Enhanced Injury Theory: An Analytic Framework

Thomas V. Harris

ENHANCED INJURY THEORY: AN ANALYTIC FRAMEWORK

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Enhanced injury liability rests upon ordinary tort concepts of duty, causation, and forseeability; yet it presents special problems of proof, affirmative defense, and allocation of liability among defendants. Many of these problems await resolution by the state courts; others have been the subject of inconsistent decisions. In this Article Mr. Harris analyzes the doctrinal and social policy bases of enhanced injury liability, and reviews the cases applying an enhanced injury analysis. He develops an analysis of enhanced injury cases, drawing from general products liability law while remaining sensitive to the particular problems of enhanced injury litigation.

Most American jurisdictions have adopted the doctrine of strict liability in tort[1] and thus have recognized an injured party's right to recover damages for injuries caused by a defective product.[2] In 1965 the doctrine was recognized and promoted by section 402A of the Restatement (Second) of Torts.[3] In those states that have adopted[4] section 402A, a claimant can recover if the defective product caused an injury-producing accident. After some disagree-

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1. The various states that have adopted the doctrine are listed in 2 L. FRUMER & M. FRIEDMAN, PRODUCTS LIABILITY, § 16A[3] n.2 (1983). *See also infra* note 4.

2. The landmark decision in this area was Greenman v. Yuba Power Prods., Inc., 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963). Of course, injured parties previously had been able to recover against manufacturers and other defendants if they could prove negligence. *See, e.g.*, MacPherson v. Buick Motor Co., 217 N.Y. 382, 111 N.E. 1050 (1916).

3. RESTATEMENT (SECOND) OF TORTS § 402A (1965), provides:

(1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if

(a) the seller is engaged in the business of selling such a product, and

(b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.

(2) The rule stated in Subsection (1) applies although

(a) the seller has exercised all possible care in the preparation and sale of his product, and

(b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.

4. Most states have expressly adopted either the Restatement's formulation of the doctrine or its seminal principles. The jurisdictions that have adopted § 402A are listed in Carestia, *The Interaction of Comparative Negligence and Strict Products Liability—Where Are We?*, 47 INS. COUNSEL J. 53, 57 nn.47-48 (1980). Several states, however, have modified or altered substantive Restatement provisions. *See, e.g.*, Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 150-53, 542 P.2d 774, 777-79 (1975) (discussing the various states' approaches to the "unreasonably dangerous" and "defective product" terminology in § 402A). Two recently published tort and product liability codes contain provisions fundamentally different from the approach taken in § 402A. *See* UNIF. COMPARATIVE FAULT ACT, 12 U.L.A. 35 (Supp. 1983); UNIF. PROD. LIAB. ACT, 44 Fed. Reg. 62,714 (1979).

ment, it has been widely recognized that a manufacturer will also be held liable for *enhanced* injuries resulting from a defect even if the defect did not cause the underlying accident.[5]

A party litigating an enhanced injury claim is confronted with an "uncertain area of law" and a "myriad of [as yet unresolved] problems."[6] While they have recognized the viability of enhanced injury theory, the states have not been active in developing a conceptual framework for the resolution of such claims.[7] The federal courts, in exercising diversity jurisdiction, have taken the lead in defining the parameters of enhanced injury theory. As one federal judge noted:

> This is an *Erie Railroad v. Tompkins*, . . . case, but it must be conceded that the lore of "strict liability" and "second collision" tends to be generalized across state boundaries and to borrow precedent from the federal courts. But the bellwether in the second collision field has been *Larsen v. General Motors Corp.*, 8th Cir. 1968. . . .[8]

This dearth of state court doctrinal development has been widely criticized.[9]

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5. Most courts that have addressed the issue have recognized the right to recover for enhanced injuries. The landmark decision allowing recovery was Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968). The leading decision rejecting the concept of enhanced injury liability, Evans v. General Motors Corp., 359 F.2d 822 (7th Cir. 1966), was overruled in Huff v. White Motor Corp., 565 F.2d 104 (7th Cir. 1977). In Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 840 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981), the court noted that most jurisdictions considering the issue had adopted the *Larsen* approach.

6. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243, 245 (2d Cir. 1981).

7. In Huddell v. Levin, 537 F.2d 726, 733 n.2 (3d Cir. 1976), the court of appeals noted that the "major" cases involving enhanced injury liability have been litigated in federal courts. The Supreme Court of Washington has the distinction of being the one state court that has expressly admitted that it has not addressed the central issues relating to the criteria, definitions, and limitations of enhanced injury liability. Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 148-50, 542 P.2d 774, 776-77 (1975). Unfortunately, even after the *Seattle-First Nat'l Bank* decision, both the Washington courts and legislature have failed to further define the parameters of that state's enhanced injury concept. *See* Bernal v. American Honda Motor Co., 87 Wash. 2d 406, 553 P.2d 107 (1976) (the only issue properly before the court was the viability of plaintiff's enhanced injury theory); Tort and Product Liability Reform Act, ch. 27, 1981 Wash. Laws 112 (codified at WASH. REV. CODE ANN. §§ 7.72.010-7.72.060 (Supp. 1983) (court did not even address enhanced injury theory and its need for particularized treatment different from that in ordinary tort cases).

8. Caiazzo v. Volkswagenwerk, A.G., 468 F. Supp. 593, 603 (E.D.N.Y. 1979), *rev'd in part on other grounds*, 647 F.2d 241 (2d Cir. 1981). Diversity jurisdiction has itself come under attack. In Huddell v. Levin, 537 F.2d 726, 732-33 (3d Cir. 1976), the Third Circuit reiterated Chief Justice Burger's concern about the "impracticality of the federal diversity forum."

9. Sours v. General Motors Corp., 717 F.2d 1511, 1520-21 (6th Cir. 1983) (court spared the "unenviable" task of resorting to "tea leaves or to judicial tarot cards" only because the alleged error was harmless); Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 (2d Cir. 1981) ("difficult task" in this "uncertain area of the law"); Higginbotham v. Ford Motor Co., 540 F.2d 762, 771 (5th Cir. 1976) ("straining for clairvoyance"); Huddell v. Levin, 537 F.2d 726, 733 n.2 (3d Cir. 1976) (federal courts furnish "unauthoritative and diverse prognostications" on how state courts would rule); Wooten v. White Trucks, 514 F.2d 634, 636 (5th Cir. 1975) ("ironic" that the parameters of this "diversity-bound theory" of liability should be set by federal courts); Passwaters v. General Motors Corp., 454 F.2d 1270, 1277 (8th Cir. 1972) ("disliking the task" of predicting state enhanced injury law).

The recent status of enhanced injury law in North Carolina illustrates the problem. By mid-1981, North Carolina's appellate courts had not determined whether there was any legal theory that would allow a claimant to recover for enhanced injuries. They had, however, expressly held that a manufacturer's duty was governed by negligence theory. Wilson v. Lowe's Asheboro Hardware, Inc., 259 N.C. 660, 664, 131 S.E.2d 501, 503 (1963). With that background, the District Court for the District of New Jersey, applying North Carolina tort law, predicted that North

Litigants, as well as the federal courts, have been forced[10] into the "hazardous occupation"[11] of predicting, rather than applying,[12] the legal principles that the states will enforce in enhanced injury cases.

The development of a system for the adjudication of enhanced injury cases is a complex process. The conceptualization and implementation of such a new liability theory requires fresh legal thinking.[13] Judicial and statutory rules governing ordinary negligence and products liability cases cannot be mechanically applied in enhanced injury litigation.[14] Concepts must be carefully formulated to reflect the philosophical and policy considerations inherent in the enhanced injury theory of recovery.[15] The undeveloped state of enhanced injury theory heightens the need to formulate rules in a logical and evenhanded manner. Those rules then can be applied in an intellectually justifiable way to the additional issues that undoubtedly will be raised in the future.

