mother, though not well. No savings. Compensation pending.

Woman. Sole support of three. Out six weeks. Debts to grocer, butcher, commercial loans. No compensation.

Child. 63 days in bed. 8 family members, no earners (father unemployed at time). Grocery bills owed. Borrowing from friends. No compensation.

Male head. Serious injury, probably permanent. Three months in hospital. Compensation more than covering expenses up to time of settlement, received 8 months after accident. Meanwhile family owed grocer, landlord, coal dealer, and drug store. Commercial loans at 12%.

The importance of these factors was underlined by the contrasting examples of legal regulation of air safety and radio traffic. There, we noted, the law turned toward a preventive emphasis with a speed quite unlike its laggard's preoccupation with awarding damages for industrial or automobile accidents. The technical facts set much more obvious terms for the public enjoyment of radio and the airplane. A listening public could learn fast and on a large scale that for want of radio traffic control they would get mainly a jumble of interfering stations on their new receiving sets. The airplane was conspicuous and conspicuously hovered over innocent heads. Its accidents had the drama of lone adventure and did not lose headline appeal by fast becoming mere incidents of a new mass form of travel; the timing as well as the technical facts of air travel development both favored earlier resort to preventive regulation. The pressure of the facts in the radio and airplane *748 cases thus was so strong that we cannot allow law-men clear credit for showing that they could learn by experience. Still, radio and air regulation plainly benefitted because they came after twenty years of pioneering work in preventive-administrative law.

Granted that for forty years the law attended mainly to the award of damages in handling automobile accidents, how did it develop within this frame of reference? Again, it was slow to adapt its thinking to the ways of life in a machine society or to the analytical methods of applied science or technology. What it did do was demonstrate that legal institutions and doctrines can have remarkably tough staying power against the weight of facts that press on them from outside.

The law met the rise of the automobile accident problem about 1910, with a policy deep-fixed since Mr. Chief Justice Shaw's opinion in Brown v. Kendall in 1850: to recover for injury unintentionally inflicted, plaintiff must show that defendant was at fault; and plaintiff must not be guilty of fault contributory to the injury. So rooted was this approach that in 1911, the New York Court of Appeals could regard the legislature's attempted substitution of a principle of liability without fault as unreasonable to the point of a violation of due process of law; hence it held unconstitutional the state's first workmen's compensation act.

The facts of automobile use made the “fault” principle in large measure irrelevant and certainly very hard to administer. The principle assumed that serious damage to another was unusual and the normal result of only a substantial departure from ordinary standards of care. But a percentage of cost was inherent where people made wide use of machines. The automobile was fast, powerful, and heavy. It responded quickly to the will or impulse of its driver. It magnified his personal characteristics in action, turned what otherwise would be a moment’s inattention, a *749 trifling indecision, a second’s daring, into tangible consequences heavy with loss. The mass use of the automobile multiplied the occasions on which such otherwise trivial lapses might have these results and the likelihood that all the fault would not be in one party to the accident. Moreover, almost any accident involving an automobile in motion happened very fast and with little or no warning.

The confidence with which courts early denied that the automobile was inherently a “dangerous instrumentality” marked not only their faith in the wisdom of maximum free action, but also their failure to foresee how technical fact and human nature would mix. Experience with the behavior of people and automobiles tardily pressed questions on the lawmen: (1) Was it just to decide how the loss of an automobile accident should be borne, according to a weighing of somebody’s (more likely, at least two people’s) split-second “fault,” which in most other circumstances would not have caused such disproportionate harm? It seemed especially harsh that “fault” of plaintiff should bar his recovery under the defense of contributory negligence. (2) Did it not turn the administration of justice largely into a game of chance to attempt, months or years after these split-second events, to piece together an appraisal of “fault” from partisan witnesses, or witnesses who at best were untrained observers of unanticipated happenings that they saw or heard in a flash of startled perception? In 1925 a distinguished judge of a busy, urban, first-instance court soberly appraised the automobile accident lawsuit. His testimony exemplified an almost unanimous current of opinion increasingly voiced by experienced trial lawyers and judges. Said Judge Marx:

In the average personal injury case, it is a pure gamble who will win. The result does not depend upon who was negligent because that question can not be accurately determined by anyone. The result may depend upon who has the most or the best witnesses, the ablest lawyers, or upon the bias of the judge or the jury, the “breaks of the trial,” the personal equation, the wealth or poverty of the parties and many other questions which have little or no connection with the issue of true fault. Every practicing lawyer knows that a negligence case is built upon shifting sands and that different juries, trial judges and appellate

courts, upon re-trials of the same case and upon the same evidence, reach varying and opposite results.

***750** In various ways, from the 1930s on the law in a backhanded fashion seemed to acknowledge the fault principle had dubious value in automobile cases. Experience showed that if a case got to the jury, the plaintiff was likely to win at least two out of three times. If it appeared that the plaintiff's conduct had violated some clear standard of care fixed in legal doctrine, the judge could keep the case from the jury, as by directing a verdict for defendant. As the accident problem mounted after 1910, courts in traditional common law fashion began to elaborate rules out of similarities they saw in the situations brought before them. The majority of states also followed the doctrine that violation of a penal statute was in itself negligence. Legislatures were adding to traffic codes, and the courts drew on these more fixed rules of careful conduct; since driver violations were involved in at least half of traffic accidents, judges thus had potentially broad opportunity to curb the jury's role. But the first enthusiasm for fixed, specific rules of drivers' care later slackened. At one stage, for example, applying the traffic codes, decisions announced firmly that the person approaching an intersection from the right had the right-of-way. Later cases so qualified the rule that it finally amounted only to one element to be weighed by the jury: the one having the right-of-way must not exercise it without regard to other facts—the width of the street, the number of cars crossing, the scope of the other driver's view, for example—which might lead a careful man to yield the right to avoid collision. The lines of other fixed rules were likewise blurred as experience taught the infinite variety of auto accidents and the almost inevitable degree of split-second fault involved on one or more sides. This sent more cases to that plaintiff's tribunal, the jury. The effect was as if the law recognized that in most cases the plaintiff should have some compensation.

***751** Both courts and legislatures began to chip away at the fault principle in another fashion by reducing the importance of the defense of contributory negligence. Largely out of cases involving automobiles, judges developed a material exception to this defense, in the "last clear chance" rule: where plaintiff negligently put himself in danger, defendant might yet be liable if he had a "last clear chance" to avoid injuring plaintiff and failed to use it; some states applied the rule even where defendant did not know of plaintiff's peril in time to avoid injuring him if defendant could have known, had he been using due care. The frequent explanation of this exception was that plaintiff's contributory negligence was not the "proximate cause" of the accident. By hypothesis, however, plaintiff's conduct had in fact contributed to the situation to such an extent that but for the exception he must be barred from all recovery; clearly the judges

were moulding causation theory to express a judgement against the harsh results of the common law.

Another inroad on contributory negligence was made in the handful of states—among which Wisconsin was outstanding—which adopted statutes providing that plaintiff's recovery should not be wholly barred by his fault but should be diminished by the amount of his fault contributed to the injury. The Wisconsin statute, like that of Mississippi, was passed after the automobile accident became a major item in personal injury lawsuits. Again, by decision in four jurisdictions and by statute in about one-fourth of the states, the common law rule barring contribution among joint tortfeasors was altered to allow contribution in tort actions where the person seeking it was not an intentional wrongdoer. This trend also reflected growing dissatisfaction with the equity of the fault principle. Whether it represented an effective or fair answer to that dissatisfaction was hard to say, pending more experience. Conceivably the change might go counter to the tendency, *752 hereafter noted, to put loss in the first instance on somebody who could best spread its cost around and so limit its damaging weight on any one person. For it seemed likely that the one most apt to seek contribution would be an insurance company that had had to pay a claim and that this would measurably reduce the social utility of insurance.

Back of the fault principle was a judgment that in case of unintentionally inflicted injury the loss should lie where it fell unless reason was shown for shifting it. No social good would be served merely by transferring loss from one person to another.

This made sense in a simple society where most human relations had effects limited in locality and in the number of people directly concerned. It made sense, too, because most people there had to bear their own losses; they had no way to pass them on or shift them, at least beyond the circle of family or close friends or relations.

But developments that stemmed from applied technology made this reasoning inapplicable to a large portion of personal injury cases, including those involving the automobile. Again, the law was tardy in recognizing the changed facts. Again, its response was in large part by clumsy indirection.

The machine and the business ways that grew up to explore the machine's possibilities had effects not limited in locality or in number of persons directly affected. Machines and the new business raised the mass standard of living. They did so only because they reached out to involve almost the whole people in a new way of life, as producers and consumers. Passenger automobile and commercial truck contributed to the rising standard of living by permitting a huge scale of economical transportation-to-individual-order. The community as a whole had to use the motor vehicle if cars were to be produced cheaply enough, and if it was to be

economical to build the necessary good roads and streets, to spread these benefits. In turn, the general community benefitted from the *753 cheaper and more flexible transportation of raw materials and more flexible transportation of raw materials and manufactures, from fresh-delivered foodstuffs and movies, from easier access to recreation and emergency life-saving services, and from an infinite number of other services.

The benefits of a machine like the automobile came because most people used it, directly or indirectly. Machine and human nature could be mingled on this scale only at cost of a predictable range of accident. Was it, then, just or efficient that individuals involved in a motor vehicle accident, should, one or the other or all, bear the whole direct cost of it?

The law began to whittle away at this problem chiefly by expanding the scope of vicarious liability—that is, by increasing the cases in which one person might have to pay the costs of another's conduct. The courts made the most direct expansion along this line by extending the master's liability for torts of his servant in automobile cases. Thus, where a servant, without authority, let another drive the car, the negligence of this unauthorized driver might be imputed to the master if the servant was in the car when the accident happened. Old decisions settled that the master was not liable where the servant took the vehicle on a frolic of his own. But, as the automobile became a familiar business instrument, the cases seemed to recognize that its ready mobility required some relaxation of this defense; the master must expect some deviations from the line of duty; hence he was likely to be held liable if, though on a detour, the servant was taking a general course necessary to do the master's business. The courts also devised doctrine to help the plaintiff prove his case. In 1869 the Massachusetts court, following the English rule, required the injured plaintiff to prove affirmatively that defendant owned the horse and wagon and hired the driver and that the driver was on defendant's business. In the same year the New York court adopted a different rule: when plaintiff *754 proved that defendant owned the horse and wagon, it would be presumed that it was being driven by his employee on his service until defendant showed evidence to the contrary. Only scattered cases followed the New York doctrine over the next generation. Then, in the years of the automobile, it sprang into steady growth. Twelve other jurisdictions followed it between 1904 and 1914. In the twenty years after 1914 when the automobile accident problem became acute, the New York rule became the express doctrine of twelve jurisdictions and was accepted in principle in twelve others. Only four states continued the rule that Massachusetts had taken in the horse and wagon century, and in Massachusetts itself the rule was changed by statute.

To hold the master liable was to put loss on one who was in a favorable position to pass it on as part of the price of goods and services rendered. Thus, loss might be spread among a broad enough circle that none would feel it a hardship.

Courts, juries, and legislatures tended to effect the same result, if in less obvious fashion, by their development of the law regarding casualty insurance. Insurance against loss or liability arising out of damage done by oneself, or others for whom one was legally responsible, was itself a product of the interplay of law and technology. It was first offered in the form of employer's liability insurance in the '80s. This came in close answer to employers' demands for protection against risks and recently enacted employer's liability laws that cut down their common law defenses in industrial accident suits. Insurance companies first feared to explore the unknown risks of automobile operations. They ventured in, however, about the turn of the century, and with a sharp burst of development in the early 1920s, automobile liability insurance grew by 1940 to be the largest liability insurance business written. *755 It then comprised over one-fifth of the total casualty insurance volume, ranking ahead of workmen's compensation insurance. Data were lacking for a precise statement of the percentage of the country's motor vehicles covered by insurance at different stages of this growth. One careful estimate indicated that 27.3 per cent of all private passengers and commercial motor vehicles registered in the United States in 1929 were insured for public liability. Excluding Massachusetts (which had a compulsory insurance law after 1927), five states had over 40 per cent of their private passenger cars in the insured category; in three-fourths of the states the percentage was under 25. Some increase in the percentage of insured vehicles went on apparently in many states in later years; thus, in Wisconsin, representatives of the state insurance department estimated that the percentage rose from about 28.5 per cent of family cars insured in 1935 to about 33 or 34 per cent insured in 1940.

Automobile casualty insurance originated not as a social device for the more just and efficient spreading of loss, but simply as privately contracted protection to the insured car owner. Early policies underlined this. The insurance company usually agreed not to pay the victim, but only to indemnify the insured if the latter suffered actual loss by having to pay the victim. Not only did the injured person have no right to sue the insurance company directly, but any legal liability under the policy depended on the insured's fulfilling all conditions in the policy and himself first discharging a legally established liability for the injury. The insurance company would not have to pay, for example, if the insured was unable to pay first or became insolvent or bankrupt before he paid anything, and the company would have a defense if the insured had committed fraud in applying for the insurance or had broken the terms of the policy.

By 1930, two lines of change had become apparent in this *756 situation. In a number of states, statutes made the insurance company directly liable under the insurance contract to the injured person who had prosecuted a claim to judgment. Moreover, they set terms for this direct

liability of insurer to judgment creditor, which could not be altered by any provision in the insurance contract; particularly, they said that the insurance company could not defend against the judgment creditor because the insured was bankrupt or for other reason had not discharged his liability and hence had not sustained a loss as the result of such liability.

Partly in response to this gathering pressure, partly in continuation of practices that the companies had learned were good business, the terms of the standard policy were changed throughout the country by the 1940s to the benefit of the accident victim. The standard policy became an agreement not merely to indemnify the insured, but (within the policy terms) to pay the insured's legally established liability; and it allowed the victim to sue the insurer directly once he had established the insured's liability by judgment or agreement of all parties including the insurer.

The law in some respects developed beyond the liberality of this new business practice. In a few states, statutes said that the insurer could not invoke against the victim defenses based on fraud or breach of condition by the insured in violation of terms of the policy. A common law development paralleled this. In the 1920s, court decisions made it very difficult for the insurance company to defeat liability under a policy on grounds of alleged illegal conduct (traffic violations, for example) by the insured or his servant in the absence of express provision in the insurance contract regarding that type of illegal conduct. A careful student of this development points out that it marked only the field of automobile casualty insurance. There it was "unavoidable in view of the multitude of statutes designating, as crimes, frequently recurring acts of employers and of automobile operators." In other areas of public liability insurance there was no detailed legislation comparable to the traffic codes; there, accordingly, the courts often repeated the old doctrine that no insurance policy could lawfully protect the insured against the civil consequences of conduct in violation of penal law.

By the 1930s the companies had learned to insert in auto policies clauses barring liability for unlawful conduct. But the courts now showed themselves diligent to keep the facts of a case outside the protective clause where they felt that the latter was so broad as to make the policy's protection a shadow. *757 Thus the decisions would strictly apply, in favor of the insurer, so specific a clause as one that barred recovery under the policy where the car was driven "by any person whatsoever either under the influence of liquor or drunk." But, confronted with sweeping provisions against the insurer's liability "while the car is being used, operated or engaged in violation of the law," the courts held that "lawfully operated" meant only operated with proper permission from the lawful owner; the clause did not bar recovery, for example, where an operator having such permission violated traffic rules, or lacked a driver's license, or even where he was drunk. The judges were mainly concerned, in these insurance contract cases, to protect the insured against overreaching by the

insurer. Nonetheless, the accident victim profited. And it seemed likely that the trend of the cases was bulwarked by increasing sympathy to the notion of spreading the burden of the auto accident loss. A related group of cases suggested that this readiness to spread loss grew more self-conscious. Where compulsory insurance was involved, the courts gave least favorable treatment of policy clauses against liability for “unlawful” conduct. This was true not only under the general compulsory insurance statutes of Massachusetts, but also in the states generally, where insurance was required of common carriers.

Thus far we have seen that the justice and utility of the fault principle as the basis for handling auto accident losses were put in question in two ways: (1) The fault principle ignored the substantial percentage of inevitable accident costs attending mass use of the automobile and ignored, too, the frequent disproportion between the degree of “fault” and the gravity of the consequences and the likelihood that fault of this type would be involved on both sides. The practical reflection of these facts was an increasing distrust of fixed rules of conduct, and as a result, an increasing readiness *758 to send cases to juries, which proved most likely to hold for the plaintiff. (2) The fault principle more or less assumed that the loss of an accident must be borne as a practical matter by one or the other of the persons immediately involved, and that in general this was fair, since their conduct was of main concern only to themselves. However fitting to the conditions of a simpler society, these assumptions did not take due account (a) of the opportunities the wider markets of business gave for spreading loss, (b) of the invention of public liability insurance, or (c) of the implications of the facts that only the community-wide use of new machines made possible their benefits to the individual, and that on the other hand the cumulative effect of many individuals’ handling of machines was a far ranging benefit to the community.

There was another aspect, however, to the unsatisfactory application of the fault principle to the automobile accident problem. (3) It was tacitly assumed that the law was dealing with financially responsible people and hence that, if a man were found guilty of fault which injured another, he could be forced to make money compensation therefor.

By the middle 1930s, there was a passenger car in the United States for at least two out of every three families and about one to every five persons. A 1935–1936 study showed that over 64 per cent of the families in the country then had incomes under \$1,500; over 90 per cent of families had incomes under \$3000. As of the same time, over 80 per cent of single individuals had incomes under \$1,500; over 96 per cent under \$3,000. The most reliable, comprehensive estimate available showed that in 1929, in three-fourths of the states, less than 25 per cent of registered private passenger cars were insured for public liability; in six states the percentage was between 25 and 40 per cent; in only five states (excluding

Massachusetts, with its compulsory insurance law) was the percentage over 40.

*759 These facts reflected, in mid-course, a problem that had been developing since Ford introduced Model T in 1909 and since the used-car market became a major element in the automobile industry in the early 1920s. Obviously a great many automobile owners or operators were people who would find it very difficult, if not impossible, to satisfy any substantial judgment for damages.

Judge-made law showed the first broad reactions to this. The courts began, in effect, to search for financially responsible defendants. This was undoubtedly a pressure behind the extension of the master's liability for the automobile torts of his servants. It explained more satisfactorily than any of the rationalizations advanced by the opinions, certain other extensions of vicarious liability. One who entrusted his car to another would be liable for his negligence in so doing if he knew or ought to have known that the driver was incompetent. Theoretically this liability rested on the owner's own negligence; in practice the opinions stressed the driver's negligence. The implication of vicarious liability was perhaps clearest in the cases that held that a renter of automobiles must make reasonable efforts to determine the competence of the prospective driver. In another marked extension of vicarious liability, about half the state courts adopted the "family car doctrine." Under this head, the owner of the family automobile was held liable in a broad range of situations for torts committed in the use of the car by any member of the family.

Starting mainly in the 1920s, a few states enacted statutes that made the owner liable in all cases where his car was driven with his consent. The courts, however, seemed to be somewhat taken aback by this breadth of change and generally construed the statutes so as to narrow the liability thereunder. Thus, the acts were held not to apply where owner and driver were in a master-servant relationship. And "owner" was held not to include a conditional vendor or chattel mortgage.

*760 The development of the automobile public liability insurance policy also entered into this phase of the general problem. As good business practice, and undoubtedly in large part to meet the owner's demand for protection against the widening reach of liability, the insurance companies began to write broader standard policies. These covered anyone operating the car with the owner's permission, as well as the insured and at least some members of his family while driving any other car than the family's.

Against the background of all these trends toward broader liability in auto accidents, what was the situation regarding compensation in fact received by victims? The only study that was both broad and careful was that conducted between 1929 and 1931, in cooperation with the Yale Law School, by a committee reporting to the Columbia University Council for Research in the Social Sciences. The committee drew its conclusions

largely from investigations that it caused to be made. These concerned what happened with respect to compensation to injured persons and their families in 8,849 cases of personal injury or death from motor vehicle accidents in ten localities in six states. The cases came from Philadelphia; New York; Terre Haute and Muncie, Indiana; San Francisco; San Mateo County, California; New Haven; rural Connecticut; and Boston and Worcester, Massachusetts. The case studies looked only to the facts of compensation and made no effort to determine legal liability or to gather information as to the negligence of the persons involved.