Any such system must have clear and predictable standards[16] regarding

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Carolina's courts would both adopt the doctrine of strict liability in tort and allow recovery for enhanced injuries. *See* Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 836 (3d Cir.) (summary of the district court proceedings), *cert. denied*, 454 U.S. 867 (1981). During the pendency of the *Seese* appeal, the North Carolina Supreme Court refused to adopt the principle of strict liability in tort. Smith v. Fiber Controls Corp., 300 N.C. 669, 678, 268 S.E.2d 504, 510 (1980). In *Seese* the Third Circuit affirmed the trial court judgment. 648 F.2d at 835. The court admitted that the strict liability in tort theory was improperly submitted to the jury, but affirmed the judgment after it "predicted" that the same state court that rejected the doctrine of strict liability would allow such a claim to be asserted as a "crashworthiness" claim. *Id.* at 837, 841. Subsequently, in Wilson v. Ford Motor Co., 656 F.2d 960 (4th Cir. 1981), the Fourth Circuit, in affirming the District Court for the Western District of North Carolina's dismissal of an enhanced injury claim, "forecasted" that the North Carolina Supreme Court would *not* allow recovery for enhanced injuries. *See also* Alexander v. Seaboard Air Line R.R., 346 F. Supp. 320, 322-23, 327 (W.D.N.C. 1971) (rejecting enhanced injury doctrine noting that no North Carolina court had adopted it).

10. Some states have statutes authorizing federal courts to certify questions of local law to that state's highest appellate court. *See* UNIF. CERTIFICATION OF QUESTIONS OF LAW ACT, 12 U.L.A. 49-56 (1975); *id.* at 17 (Supp. 1983) (21 states and territories have adopted the Act).

11. Dyson v. General Motors Corp., 298 F. Supp. 1064, 1069 (E.D. Pa. 1969).

12. The Third Circuit Court of Appeals recognized the need for such predictability in Huddell v. Levin, 537 F.2d 726, 736 n.5 (3d Cir. 1976).

13. *Id.* at 742.

14. *See infra* notes 195-97, 236-47 and accompanying text.

15. *See infra* notes 195-97, 236-47 and accompanying text. *See also* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 246 (2d Cir. 1981); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 22,699, 22,704 (Okla. 1982) (motion for rehearing pending).

16. The resolution of an enhanced injury claim often involves the application of other equally important aspects of a state's tort liability system. Consequently, a state's enhanced injury theory must be conceptually consistent with that state's basic product liability theory, and with its rules regarding joint and several liability, comparative fault, indemnity, contribution, and evidence. The Department of Commerce has recognized that the diversity among the various states' tort systems is an absolute obstacle to the development of a unified system for resolving product liability claims. *See* MODEL UNIF. PROD. LIAB. ACT (UPLA), 44 Fed. Reg. 62,716 (1979).

Although offered as a model state act, the MODEL UNIF. PROD. LIAB. ACT (1979) has not been adopted in full in any state. *See* REPORT OF THE SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION ON SENATE BILL 2631, S. REP. NO. 670, 97th Cong., 2d Sess. 6 (1982). In reporting S. 2631, the Senate Committee on Commerce, Science, and Transportation proposed a federal "Product Liability Act" that would create uniform national products liability standards.

The private National Product Liability Council (P.O. Box 11111, Cincinnati, Ohio 45211 (founded in 1976)) opposes such federal legislation. The Council put forth the following objection:

While a federal solution could be narrowly tailored so as not to disrupt traditional fed-

the scope of the duty owed to the public, the elements of a prima facie case, the burden of proof, the method of proof, comparative defenses, the recovery of indemnity and contribution, and the manner in which the court will instruct a jury. To a significant extent, the specific concepts and rules proposed in this Article are based upon the enhanced injury "lore" developed by the federal courts. Certain issues, which even the federal courts have not resolved, require the application of legal principles that courts have used to resolve analogous legal problems.

I. THE PARAMETERS OF ENHANCED INJURY THEORY

A. The Concept

Enhanced injury liability is based on the premise that some objects, while they are not made for the purpose of undergoing impact, should be reasonably designed to minimize the injury-producing effect of such contact. In *Larsen v. General Motors Corp.*[17] the court discussed the nature of this type of liability:

> Automobiles are made for use on the roads and highways in transporting persons and cargo to and from various points. This intended use cannot be carried out without encountering in varying degrees the statistically proved hazard of injury-producing impacts of various types.
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> . . . .
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> No rational basis exists for limiting recovery to situations where the defect in design or manufacture was the causative factor of the accident, as the accident and the resultant injury . . . all are foreseeable.
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> . . . .
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> We perceive of no sound reason, either in logic or experience, nor any command in precedent, why the manufacturer should not be held to a reasonable duty of care in the design of its vehicle conso-

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eral-state relationships, certain reforms are necessary in all tort actions and those should be implemented through the States. With these principles in mind, the Council rejected solutions which would burden an already over-worked federal judiciary, disrupt traditional tort law doctrines or present constitutional problems in the drafting. *See, e.g.*, Simon v. St. Elizabeth Medical Center, 355 N.E.2d 903 (Ohio Common Pleas, 1976) (compulsory arbitration of medical malpractice claims violates due process and equal protection); Wright v. Central DuPage Hospital Assoc., 347 N.E. 736 (1976) (dollar limit on medical malpractice claims invalidated). *See also* Carolina Environmental Study Group, Inc. et al. v. U.S. Atomic Energy Commission, (W.D.N.C. No. C-C-73-139, March 31, 1977) (statute limiting recovery in the event of catastrophic nuclear accidents violates the due process and equal protection clauses of the Constitution; citing *Wright*, *supra*, with approval).

National Product Liability Council, Memorandum in Support of the Model Product Liability Act II-1 (1982). Neither S. 2631 nor any kindred bill has been passed by the Senate.

Ultimately, rules governing enhanced injury litigation should be included as part of a comprehensive tort and products liability code. At this juncture, no tort or products liability code has been generally accepted. The judiciary's case-by-case approach to doctrinal development is inherently limited and time consuming. *See* MODEL UNIF. PROD. LIAB. ACT, 44 Fed. Reg. 62,714 (1979) (introduction); Act of April 17, 1981, ch. 27, § 1, 1981 Wash. Laws 112 (preamble to Washington's 1981 Tort and Product Liability Reform Act).

17. 391 F.2d 495 (8th Cir. 1968).

nant with the state of the art to minimize the effect of accidents.[18]

The proper terminology for characterizing this theory is "enhanced injury" liability.[19] In addition to that term, courts and commentators have described such accidents as involving "crashworthiness"[20] or a "second collision."[21] In many cases, courts have used the three terms interchangeably.[22] In so doing, they have unintentionally masked the broad applicability

18. *Id.* at 501-03.

19. Courts have used this terminology in the following cases: Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 838 n.7 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981); Huddell v. Levin, 537 F.2d 726, 737-38 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1069 n.3 (4th Cir. 1974); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1370 n.1 (E.D. Va. 1978); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 150, 542 P.2d 774, 776 (1975).

20. Courts have used the term "crashworthiness" to describe this type of liability in the following cases: Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 835, 838 n.7 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981); Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 737-38 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1069 n.2 (4th Cir. 1974); Olsen v. United States, 521 F. Supp. 59, 63 (E.D. Pa. 1981), *cert. denied*, 103 S. Ct. 732 (1983); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1370 n.1 (E.D. Va. 1978); Arbet v. Gussarson, 66 Wis. 2d 551, 553, 225 N.W.2d 431, 433 (1975).

21. Courts have used the term "second collision" to describe this type of litigation in the following cases: Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1203 (8th Cir. 1982); Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 737-38 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1069 n.2 (4th Cir. 1974); Olsen v. United States, 521 F. Supp. 59, 63 (E.D. Pa. 1981), *aff'd mem.*, 688 F.2d 823 (3d Cir. 1982), *cert. denied*, 103 S. Ct. 732 (1983); Jeng v. Witters, 452 F. Supp. 1349, 1355, 1360 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1370 n.1 (E.D. Va. 1978); Volkswagen of Am., Inc. v. Young, 272 Md. 201, 207, 321 A.2d 737, 744 (1974); Brandenburger v. Toyota Motor Sales, U.S.A., Inc., 162 Mont. 506, 516, 513 P.2d 268, 274 (1973).