The Columbia Report studies showed a sharp line between those cases where the victim could look only to an uninsured person for recovery and those where he could seek compensation from an insured person. Where the accident caused temporary disability, some money was received in only 27 per cent of the uninsured cases, as compared with 86 per cent of the insured. The adequacy of the payment ran also on these lines: enough was received to cover medical, wage, and property losses in 69 per cent of the insured cases but in only 11 per cent of the uninsured. The study of closed permanent *761 disability cases showed that claimants received some money in 96 per cent of the insured cases and in only 21 per cent of the uninsured. In closed fatal cases, damages were paid in 88 per cent of insured and in only 17 per cent of uninsured. In both classes of the more serious cases, payments received were inadequate by a wide margin in both insured and uninsured cases, but particularly in the latter. In permanent disability cases, only partial losses (excluding, that is, permanent loss of earning power or health) were covered in 63 per cent of insured and in only five per cent of uninsured cases. Payments in insured fatal cases were found frequently not to cover the full economic loss, but were \$500 in 73 per cent of cases, while in the uninsured cases the amount paid was over \$500 in only five per cent of cases.

Other factors had to be considered to appraise the inadequacy of compensation received. Even though payment, and often substantial payment, was the rule in insured cases, there was likely to be substantial delay in its receipt. Compensation was received generally within two months in most minor injury cases, but in cases of serious injury or death, where there was likely to be more urgent need of compensation, half of the payments were not received in six months, and most of these were not received within a year. Claimants employed attorneys in about a third of the cases studied; usually retained on a contingent basis, the attorney took from 25 to 50 per cent of the gross recovery as his fee. Most of the families of accident victims were of small or moderate means, so that the inadequacy, delay, and recovery costs of compensation received meant severe economic hardship in many cases.

The Columbia Report presented only a sampling of cases. But the sample showed convincing uniformity in the general picture. And

contemporary legislative activity indicated widespread dissatisfaction over auto accident compensation. The most dramatic action was *762 taken by Massachusetts when, after agitation of the matter since 1919, it put into effect on January 1, 1927, a compulsory insurance act. The statute required each resident owner of a motor vehicle, as prerequisite to its registration, to give proof of financial responsibility with respect to personal injuries. The proof was usually a certificate of insurance. It must cover not only the owner but anyone who used it with the implied or express consent of the owner. The state set up no insurance fund of its own, but its insurance commissions regulated the rates of the insurance companies that chose to sell the required insurance, and an administrative board could force an insurer to take a risk which was found to have refused without adequate reason.

By one count, 334 bills were introduced over the years 1926–1939 in various states and in Congress to require automobile insurance of the ordinary car driver. But at mid-century point, only Massachusetts had taken the step. On the other hand, Massachusetts continued its law, despite continuing attacks on it. The Massachusetts statute was not without considerable effect throughout the country, however. It aroused the activity of organized automobilists, who expressed fear of the cost of compulsory insurance; it also stimulated the activity of the insurance companies, which, whatever their other objections, apparently were most concerned lest compulsory insurance lead either to more intensive rate regulation or to state insurance. Primarily under these auspices, there developed in the states a trend to enact “financial responsibility” laws. Beginning with a Connecticut act of 1925, the movement grew fast. By 1932, eighteen states had some version of the new type of law; by 1936, the total included twenty-seven states, the District of Columbia, and Hawaii; by 1945, only seven states had no motor vehicle financial responsibility law of any sort.

These laws varied greatly in detail but fell into two main categories. The earlier type, which began with the 1925 Connecticut act, did not affect the motorist until (1) a judgment was obtained *763 against him arising out of an accident, and he failed to pay the judgment, or (2) he was convicted of a criminal offense arising out of the operation of an automobile. Thereupon, (a) under some of the statutes, he must provide proof of financial responsibility for the future; (b) under others, his driving privileges and motor vehicle registration were suspended until satisfaction of the judgment; and (c) a few of the acts combined these two features. These early statutes proved of little effect. If the offender were obviously of small means or insolvent, the victim would not go to the trouble and cost of suing him, merely to deprive him of his right to drive. Thus, the offender’s lack of financial responsibility in effect protected him from operation of a statute designed to bar him from the road because of his financial irresponsibility.

A second approach began with a New Hampshire statute of 1937. This type of law was reshaped and became the model sponsored by the American Automobile Association, the Association of Casualty and Surety Executives, and the National Conference on Street and Highway Safety; the last was a voluntary organization of groups interested in highway safety and was formed under the direction of President Hoover. The New Hampshire type of financial responsibility law (1) required proof of financial responsibility for the future immediately upon the occurrence of an accident of record, instead of after failure to pay a judgment; and (2) required each owner or operator involved to deposit security to cover damages arising out of the accident, on pain of losing his motor vehicle registration and his driving privilege. The “model bill” sponsored by interested groups was content with the security provision alone, on the theory that compliance with it would be sufficiently irksome to induce the motorist who had run afoul of the regulation to insure against future trouble. The New Hampshire-type regulation thus did not require the victim to bring a fruitless civil action against a financially irresponsible offender in order to rule the latter off the road, and it added pressure for payment for the injury already inflicted. Its practical effect, however, depended on more complete and accurate accident reporting than had so far been known in United States traffic law enforcement.

*764 Viewed as measures to increase the likelihood of compensation to accident victims, the early financial responsibility laws were quite plainly a failure; the vigor of the claims made on behalf of the later, New Hampshire-type statute in effect conceded the point. More than ten years after the appearance of the new type of law, no planned, objective study existed to measure its effect. Some data indicated at least a temporary increase in the number of insured motor vehicles operated in some states after their adoption of the new type of law. Apparently, no study had been made of the effect on payment of compensation for past accidents. One point seemed clear: the new type of law emphasized that there was an inescapable relation between prevention and compensation. The effectiveness of the new financial responsibility laws depended on the adequacy of accident reports, and this in turn was a phase of the administrative-preventive approach to the automobile traffic problem.

The Massachusetts compulsory automobile insurance act that became operative in 1927 was neither a safety nor a compensation measure, but simply the most drastic form of financial responsibility law. The act achieved its purpose of making Massachusetts resident-owners of motor cars financially responsible. The act excepted some defendants in accident cases, notably persons with cars not registered in the state, and there were some people who operated cars in the state without insurance, in violation of the law. In 1932 the Columbia Report found that these exceptions were not substantial: the ratio of non-resident cars to all cars in accidents was

considerably below 10 per cent, while the ratio of uninsured resident cars was considerably below 1 per cent.

Since the Columbia study found that, throughout the country, the frequency and liberality of compensation depended on the proportion of insured defendants, it was natural to find that in Massachusetts payments were more frequent and more liberal than in any other locality studied. *765 For cases involving claims against both insured and uninsured motorists, the Columbia Report presented these striking comparisons.

Percentage of Closed Cases Receiving Compensation

	Temporary	Permanent	Fatal	% of Loss Covered in Paid Temporary Disability Cases
Boston	81%	94%	92%	89%
Worcester	87%	100%	80%	89%
Philadelphia	64%	71%	56%	75%
New York	66%	52%	41%	66%
New Haven	72%	71%	55%	65%
Rural Connecticut	68%	77%	57%	64%
Terre Haute	48%	53%	43%	61%
Muncie	43%	44%	22%	55%
San Francisco	62%	68%	60%	72%
San Mateo County		71%	44%	

Sufficient data were not available to permit generalization about the adequacy of recovery in permanent and fatal injury cases, but indications were that, as elsewhere in the country, these losses were not so well covered as in the less serious cases. As to delay in payment, little difference was found between insurance company practices in Massachusetts and elsewhere.

Argument over the Massachusetts act developed not with respect to its success in enforcing insurance coverage within its scope, but on subsidiary points. Some contentions to the contrary notwithstanding, there was no evidence that compulsory insurance increased the number of accidents in Massachusetts. After 1927 Massachusetts had an increase in fatalities from automobile accidents, but this was true in those years generally throughout the country; the Massachusetts record was better than some, worse than others, and better than that of the country as a whole.

Most arguments centered on various aspects of the cost experienced under the Massachusetts act. One point seemed clear: political considerations worked toward low premiums. Though the act declared that adequate rates should be set, the rates were not in fact adequate, and over the twelve-year period including 1939, one disinterested observer found that available losses for all carriers *766 exceeded the provision made for them in the rates by 8 per cent. The stock companies did not earn enough on this automobile business to pay dividends; mutuals, on the other hand, largely through economies in expenses, paid dividends under the rates set by law. Premium rates climbed in Massachusetts after 1927, but so did they in many other parts of the country, and in some parts more steeply. The average loss cost under the Massachusetts statutory coverage increased in about the same ratio as that of full coverage in other states; insofar as it increased somewhat more, the difference was not large enough to show clearly that the 1927 statute was responsible. Massachusetts showed a relatively very great increase in claim frequency (over the years 1927–1933, an increase of 38.9 per cent as compared with a 12.5 per cent increase in other states), but the average cost per claim decreased, so that the effect on average cost per car was not as great as might have been expected (average cost per claim decreased 13.9 per cent in Massachusetts, 1929–1933, while it increased 8.7 per cent in other states). There was no reliable evidence as to the extent to which greater claim frequency in Massachusetts was due to fraud. Undoubtedly, the general knowledge of the availability of insurance would in itself account for the filing of many good faith claims that would otherwise not be made.

One type of compulsory automobile liability insurance became common throughout the country, and without dispute. New York and Wisconsin pioneered before 1920 in compulsory liability insurance for motor carriers. By 1920 seven states, by 1928 forty states, and by 1936 forty-six states required motor vehicles that were common carriers of passengers to be covered by public liability insurance of some extent, and most of the states adopted a like requirement of property insurance. In 1935 Congress provided that the Interstate Commerce Commission should require liability insurance of interstate motor carriers. Municipal ordinances commonly required insurance of local carriers, especially taxis and buses.

Financial responsibility laws, from the least to the most effective, all worked within the framework of the principle that liability for the costs of an automobile accident must rest on a showing of fault. In themselves they did not reduce the gamble of a lawsuit over the fault issue, as this was pictured by Judge Marx. They did not meet the issues of justice or efficiency that we have noted—the inevitability of some percentage of accidents, the disproportions to consequences of small failures of conduct, the social benefit from general use of the automobile.

***767** The financial responsibility laws, moreover, did not seem to reduce the serious pressures that automobile accident matters put on the institutions of the law. Auto accident litigation brought a serious problem of the fraudulent claim, or the claim fraudulently inflated or supported by perjury. Especially in the big cities, it brought the related problem of the ambulance chaser, who might be a lawyer or associated with a lawyer. Investigations in the early 1930s in Boston, New York, and Atlanta, for example, produced evidence that the pursuit of false claims had been organized into a business.