22. *See, e.g.*, Huddell v. Levin, 537 F.2d 726, 737-38 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1069 n.3 (4th Cir. 1974); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1370 n.1 (E.D. Va. 1978). In Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 838 n.7 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981), the court explicitly stated that the terms "injury enhancement" and "crashworthiness" were interchangeable. In Olsen v. United States, 521 F. Supp. 59, 63 (E.D. Pa. 1981), *cert. denied*, 103 S. Ct. 732 (1983), the court commented that the terms "crashworthiness" and "second collision" were "merely alternative expresssions for the [same] notion."

The terms "crashworthiness" and "second collision" tend to be used interchangeably. *See* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981). In Bolm v. Triumph Corp., 33 N.Y.2d 151, 157-58, 305 N.E.2d 769, 772, 350 N.Y.S.2d 644, 649 (1973), the New York Court of Appeals expressly rejected the term "crashworthiness": "The extent of that assumption, however, should be no greater than those 'second collision' injuries which would result from an impact in a reasonably designed and constructed vehicle . . . . [A] vehicle need not be made 'crash-worthy' . . . ." *See also* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981) (defining "crashworthiness"). Actually, the Court of Appeals' distinction in *Bolm* was probably based upon its failure to understand that "crashworthy" does not mean "crashproof." *Cf.* Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070 (4th Cir. 1984) (no manufacturer's obligation to build a "crash-proof" car); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968) (crash-proof vehicle cannot be designed).

One commentator has sought to draw a definitional distinction between the terms "crashworthy" and "second collision." *See* Foland, *Enhanced Injury: Problems of Proof in "Second Collision" and "Crashworthy" Cases*, 16 WASHBURN L.J. 600, 606-07 (1977). According to Foland, the distinction is both "subtle" and "obtuse." *Id.* He feels that a "second collision" theory deals with injuries caused by a "specific" defective part, while a "crashworthiness" theory involves the failure of a vehicle to provide "overall protection" to its occupants. *Id.* at 607. In fact, such a distinction is a labored one and is of no analytical aid. As the *Olsen* court recognized:

> Terms such as these, however, may be more attractive because of their brevity than they are useful from the viewpoint of comprehension. It is plainly preferable to concentrate on clearly explaining the relevant principles than to use shorthand expressions of uncertain or even incorrect meaning.

of the "enhanced injury" concept.[23]

The terms "crashworthiness"[24] and "second collision"[25] are the product of automobile litigation.[26] Many cases involving passenger cars, vans,[27] trucks,[28] motorcycles,[29] tank cars,[30] school buses,[31] snowmobiles,[32] airplanes,[33] boats,[34] and other means of transportation, do involve crashes or collisions allegedly involving enhanced injuries. The concept of recovery for enhanced injury, however, is far broader.[35] Application of the concept should not be limited to cases involving manufactured products[36] or the doctrine of

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Olsen v. United States, 521 F. Supp. 59, 63 (E.D. Pa. 1981), *aff'd mem.*, 688 F.2d 823 (3d Cir. 1982), *cert. denied*, 103 S. Ct. 732 (1983).

23. *See infra* notes 39-46, 54-59 and accompanying text.

24. In Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981), the court said the following about the origin and meaning of the term "crashworthiness":

> "Crashworthiness" means "the protection that a passenger motor vehicle affords its passengers against personal injury or death as a result of a motor vehicle accident." 15 U.S.C. § 1901(14). Coincidentally, the Caiazzos' reconstruction expert, William Steiglitz, is credited with coining the term "crashworthiness" in a paper he presented at the Institute of Aeronautical Sciences in 1950.

25. This term was used in the landmark decision Larsen v. General Motors Corp., 391 F.2d 495, 502 (8th Cir. 1968), because the court perceived that such enhanced injury vehicular accidents were usually "caused by the so-called 'second collision' of the passenger with the interior part of the automobile."