Fraud was the more dramatic problem, but the evidence suggested that the community suffered far greater losses through the congestion of court calendars to which auto accident cases greatly contributed after the 1920s. In 1925 Judge Marx noted that it took one to five years to win through judgment in auto accident suits. In 1932 the Columbia Report noted that in large cities, motor vehicle accident trials formed a considerable proportion of all civil trials, ranging from a fifth to one-half or more, and that such lawsuits lasted from one to three years or more; delay was not serious in smaller communities. A large increase in civil cases filed marked the years immediately following the effective date of the Massachusetts compulsory insurance act, but civil suits had been increasing steadily before that date, and there is no reliable measure of the extent to which the new system actually contributed to the trend. Increased litigation would seem a natural result of assuring almost every accident victim a financially responsible defendant. Unless checked, more court congestions would follow.

Estimates for the Columbia Report put the direct daily cost to the public of a court trial of an auto accident case from \$108 and \$120 in two medium-sized-city counties of Indiana to about \$200 in New York County and \$232 in Philadelphia. In comparison with these costs, many verdicts were for no more than \$500 or, at most, \$1,000. The Judicial Council of Massachusetts estimated the cost of jury trial in that state in 1931 at between \$400 and \$500 per day.

***768** There were serious problems surrounding the development of automobile accident litigation. But at least from the 1930s, what went on in litigation did not represent the fundamental trend. We noted in the last section of Chapter Four that only a minor percentage of lawsuits filed ever reached disposition by the court on the merits. Recall one significant measure of this trend, as it was noted by Clark and Shulman in their study of law administration in Connecticut. Of 4,098 automobile negligence cases terminated in the Superior Court at New Haven in the years 1919–1932, 3,436, or 83.8 per cent, did not go to judgment; they were ended before or during trial by discontinuance, withdrawal, stipulation, or default. Of the automobile negligence cases that went to judgment there, 75 per cent resulted in judgment for plaintiff. The inference from this and

like samplings was that the main function of the machinery of the lawsuit was to exert pressure for out-of-court settlements.

The Columbia Report in 1932 found that, where there was insurance, some payment was made in 86 per cent of temporary disability cases, in 96 per cent of permanent disability cases, and in 88 per cent of fatal cases. The percentages were not substantially different in Massachusetts, under the compulsory insurance law. Of course, as we have seen, the data also showed the serious limitation, that compensation was both less adequate and more tardy in proportion to the seriousness of the injury.

The preponderance of out-of-court disposition of auto accident suits, and the high percentage of cases involving insurance where some payment was made, evidenced a practice quite different from the theory of liability-based-on-fault. It is hard to prove objectively that “fault” exists; fault was undetermined, for example, in 43.8 per cent of District of Columbia auto accidents studied over the years 1923–1925. Strict application of the contributory negligence *769 defense would alone reduce the percentage of recoveries substantially below the percentage of cases involving insurance where some payment was made. A Connecticut estimate of 1923 attributed 43 per cent of fatal accidents and 50 per cent of serious personal injury accidents to the fault of other persons than the automobile driver. In 1924 the Committee on Insurance of the National Conference on Street and Highway Safety found that a careless driver was responsible for 32.7 per cent of auto accidents, a careless pedestrian for 29.3 per cent of auto accidents, and that in 18.7 per cent both parties were responsible. “The conclusion from all these facts,” a leading torts authority commented in 1948, was “that, so far as the making of some payment goes, there is a closer approach to absolute liability in practice than in theory. In other words, wherever there is insurance there is to this extent a closer approximation to the objectives of social insurance in fact than the doctrines of tort law would lead one to suppose.”

To this result converged the several trends in tort law that we noted as accompanying the expanded use of the automobile: the retreat from fixed rules of conduct and hence the tendency for more cases to go to juries, whose verdicts were preponderantly for plaintiffs; the extension of vicarious liability, in the master-servant cases, the family-car doctrine, and other extensions of owner liability; and the legal pressures for broader insurance coverage. Insofar as the tendency to expanded legal liability promoted the rise of the casualty insurance business, the law contributed indirectly to growth of powerful business pressures toward payment of accident losses wholly or partly without determination of fault. Any claim against an insured person meant for the insurer some cost for handling it, regardless of its disposition. Often, therefore, it might be economical to settle for some payment that would save on this handling cost. The gamble

involved in going to trial gave a substantial settlement value to many doubtful cases.

*770 People took out insurance to relieve themselves of the hazard and worry of contesting claims and defending lawsuits; it was good sales policy for an insurer to build a reputation for speedy settlement with a minimum of distraction and litigation. This way of doing business meant, too, that the insurer need tie up less funds in reserves to pay possible judgments.

By round-about ways, practice thus arrived at the payment of a material part of automobile accident losses with little or no regard to the prior determination of "fault" on which theory insisted. It was natural, then, to ask: Why not reject the fault principle altogether as the theoretical basis for recovery?

Even before 1920, the workmen's compensation system suggested to able lawyers the application of the same approach to distribution of automobile accident losses. In 1932, after the most exhaustive examination of the problem so far made, a distinguished Committee to Study Compensation for Automobile Accidents reported to the Columbia University Council for Research in the Social Sciences that some kind of compensation plan should be adopted for mobile accident cases.

The Columbia Report outlined a plan that would put on motor vehicle owners a limited, exclusive liability, without regard to fault, for personal injury or death caused by the operation of their motor vehicles to anyone who did not willfully bring injury to himself or another. The owner would be primarily liable, if, at the time of the accident, the car was driven by him or by another with his consent. The liability would be secured by requiring that every registered motor vehicle be covered by compensation insurance. Benefits would be based on analogies under workmen's compensation. The plan would be administered by a special board set up for the purpose, helped by such referees and clerks as might be needed, and operating under procedure like that in workmen's compensation cases.

*771 In some ways the workmen's compensation analogy was perhaps superficial. When an accident happened in an employment situation, in the nature of the case there was at hand a ready means to spread the loss, through business channels, to buyers of the goods or services. Obviously, this was not matched by anything in the situation of many automobile accidents. But this did not raise an impossible objection. If it were thought unfair that automobile owners as a class should in the first instance bear the whole cost, part of the costs of a compensation system could be met out of general tax money. Such a contribution would reflect the communitywide benefits of the mass use of the motor car.

Even so, a compensation plan would have some limits, designed to tie together the costs and benefits of automobile use. But how could limits be set without inviting as much litigation over their application as was produced by lawsuits of "fault"? If compensation were to be allowed

wherever operation of a motor car “caused” injury or death, would not we have all of our lawsuits and disputes still with us under the guise of arguments over causation? The point undeniably posted a very practical issue for the draftsman. But its worst difficulties would come only from trying to cover every case. If, for example, the compensation plan were limited to injuries caused by collision, it would include the bulk or ordinary cases. The rest must continue under the old law, but with experience the scope of the compensation plan might be extended.

Fraud was not an unknown problem, of course, under workmen’s compensation. The danger there was the less, however, because the cases arose within a defined pattern of employer-employee relations; there were generally other witnesses to the accident than those immediately involved; the job relation created important pressures toward good faith, on the part of the employee who wanted a job to come back *772 to and on the part of the employer who wanted good working relations; medical care was likely to be the employer’s doctor. But often only the chance-met parties to an auto accident were witnesses to it, and between them was no prior and continuing relation to induce good faith or cooperation. On the other hand, the gamble in auto accident litigation was in itself a strong inducement to sharp practice on all sides—by the victim who hoped for high takings, by an insurer mainly concerned to hold down payments. Modest but assured recovery under a compensation schedule should reduce prices that tempted to overreaching and perjury. In return for assured compensation, moreover, the victim might fairly be required to submit to impartial medical examination at intervals. In any case, one could not realistically weigh the situation as if it involved exchanging a satisfactory system for an untried one that carried heavy risk of fraud. The existing system caused great hardship to many innocent people and was marked by much sharp dealing on all sides.

The proposed change was novel enough so that it was easy to raise against it an abstract catalog of administrative difficulties. It was significant of the trend in thinking about law administration that discussion went mostly to possible administrative problems and not to the question of the justice and wisdom of abandoning the theoretical test of “fault” as the basis of liability. Applied science and technology had taught people to think matter-of-factly about problems they once discussed only in moral terms; particularly they had taught people to analyze costs and to trace where they fell and to what activities they could in fact be attributed; and they have taught familiarity with the insurance principle of spreading loss. They had taught, also, faith in experiment and in what could be done to direct human affairs. It seemed only a question of time before the abstract administrative objections to an automobile accident *773 plan would be tested in the only practical way, by putting some sort of plan into action and observing it.

C. Preventing the Damage

From 1870–1910, when the law began to reflect problems peculiar to an urban-industrial way of life, the typical first reaction to a new question was to add a section to the penal code. The legislature defined certain conduct as criminal, provided a penalty, and hoped that this would deter the possible wrongdoer or even direct his conduct into other channels. This was preventive law.

By 1910, thinking was turning toward the more flexible resources of the administrative process in other fields—the regulation of foods and drugs, of public utility operations, of industrial accidents. But from the Ford Model T of 1909, it took at least until 1924 to introduce into automobile regulation the search for a more effective approach than through the criminal law; 1924 is marked by the National Conference on Street and Highway Safety.

The horse-and-wagon era developed some elementary rules of the road that the automobile age inherited. Such, for example, was the rule that vehicles should be driven on the right side of the highway and should keep to the right except when passing other vehicles moving in the same direction; such, also, was the rule that of two vehicles approaching an intersection at the same time, the one on the left must yield right-of-way to the one on the right. A measure of the tardy attention to automobile traffic codes was the fact that as late as 1940, such uniformity as there was over the United States with respect to rules of the road was primarily in these elementary requirements laid down before the automobile was known.

*774 The Illinois statute books offer a measure of the movement in this field, in a state that faced the problems of both large-scale urban and rural automobile traffic. The development of the traffic code paralleled the general development of automobile legislation in Illinois, as that was outlined in the first section of this chapter. Thus, the Illinois Revised Statutes of 1901 found no need to specify particular rules for automobile drivers; they contained some general, elementary rules of the road that had been drawn to govern horse-drawn traffic. In 1903, however, the legislature passed a law that set a general 15-mile-an-hour speed limit for automobiles and required the automobile driver to come to a full stop whenever it appeared that his vehicle was frightening a horse ridden or driven on the highway. In 1905 the Illinois court held that the legislature could, consistent with due process of law, single out the automobile for particular traffic regulation, in view of the special dangers of its speed. By 1921 the Illinois Revised Statutes contained about twenty-five sections that might be termed automobile traffic regulations. These included a section that made applicable to automobiles the chapter of the statutes stating the rules of the road, as these had been framed in the horse-and-wagon years. The 1921 traffic provisions were scattered through a chapter which

brought together a miscellany of automobile regulations. The absence of provisions for such matters as parking or protected through-routes was perhaps not surprising in view of the current stage of automobile use. It did suggest, however, the lack of a plan for the future and *775 the willingness to leave important matters to the unguided discretion of local authorities. The Illinois Revised Statutes of 1941, in contrast, showed an order and breadth in automobile traffic regulations that reflected the state's adoption in 1935 of the uniform act. The number of specific traffic provisions was about treble that in the 1921 acts. In general, the expansion represented not so much the addition of new heads as the more detailed provision for topics that had had limited treatment before. For example, the earlier legislation had made some general requirements as to adequate lights, brakes, tires, and horn; the legislation of twenty years later added details on these familiar items (lights on projected loads, for example, or use of lighted signal devices for stopping and turning) and made new specifications (for example, rear-view mirrors, windshield wipers and an unobstructed windshield, safety glass, flares for trucks, required couplings for trailers).

Lack of plan was apparent on the face of traffic code development. The important item of speed regulation is an example. In 1901, with simple flexibility, New York provided that speed must not be more than was "reasonable and proper." As the automobile became more of a highway problem, the demand for greater control was not satisfied with such a broad standard. There is no evidence that legislatures made any investigations or tests to fix more precise rules, but beginning with Massachusetts and New York legislations of 1902, they widely adopted absolute speed limits. This penalized speed in itself and encouraged a rigid enforcement that created bad public relations and was more and more obviously out of line with the safe usefulness of improved cars and highways. Following a Massachusetts revision of 1906, therefore, legislatures again changed their course: the new type of regulation, which prevailed through the 1930s, specified rates of speed but declared that it was only prima facie unlawful to exceed such speeds. In practice these provisions were almost as inflexible as the regulations they superseded, because of the practical difficulty of rebutting the prima facie case. Movement came full circle, to the broad standard of the New York act of 1901, when Montana in 1917 and Connecticut in 1928 led the way back to the test of speed "reasonable and proper" in the circumstances. This was the basic test written into the Uniform Act Regulating Traffic on Highways as this was recommended to the states in 1930 by the National Conference on Street and Highway Safety. Only at this date can it be said that expert investigation and careful thought had finally entered into the determination of a policy on speed regulation.

Movement toward a more comprehensive traffic code was also very uneven. For example, very tardy treatment was given to the relative rights and duties of pedestrian and motorist. The pedestrian was here before the motor car, and the law, with scant evidence of deliberation, followed the judgment that he who is prior in time has the prior equity. Few laws limited pedestrian rights, compared with the increasing limits put on motorists; jay-walking, for example, was not uniformly declared a traffic offense. So important a matter as the relative right-of-way of pedestrian and motor car at intersections was uncertain in many jurisdictions. As late as 1942, a leading survey could comment that “[a]t present, in the case of injury to a pedestrian, the law tends to protect him and to punish the motorist, regardless of how dangerous the pedestrian’s actions may have been.”

Despite the limitations, there was progress in defining the content of an adequate traffic code. By about mid-century the major problems were those of getting this code into the statute books. In 1938 a United States Public Road Administration survey concluded that state motor vehicle laws showed “chaotic nonuniformity.” In part the lack of uniformity was as between the states. Thus, in 1938, in seventeen states, when a driver put out his left hand horizontally from the side of the car, this was stated to be a signal that he intended to stop or suddenly to decrease speed; but twenty-seven states declared it to be a signal for a left turn, and fourteen said that it signaled a right turn; in twelve of the states this signal might be used to show that the driver intended to do any of these things. In part the lack of uniformity was as between state law and the ordinances of cities and towns within the state.

*776 The automobile had great mobility and range, and its mass use created similar traffic problems wherever it went. The lack of uniformity in traffic law was, therefore, an especially marked case where the law lagged behind the logic of technics. The lag was considerable. In 1923 the National Conference of Commissioners on Uniform State Laws voted to prepare a uniform traffic act. In 1924, on call of Secretary of Commerce Hoover, representatives of government, automobile associations, insurance companies, and interested industries met as the National Conference on Street and Highway Safety. In conjunction, in 1926 the two bodies promulgated a Uniform Vehicle Code, which included (1) a Motor Vehicle Registration Act, (2) a Motor Vehicle Anti-Theft Act, (3) a Motor Vehicle Operators’ and Chauffeurs’ License Act, and (4) an Act Regulating Traffic on Highways. By 1943 only eleven states had adopted the registration act, in whole or with modifications; only nine had similarly adopted the anti-theft act, eighteen the driver’s license act, and twenty-six the traffic regulation act. In 1943 the acts were withdrawn from the program of the National Conference of Commissioners on Uniform State Laws, on the ground that, as models, they had been outdated by changed events and codes suggested by other agencies. The National Conference on Street and Highway Safety also promulgated model traffic ordinances

as a guide to cities and towns, and a number of localities adopted these models. After due tribute was paid, up to mid-century the progress toward uniformity of traffic laws was not great.

Other technical deficiencies added up to as great a defect as the lack of uniformity. State traffic codes were rarely available to the public in a form that the public could understand or was likely to read. Municipal traffic laws were rarely available to the public in any form at all. Traffic regulations were often not well-contrived to achieve their purpose; Warren noted that some of the earlier *777 stop-street laws gave no legal opportunity for cross traffic to get through and pointed to “reckless driving” statutes so worded that courts interpreted to require proof that defendant intended to drive recklessly. After a broad survey of motor vehicle codes in 1942, Warren summarized the situation in very critical terms: “The inspection of traffic ordinances in twelve cities and of motor vehicle laws in the forty-eight states and the District of Columbia resulted in the unavoidable conclusion that a drastic modernization of our traffic laws is necessary. The only general exceptions to this conclusion are those jurisdictions which have adopted the Uniform Vehicle Code or the Model Traffic Ordinances.”

The license is above all else the mark of the modern administrative process; license laws have opened the broadest approach to preventive regulation. The first automobile license requirements were chiefly for registration of the vehicle. These came early, but their purposes were ill-defined. The courts were not certain whether they were primarily safety regulations, a means of general revenue, or a consideration for use of the highways. The Supreme Court of the United States mingled these explanations when, in Hendrick v. Maryland, 1915, it found no violation of due process of law in registration requirements for use of a motor car. Objections to the revenue aspect of the registration statutes dominated cases brought up to the state courts. Talk of “safety” was never specific. Registration of the vehicle was important, of course, to aid identification of the person responsible for its operation. This seems the only tangible “safety” contribution of the first licensing regulations; early traffic code requirements that license plates be properly attached and kept clean, and penalties imposed for fictitious plates, point to this as the sole “safety” function of registration. At least, however, *778 the motor vehicle registration laws firmly established the principle that operation of a motor car was a privilege and not a right, to which government might attach prerequisite conditions in the interest of public safety.

The licensing of drivers, after proper examination, was obviously a basic step in preventive regulation. The extreme slowness with which the states (1) adopted any driver’s license requirements at all and (2) implemented these with adequate examinations is striking evidence of the scant attention given to preventive treatment of the auto accident problem.

In part, however, this failure reflected the laggard understanding of what was implied when the automobile ceased to be a luxury and became an instrument of mass transportation. A number of states relatively early required licenses for persons who drove for hire (“chauffeurs”); Illinois, for example, did this by its act of May 28, 1907. Such a regulation was a natural accompaniment of a time when cars were few and their drivers were either wealthy sportsmen or the chauffeurs of wealthy owners. The man who drove his own car would by definition be a financially responsible person, one who, because of his special interest, would likely be competent, and one who, because early cars were hard to operate, would almost certainly be an able-bodied adult. The chauffeur’s license system would, then, take care of almost all other cases. The drastic reductions in the price of new cars after 1920 swiftly put motor cars in the hands of persons who were in the main not financially responsible, and who were not specially qualified by intensive pursuit of driving as a sport or hobby. Greater ease and reliability of operation accompanied the technical improvement of the automobile. The invention of the multiple disk clutch about 1907 and the self-starter in 1912, for example, helped to put the automobile in the hands of women and young people, as well as of men, and in the hands of the weak as well as of the able-bodied. Licensing laws lagged *779 by at least twenty years in any substantial response to the logic of these changed facts of technology and social behavior.

Early general license requirements for automobile drivers were usually not supported by an examination system. Hence, they amounted to little more than a further form of identification requirement. New Jersey, for example, wrote an impressively specific requirement for examination and license of drivers into its statutes as early as 1906, but drivers were first there examined in 1913. Before 1914, only three other states had begun examining drivers. Only nine more began in the years 1917–1929, which saw the mass adoption of the automobile. Between 1930 and 1939, twenty-four more states first examined drivers; these included the populous states of Ohio (1936), Indiana (1938), and Illinois (1939). As of 1939, this left eleven states that did not examine drivers, and three of these did not even require driver’s licenses. “Examinations” varied much in effectiveness, moreover. In 1942, DeSilva estimated that not more than fifteen or twenty states gave a fairly strict, comprehensive license examination. Such an examination included tests on (1) ability to read and understand road signs, (2) visual efficiency, (3) knowledge of the state’s motor vehicle laws and the safe-driving rules that they represented, and (4) ability to handle a car skillfully.

At best, the extension of the registration and licensing requirements was subject to severe limitations. As states tardily adopted driver’s license requirements, for example, they always exempted persons then operating vehicles. As a result, in 1942 it was estimated that about 60 per cent of the persons driving had never had their driving ability investigated. As of that

time, only three states required all drivers to undergo periodic reexamination of their eyes, and but one of these authorized the examiners to administer the other branches of the driver's tests at this reexamination. Two states required complete reexamination of all elderly applicants for renewal of ***780** their licenses. A few states reexamined drivers who were involved in repeated accidents; some reexamined drivers who were involved in a serious accident or violation.

Motor vehicle registration combined to be handled throughout the country as primarily a means for identification and for collection of revenue. Conceivably, it might be used as a means to enforce standards recording the condition of vehicles. Studies showed that about five per cent of all accidents were caused by defects in the vehicle, and faulty equipment undoubtedly contributed to many more accidents. But as of 1940, only eighteen states and fifteen cities had some form of compulsory vehicle inspection.

Legislatures made financial responsibility laws part of the pattern of motor vehicle registration and driver's licenses. As this movement gained momentum in the early 1930s, large claims were made that this would promote safety. On its face, the claim was unconvincing. The statutes were, literally, financial responsibility requirements; an owner or operator who, according to the varying terms of the laws, paid his judgment, took out insurance, or posted security against a claimed liability, could thereupon take to the road again, however dangerous a driver he might be. Failure to comply with the financial responsibility law might of course remove a bad driver from the road by suspension or revocation of his license. But this was only incident to the main purpose of the laws, and in most states the statutes separately provided for suspension or revocation of licenses for serious traffic violations.

So much for the substance of preventive regulation. What techniques developed to enforce such preventive standards as evolved? The enforcement story followed an order familiar in other fields of the law: from penalty, to correction, to prevention. Moreover, enforcement tended toward more emphasis on executive and administrative action and less on traditional resort of the courts. In both respects, traffic law enforcement moved slowly into the broad current of administrative law.

The preventive-administrative approach was closely linked to improvements in street and highway engineering, which set a frame for traffic problems. By reducing grades, increasing visibility, and banking curves, the engineer could often do more to reduce traffic hazards than any amount of the law's regulations. ***781** Despite new trends, as late as 1940, the combination of policeman and traffic court still did the bulk of preventive traffic regulation the country over. Police administration in this field changed greatly in the first generation of mass use of the automobile. In the rural areas, the striking change was toward centralization; the village

constable operating a “speed trap” in the early 1920s was by the 1930s generally supplanted by more responsible county or state patrols. There were not enough of the new officers, however. In 1942 DeSilva estimated that there were about 7,000 state traffic police to patrol 845,326 miles of main federal, state, and county highways—about one for every 120 miles of main highway, or about one for every 4,300 vehicles. In the cities the central change was in the development of specialized traffic divisions within the city police department. The new divisions took on an increasing number of specialized jobs connected with traffic law enforcement, public education in traffic safety, and engineering. Even in smaller cities, the traffic division handled a considerable range of affairs. In the reorganized San Antonio, Texas, department, in July 1939, for example, the traffic division was assigned the regulation of traffic, elimination of congestion, prevention and investigation of accidents, enforcement, education, engineering activities, and taxi inspections.

By far the weaker member of the traditional partnership was the traffic court. There is no need to retell the story that was sketched in the fifth section of Chapter Four. Police administration put increasing emphasis on education of the public and constructive correction of the offending driver; the typical traffic court imposed fines in a mechanical fashion with little or no regard to the effect that its proceedings might have in teaching safety or getting at the root of driving troubles. Police administration stressed cooperation with *782 the public; the traffic court—often held in crowded, dingy, and dirty quarters, with little order or decorum, and with little efficiency in the clerk’s office—made bad public relations for the cause of traffic safety. Police administration developed a quite-consistent set of safety standards, reflected in the model traffic codes; traffic courts showed the widest range of inconsistency in the assessment of penalties, both for the same offense as it came before different judges and in the relative weighing of offenses. If police enforcement was zealous, it was often nullified by too ready suspensions of sentence by the courts. Ineffectiveness of the courts was doubly damaging: the traffic offender was likely to feel no effective restraint as a result of his experience in court, and police morale suffered when the end result seemed to be futility.

For the most part police and traffic court worked with three sanctions—the warning, the fine, and the jail sentence. Experience led to serious questioning of the adequacy of these with respect particularly to the well-off violator and the chronic offender. These sanctions were especially weak because of the lack of record systems that would permit ready check of a violator’s history of previous offenses; neither local governments nor states usually kept such records, and each violation was thus typically treated in isolation. There was, in any event, little chance to judge the possible effectiveness of the jail sentence as a traffic sanction because courts would so rarely impose it. The law here confronted a

difficult public relations problem when it provided so strong a “criminal” sanction against violators who did not fit the conventional notions of criminals. Partly the issue was one of education; public opinion must learn to weigh more accurately the seriousness of safety violations. Partly the issue was inherent in the situation: most traffic violators offended heedlessly or unintentionally. The law had grown accustomed to imposition of minor penalties for unintentional violations of many modern social regulations, but both laymen and lawmen balked at a heavy jail term where no wrongful intention appeared. In Connecticut, in 1934, for example, out of 621 convictions for reckless driving, only 27 (about .04 per cent) received jail sentences; probably some of these went to jail only because they could not pay a fine.

The belated development of driver licensing systems offered a powerful new means of traffic law enforcement. The average driver had made use of the automobile a most convenient, or even essential, item of his way of life, if not of his livelihood. Suspension or revocation of his license to drive might, therefore, be a most effective penalty; particularly, it would provide strong incentive to reform one’s driving practices. Moreover, since it was not in the tradition of “criminal” penalties, license discipline did not have to overcome the resistance in lay and professional opinion that so largely nullified the jail term or the heavy fine as a penalty for serious traffic offenses.

The seriousness of the penalty would require that it be used with deliberation and consistency, however. *783 Thus, there would be added reason for a state-wide record system that would allow assessing a given violation in relation to the violator’s history. But as of 1942, only Connecticut, New Jersey, New York, and Rhode Island had kept such files long enough to be able to detect the majority of accident- and violations-repeaters. Back of the records, moreover, must be improved reporting of accidents and violations; this called for more policing. Particularly would it be necessary to have more frequent checks on driver’s licenses, to search out unlicensed operators. All these steps would be essential preliminaries to tighter administration of the driving privilege. The basis for this, we have seen, was laid in early twentieth-century decisions. Lax regulation might have fostered a popular attitude that a man had a “right” to drive, but the law had firmly declared that the question was one of a privilege only.

Who should judge the suspension or revocation of driver’s licenses? Many states made suspension or revocation mandatory when a court had convicted a driver of a serious offense. In 1940, for example, thirty states made this result mandatory upon conviction of manslaughter resulting from operation of a motor car, forty upon conviction of drunken driving, thirty-one upon conviction of hit-and-run driving. As of that date, however, Warren found that where judges had the enforcement of these

mandatory provisions, the judges who strictly enforced surrender of the license “were in a small minority.” In about a third of the states, statutes gave broad discretionary authority to judges to suspend or revoke licenses for unlawful use of a motor car. But the penalty could mean no more than the effectiveness of the agency that used it. The general defects of the traffic court made the power amount to little.

Most states gave discretionary powers of suspension or revocation of driver’s licenses to the state administrative agency that issued them. Some withheld the power, probably because they lacked confidence in administrators who typically did not hold their positions *784 long enough to build a firm professional tradition. Granted that the job called for good men with assured tenure, there was logic in state control over license discipline. The state was a more natural unit of regulation than the local government for so free-ranging an activity as automobile driving. The state could better meet the overhead cost of adequate highway police and records. State administrators could enjoy greater detachment from local pressures to “fix” cases. They could act promptly and under uniform policies. These advantages, plus specialized attention to the problem, in contrast to the courts’ typical lack of interest in traffic matters, gave the administrators the better record. On the basis of a broad survey, Warren concluded in 1940 that “[c]ompared to the effectiveness of license suspension and revocation as administered by motor vehicle administrators the results where judges had that authority were unsatisfactory.”

The fact of state control over licenses did not itself guaranty results, however. Many administrators who had the powers did not use them. Still, in the 1940s, the inert tradition continued, that the purposes of automobile licensing plans were simply revenue or identification. As always, what counted was not only machinery but also the will to use it. Whether the fault be in judge or administrator, without the will the potentially great instrument of license discipline remained largely ineffective. After a generation of mass use of the automobile, a not unusual case of an accident repeater showed this sorry record:

1927 May	Charged with reckless driving. License suspended.
1928 June	License reissued.
1928 September	Operating under influence of liquor. License suspended.
1929 September	License reissued.
1929 November	Court conviction, speeding. Ten dollars.
1930 March	Personal injury accident, at fault. License suspended.
1930 April	License reissued on favorable report on

	character.
1930 June	Court conviction, speeding. Ten dollars.
1931 September	Fatal accident, at fault. License suspended.
1932 March	License reissued, after hearing.
1932 April	Court conviction, speeding. Twenty dollars.
1933 February	Personal injury accident, at fault. License suspended.
1933 June	License reissued.
1934 July	Serious accident, two persons injured, not at fault.
1935 January	Accident, no one injured, property damage \$100, at fault.
1937 April	Personal injury accident, at fault. License suspended.
1937 October	License reissued.

*785 Because it touched a privilege that people valued, license discipline promised to be effective as a deterrent and perhaps as an inducement to correction of bad driving. But it was still a penalty, primarily negative rather than affirmative in effect. In the 1930s, especially, a variety of experiments showed that the law was moving toward more positive kinds of preventive regulation. Some of these experiments were tied to the traditional proceeding of the courts. Austin; Berkeley; Cleveland; Dallas; Des Moines; Detroit; Evanston; Lincoln; Long Beach; Louisville; Los Angeles; Phoenix; Portland, Oregon; Sacramento; San Diego; San Francisco; and Wichita led in establishing “violators schools.” In place of fines or jail terms, judges required offenders to attend an evening school in which lectures and moving pictures discussed safety rules and sound driving practices, and demonstrations were staged; the violator was required to take an examination at the end of the course, and his case was closed only when the court was notified that he had attended regularly and had passed the examination. The violators school was not an effective answer to cases of chronic repeaters who required medical or other special corrective attention. But experience suggested that they were a much more constructive device than the fine to deal with violators who lacked mechanical driving skill, who were ignorant of traffic regulations, who showed incompetence in meeting traffic situations, who held not too deep-seated, erroneous attitudes toward safety, or who would find a fine either an unreasonable hardship or a trifle.

Traffic history showed that in dealing with offenders against the safety regulations, the violators schools and drivers clinics took a more realistic tack than if attention were given to drivers involved in accidents.

Experience indicated that the most careful driver would have an accident if he drove long enough; accidents in themselves were not too significant of conditions that required correction. But experience indicated, also, that the repeated violator of traffic regulations was more likely to have an accident. This, experienced observers believed, was the underlying significance of speed violations—not that the speed violator had accidents to a disproportionate extent while speeding, but that his speed violations showed a general pattern of driving habits that made him more likely to have accidents than the non-violator.

The violators school dealt with offenders as a general class. A few jurisdictions, toward mid-century, pioneered in clinical work with offenders who showed signs of deeper trouble that called for more individual attention, either to physical handicaps or to mental difficulties. Among the states, California and Pennsylvania, and among the cities, Chicago, Detroit, Milwaukee, and Wichita experimented with driver's clinics.

*786 Violators schools and driver's clinics touched only those who were brought into courts. Of far greater reach were educational programs aimed to train drivers before they were taken in for violations. The simplest step in driver education was one of those that the states and local governments were slowest to adopt. This was the publication of traffic regulations in easily understood and easily accessible form. When regulations were published, they were typically presented in bulky, fine-print reproduction of the cumbersome and technical language of the statute book. Often municipal traffic regulations were not available to the public in any printed form. Michigan showed what could be done in better presentation of the regulations when it exchanged a 256-page, fine-print pamphlet for a 23-page, pocket-size, illustrated booklet that stated the sum of its regulations.

A more thorough approach to preventive education was through driving instruction offered to people before they got into difficulties. Since most states refused driving licenses to persons under 14–16 years of age, and since most of them also required young people to remain in school until 16, it was logical to begin driving instruction on a broad scale through the high schools. Such instruction began with classroom lectures, but experience proved that driving instruction—both on dummy cars and in actual automobiles—was essential to the most effective results. By 1942, DeSilva estimated that about 600 high schools in the United States offered such instruction. Up to that time scarcely a beginning had been made in adult instruction, however. In a handful of states the state motor vehicle department offered instruction. In other states, commercial driving schools sprang up as examination requirements for driver's licenses were tightened. The commercial schools were of a wide range in quality and typically concentrated on presenting just the minimum instruction to pass their graduates through the state license examination. Only New York set

up substantial regulation of the driver's schools. Widespread and effective driving instruction seemed a job to be done by public authority. At an estimated cost of \$15 per student, the total expense at first sight promised to be large. But at this rate, driving instruction would cost the state of Connecticut, for example, only one-fifth the amount the state collected annually for operator's and chauffeur's licenses, only one-twelfth of what it collected for registration of vehicles, only one-twentieth of all its receipts for motor vehicles and driver's fees and receipts.

Another type of preventive regulation that was increasingly adopted in the 1930s was the education of pedestrians. *787 This took the form mainly of safety education in the schools. Though such a program did not immediately help the serious accident problem of the aged pedestrian, it showed encouraging results within its own framework. A check in Massachusetts, for example, showed that child pedestrian deaths dropped rapidly after the schools began teaching safety, and that this trend continued. The number of licensed motor car operators doubled in the state in the years 1924–1939, and adult pedestrian deaths rose through most of that period, but child pedestrian deaths fell from 227 in 1924 to 74 in 1939. Connecticut and New York could show similar evidence.

Thus, in varied ways, both with respect to standards of conduct and to means of regulation, the law began to move toward a more positive and preventive treatment of the safety problems posed by general use of the automobile. The consistent thread throughout, however, is that this story up to mid-century is almost wholly one of limited-scale experiments. The variety of thinking and of experiments, both with respect to compensation and prevention, suggested that the trend was definitely toward some fundamental changes in emphasis in the handling of the auto accident question. That change was so slow—that the law so tardily took approaches natural to a technical age—testified to the stubbornness with which inertia could invest the ideas of a day long past. The thinking and experiment that was done showed that much silly talk had been spilled over man's inability to deal with his machines. But the delay showed, too, that a major problem for the law in a society moulded by its use of science and technology was to speed up the pace of adjustment to the social issues which they brought.

BIBLIOGRAPHICAL NOTES: CHAPTER EIGHT

***(1)** SECTION I. Material for the table on factory sales and motor vehicle registrations, 1895–1940, is from the more detailed tables in Automobile Manufacturers Association, *Automobile Facts and Figures–1941* (Detroit, 1941), pp. 4, 11 (hereafter cited as *Facts and Figures–1941*). The 1940 motor vehicle travel estimate is given, *id.*, p. 64; rural road mileage is given in National Automobile Chamber of Commerce, *Facts and Figures of the Automobile Industry* (1925 ed., Detroit 1925), p. 18 (hereafter cited as *Facts and Figures–1925*), and in National Automobile Chamber of Commerce, *Facts and Figures of the Automobile Industry* (1935 ed., Detroit, 1935), p. 57. For apparent consumption of motor fuel see U.S. Census Bureau, *Statistical Abstract of the United States* (Washington D.C., 1941), p. 837. On the ratio of passenger cars to persons and families, see Dewhurst & Associates, *America’s Needs and Resources* (New York, 1947), pp. 205, 223; Lynd & Lynd, *Middletown: A Study in Contemporary American Culture* (New York, 1929), p. 253. Adams’ history of automobile price policy is in his contribution, “The Automobile—A Luxury Becomes a Necessity,” to Hamilton & Associates, *Price and Price Policies* (New York, 1938), pp. 29, 31; for the dominance of the under-\$750-wholesale priced cars, 1925–1940, and for used car sales prices, see *Facts and Figures–1941*, p. 28, and Kennedy, *The Automobile Industry; The Coming of Capitalism’s Favorite Child* (New York, 1941), p. 140. On capital investment and employment in or in connection with the automobile industry, see *Facts and Figures–1925*, p. 9 and *Facts and Figures–1941*, pp. 31, 76. On the automobiles relative percentage of passenger travel, see Dewhurst, *America’s Needs and Resources*, p. 204. The data on “necessity” as compared with “recreational” mileage and trips will be found in *Facts and Figures–1941*, pp. 56, 57. Average gasoline consumption per motor car is given, *id.*, p. 45. The Lynds’ observations on the automobile and the depression are, in order, from their *Middletown in Transition* (4th ed., New York, 1937), pp. 266, 265, 245. For the Survey Graphic’s description of the report on “Recent Social Trends,” see Ross, “Age of the Automobile” 23 *Survey Graphic* 5 (1933); I am indebted to Professor William F. Ogburn for calling my attention to this reference. The list of derivative effects of the automobile upon the law rests primarily upon the Reports and the statute books under headings which will be suggested by the particular points enumerated. The principal sources used outside of the law books include *Whither Mankind* (Beard, ed., 1st ed., ***(2)** New York, 1928), especially the essay by McBain, “Law and Government,”; *Toward Civilization* (Beard, ed., New York, 1930); Beard, *Government Technology* (New York, 1934); Burlingame, *March of the Iron Men* (New York, 1938) and *Engines of Democracy* (New York, 1940); Chase, *Men and Machines* (New York, 1928); Epstein, *The Automobile Industry* (Chicago, 1928);

Fuller, *Nine Chains to the Moon* (Philadelphia, 1938); Gilfillan, *The Sociology of Invention* (Chicago, 1935); Hamilton & Associates, *Price and Price Policies* (New York, 1938), especially the essays by Adams, "The Automobile—A Luxury Becomes a Necessity," p. 29; by Abrahamson, "The Automobile Tire—Forms of Marketing in Combat," p. 83; and by Till, "Gasoline—The Competition of Big Business," p. 117; Kennedy, *The Automobile Industry* (New York, 1941); Lynd & Lynd, *Middletown: A Study in Contemporary American Culture* (New York, 1929) and *Middletown in Transition* (New York, 1935); Mumford, *Technics and Civilization* (New York, 1934); National Resources Committee, *Technological Trends and National Policy* (Washington D.C., 1937); Ogburn & Nimkoff, *Sociology* (Cambridge, 1940); *Recent Social Trends* (New York, 1934), especially the essays by Ogburn & Gilfillan, "The Influence of Invention and Discovery," p. 122; Willey, "The Agencies of Communications," p. 167; Gay, "Trends in Economic Organization," p. 218; Hart, "Changing Social Attitudes and Interests," p. 382; McKenzie, "The Rise of Metropolitan Communities," p. 443; Kolb & Brunner, "Rural Life," p. 497; Steiner, "Recreation and Leisure Time Activities," p. 912; Sutherland, "Crime and Punishment," p. 1114; Woody, "The Growth of Governmental Functions," p. 1274; Heer, "Taxation and Public Finance," p. 1331; and Clark and Douglas, "Law and Legal Institutions," p. 1430; Rosen, *Technology and Society* (New York, 1941); and Seltzer, *A Financial History of the American Automobile Industry: A Study of the ways in Which the Leading Producers of Automobiles Have Met Their Capital Requirements* (New York, 1928). The editions of the Illinois statutes referred to are *Revised Statutes of the State of Illinois*, 1901 (Hurd, ed., Chicago, 1901); *Revised Statutes of the State of Illinois*, 1921 (Cahill, ed., Chicago, 1922); *Revised Statutes of the State of Illinois*, 1941 (Smith-Hurd revised ed., Chicago, 1941).

***(3)** SECTION II.A. For the death rate from automobile accidents, see U.S. Census Bureau, *Statistical Abstract of the United States* (Washington D.C., 1942) p. 474, tbl. 510. On totals of deaths and non-fatal injuries, 1923–1940, see National Safety Council, *Accident Facts, 1942 edition* (Chicago, 1942), p. 81. The quotation and estimate on money losses will be found, *id.*, p. 92, and National Safety Council, *Accident Facts, 1941 edition* (Chicago, 1941), p. 60. On comparative major causes of accidental deaths, *id.*, p. 63. On trends of fatal accidents relative to mileage and car registrations, see *id.*, p. 26, and National Safety Council, *Accident Facts, 1948 edition* (Chicago, 1948), p. 41; estimates of vehicle miles of motor travel will be found in Public Roads Administration, *Highway Statistics Summary to 1945* (Washington, 1947), p. 34.

SECTION II.B. The quoted appraisal of the gravity of the automobile accident problem and the extent to which it had been met is from the survey done at the Yale Institute of Human Relations: DeSilva, *Why We*

Have Automobile Accidents (New York, 1942), p. 1. I am indebted for the quotation from Andrew Carnegie to Hacker, *The Shaping of American Tradition* (New York, 1947), Vol. 2, p. 807, where the statement is put in significant context with the pragmatism of William James. On restricting the scope of legal burdens in the industrial age, Abinger, C.B., is quoted from *Priestly v. Fowler*, 3 Mees. & Wels. 1 (Exchequer 1837) (England), and Jessel, M.R., from *Printing and Numerical Registering Co. v. Sampson*, L.R. 19 Eq. 462, 465 (1875). The cases quoted to the effect that the automobile is not a “dangerous instrumentality” are *Indiana Springs Co. v. Brown*, 165 Ind. 465, 468, 74 N.E. 615 (1905), and *Lewis v. Amorous*, 3 Ga. App. 50, 55, 59 S.E. 338 (1907). The ratios of trade-ins to new car sales are from Kennedy, *supra.*, pp. 139, 140, 222. Data on comparative passenger-miles traveled by auto, and the quotation on increased mobility, are from Dewhurst & Associates, *supra.*, p. 204. The accident victim case histories are selected from the list in Corstvet, “The *(4) Uncompensated Accident and Its Consequences,” 3 Law and Contemporary Problems 466, 473, 474 (1936). Shaw, C.J., in *Brown v. Kendall*, will be found in 60 Mass. 292 (1850). The 1911 New York decision was *Ives v. South Buffalo Railway Co.*, 201 N.Y. 271, 94 N.E. 431. Judge Robert S. Marx, of the Cincinnati Superior Court, is quoted from his much-cited article, “Compulsory Compensation Insurance,” in 25 Colum. L. Rev. 164, 177 (1925). On trends in automobile accident doctrine, I am much indebted to the Columbia University Council for Research in the Social Sciences, *Report of the Committee to Study Compensation for Automobile Insurance* (Philadelphia, 1932), generally herein cited as the *Columbia Report*; James, “Contribution among Tortfeasors in the Field of Accident Litigation,” 9 Utah Bar. Bull. 208 (1939); James, “Contributions among Joint Tortfeasors: A Pragmatic Criticism,” 54 Harv. L. Rev. 1156 (1941); James, “Accident Liability Reconsidered: The Impact of Liability Insurance,” 57 Yale L.J. 549 (1948); McNeely, “Illegality as a Factor in Liability Insurance,” 41 Colum. L. Rev. 26 (1941); McNeely, “The Genealogy of Liability Insurance Law,” 7 U. Pitt. L. Rev. 169 (1941); Fegan, “Presumption Versus Proof in Automobile Highway Accidents,” 22 Geo. L.J. 750 (1934); Nixon, “Changing Rules of Liability in Automobile Accident Litigation,” 3 L. & Contemp. Probs. 476 (1936); Shulman & James, *Cases on Torts* (Chicago, 1942) Ch. 4 § 2.

Data on the percentage of insured cars are cited, respectively, from *Columbia Report*, *supra.*, pp. 45–46, and from Wilkie, “The Recurring Question of Compulsory Automobile Insurance,” 30 S.B.A. Wis. 77, 79 (1940). The quoted statement regarding the treatment of the illegality defense in connection with automobile liability insurance is from McNeely, *supra.*, 41 Colum. L. Rev. at 60. As to the percentage of passenger cars by families, see notes under Section I, *supra.*; for 1935–1936 individual and family income distribution, U.S. Census Bureau,

Statistical Abstract of the United States (Washington, 1938) p. 304, tbl. 346. For a summary of the *Columbia Report*'s findings on compensation *(5) see the *Columbia Report*, Ch. XI, pp. 202–206. Data on the number of compulsory insurance bills introduced in the states are noted by Wilkie, *supra*, 30 S.B.A. Wis. 77, 78, n.2. On the spread of financial responsibility laws see Braun, "The Financial Responsibility Laws," 3 L. & Contemp. Probs. 505, 509–511 (1936); Braun, "The need for Revision of Financial Responsibility," 40 Ill. L. R. 237, 240 (1941); and Note, "Motor Vehicle Financial and Safety Responsibility Legislation," 33 Iowa L. Rev. 522, 525–526 (1948). On the failure of the early type of financial responsibility laws, note the implications of the address by a leading spokesman for the insurance company viewpoint, Stone, "Further Thoughts on Compulsory Automobile Liability Insurance," 63 N.Y. S.B.A. 651, 664–665 (1940); Feinsinger, "The Operation of Financial Responsibility Laws," 3 L. & Contemp. Probs. 519 (1936), weighs the effects of the laws so far as the limited data permit, with conclusions unfavorable to the early-type legislation. Quotations from the *Columbia Report* regarding operation of the Massachusetts compulsory insurance law are, respectively, from pp. 115, 129, 130. The estimate of the excess of losses over amounts returned by the rates for Massachusetts insurance is that of R.H. Blanchard, professor of insurance at Columbia University, quoted by DeSilva, *supra*, p. 215, and by Wilkie, *supra*, 30 S.B.A. Wis. 81; the estimate is lower by five per cent than that for 1927–1935, made in Blanchard, "Compulsory Motor Vehicle Liability Insurance in Massachusetts," (1936) 3 L. & Contemp. Probs. 537, 549–550. On experience with premiums, average loss, and claims in Massachusetts see *id.*, p. 546–549. Compulsory insurance for motor carriers is discussed by the *Columbia Report*, p. 113, and by Brownfield, "Compulsory Liability Insurance for Commercial Motor Vehicles," 3 L. & Contemp. Probs. 571 (1936). For the Boston, New York and Atlanta examples of investigations of fraud in auto accident claims, see Monaghan, "The Liability Claim Racket," 3 L. & Contemp. Probs. 491, 497, 501 (1936). Data on disposition of auto *(6) accident cases in New Haven are from Clark & Shulman, *A Study of Law Administration in Connecticut* (New Haven, 1937), p. 25. Data on the percentage of insured cases where some compensation was received will be found in the *Columbia Report*, pp. 77, 81, 86, 116. On the percentage of District of Columbia cases in which fault was undetermined, see Bowers, *Compulsory Automobile Insurance* (New York, 1929), pp. 73–74; on probable percentage of contributory negligence, see *id.*, pp. 76–77. The quoted comment on the approach to absolute liability in the administration of automobile insurance is that of Professor Fleming James, Jr., from the article already cited, 57 Yale L.J. 549, 567. Early advocacy of the compensation system as applied to general types of personal injury suits may be seen in Carman, "Is a Motor Vehicle

Accident Compensation Act Advisable?," 4 Minn. L. Rev. 1 (1919); Ballantine "A Compensation Plan for Railway Accident Claims," 29 Harv. L. Rev. 365 (1916); Marx, *supra.*, 25 Colum. L. Rev. 164. The outline of a compensation plan follows that of the *Columbia Report*, pp. 137-144; cf. Special Committee of the Saskatchewan Government, *A Report on the Study of Compensation for Victims of Automobile Accidents* (Regina, 1947), p. 61 ff., especially pp. 71-89.

SECTION II.C. The fact that the most uniform traffic regulations were limited to those inherited from the horse-and-wagon age is noted in *Motor Vehicle Traffic Conditions in the United States, Part 1, Nonuniformity of State Motor Vehicle Traffic Laws* (Washington D.C., 1938), pp. 8-9. For the Illinois automobile speed law and the Illinois case thereunder, see *Christy v. Elliott*, 216 Ill. 31, 74 N.E. 1035 (1905); the various editions of the Illinois Revised Statutes are those cited in the notes to Section I, above. See also Note, "Developments of Standard in Speed Legislation," 46 Harv. L. Rev. 838 (1933). The quoted observation on the pedestrian's favored position as compared with the motorist's obligations is from DeSilva *supra*, p. 237. I am indebted throughout the discussion of traffic laws to the excellent summary in Chapter II of Warren, *Traffic Courts* (Boston 1942), as well as Damon, "Progress in the Enforcement and Agenda of Traffic Laws," 35 J. Crim. L. & Criminology 269 (1941) and "Police Control of the Automobile Driver," 30 J. Crim. L. & Criminology 83 (1939). The chronology of the uniform traffic act may be traced in *Handbook of the National Conference of Commissioners on Uniform State Laws and Proceedings of *(7) the Thirty-Sixth Annual Meeting* (1926), p. 457 ff., and *Handbook of the National Conference of Commissioners on Uniform State Laws and Proceedings of the Fifty-Third Annual Conference* (1942), p. 69. Warren's examples of badly drawn traffic laws and his quoted summary of the national situation will be found, *supra*, pp. 14, 16. *Henderson v. Maryland* is in 235 U.S. 610 (1915). A sampling of state cases which support the generalization on the predominance of the revenue issue in motor vehicle registration legislation will be found in Blashfield, *Cyclopedia of Automobile Law* (Kansas City, 1927), Vol. 1, pp. 17-18. See also Garrison & Martin, "History of Kentucky Commercial Motor Vehicle Transportation Tax Legislation," 33 Ky. L.J. 3 (1944). The Illinois "chauffeur's" license statute referred to is section 14 of the Act of May 28, 1907, Laws, Illinois 1907-1908, pp. 510, 514.

On the successive adoption of driver's license examinations through the states, see the map prepared by the American Association of Motor Vehicle Administrators, reproduced in DeSilva, *supra*, p. 292; DeSilva's verdict on the number of adequate examining systems is expressed, *id.*, p. 293. On the 60 per cent of un-investigated drivers, see *id.*, p. 298. On faulty equipment and checks thereon, see *id.*, pp. 240, 256. The judgement on the predominance of the policeman-traffic-court combination as enforcement means in 1940 is believed to be a fair conclusion from the

surveys by DeSilva and Warren. DeSilva's estimate of the number of highway police for rural patrol will be found, *supra*, p. 306. The acceptance of the specialized traffic division in modern police organization is noted by Wilson, "Police Administration," in *Regulatory Administration* (Graham & Reining eds., New York, 1943), p. 38; the San Antonio department organization is noted, *id.*, p. 39. The small percentage of jail sentences in Connecticut (1934) reckless driving cases is noted, and the implications discussed, by a public prosecutor in Cohen, "The Highway Hazard," 10 Conn. Bar. J. 94, 104, 105 (1936). Data on causes for mandatory suspension or revocation of licenses will be found in Warren, *supra*, pp. 168–169; the opinion on the ineffectiveness of judicial enforcement of these requirements is stated, *id.*, p. 171; the comparison of judicial and administrative enforcement of discretionary powers over licenses is stated, *id.*; *cf.* DeSilva, *supra*, pp. 208–209. The list of cities cited for *(8) their violators schools is a composite from DeSilva, *supra*, p. 317, and Warren, *supra*, p. 173. On driver's courses and their cost, see DeSilva, *supra*, pp. 286–291; on pedestrian education, *id.*, p. 225.