26. That many of the leading cases involve automobile accidents is not surprising. In Larsen v. General Motors Corp., 391 F.2d 495, 502 n.4 (8th Cir. 1968), the court commented about the frequency of such accidents:

> National Safety Council, Accident Facts 40 (1966 ed.) reports: In 1965 motor vehicle accidents caused 49,000 deaths, 1.8 million disabling injuries. In automobile accidents since the advent of the horseless carriage up to the end of 1965, 1.5 million people have been killed in the United States. In 1966 the annual toll of those killed in automobile accidents rose to 52,500 and 1.9 million suffered disabling injuries.

27. *See, e.g.*, Seese v. Volkswagenwerk, A.G., 648 F.2d 833 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981); Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241 (2d Cir. 1981); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066 (4th Cir. 1974); General Motors Corp. v. Lahocki, 286 Md. 714, 410 A.2d 1039 (1980); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 542 P.2d 774 (1975).

28. *See, e.g.*, Huff v. White Motor Corp., 565 F.2d 104 (7th Cir. 1977); Wooten v. White Trucks, 514 F.2d 634 (5th Cir. 1975); Vizzini v. Ford Motor Co., 72 F.R.D. 132 (E.D. Pa. 1976); Cronin v. J.B.E. Olson Corp., 8 Cal. 3d 121, 501 P.2d 1153, 104 Cal. Rptr. 433 (1972); Wernimont v. International Harvester Corp., 309 N.W.2d 137 (Iowa Ct. App. 1981).

29. *E.g.*, Bolm v. Triumph Corp., 33 N.Y.2d 151, 305 N.E.2d 769, 350 N.Y.S.2d 644 (1973).

30. *E.g.*, Rucker v. Norfolk & W. Ry, 77 Ill. 2d 434, 396 N.E.2d 534 (1979).

31. In Li Puma v. Rockland Bus Lines, Inc., 81 Misc. 2d 988, 367 N.Y.S.2d 149 (1975), the court held that there was a genuine issue of fact regarding whether General Motors was liable for injuries allegedly enhanced when the bus it manufactured was struck by a freight train.

32. *E.g.*, Smith v. Ariens Co., 375 Mass. 620, 377 N.E.2d 954 (1978).

33. *E.g.*, Bruce v. Martin-Marietta Corp., 544 F.2d 442 (10th Cir. 1976); Trust Corp. of Mont. v. Piper Aircraft Corp., 506 F. Supp. 1093 (D. Mont. 1981); McGee v. Cessna Aircraft Co., 82 Cal. App. 3d 1005, 147 Cal. Rptr. 694 (1978); Cousins v. Instrument Flyers, Inc., 58 A.D.2d 336, 396 N.Y.S.2d 655 (1977); Wilson v. Piper Aircraft Corp., 282 Or. 61, 577 P.2d 1322 (1978); Duncan v. Cessna Aircraft Co., 632 S.W.2d 375 (Tex. Civ. App. 1982). *See also* Note, *The Crashworthiness Doctrine and the Allocation of Risks in Commercial Aviation*, 52 S. CAL. L. REV. 1581 (1979).

34. *E.g.*, Hebert v. Vice, 413 So. 2d 342 (La. Ct. App. 1982).

35. *See* Larsen v. General Motors Corp., 391 F.2d 495, 504 (8th Cir. 1968).

36. Restatement (Second) of Torts § 402A only applies to "sellers" engaged in the business of "selling" products. Telephone companies, electric companies and other designers and installers of utility poles and power lines installed on and over public streets often are not involved in "selling" such objects. Such nonseller entities should also be charged with a duty to design and maintain such publicly located objects in a safe condition. *See* Bernier v. Boston Edison Co., 380 Mass.

strict liability in tort.[37] The theory should be applied to any situation in which an object or conduct does not cause contact, but wrongfully causes the damage from the contact[38] to be greater than it would have been had a deficiency in the object or conduct not existed.

The terms "crashworthiness" and "second collision" are not descriptive of many nonvehicular accidents. Enhanced injuries can result when a defective window or a pair of sunglasses shatters, rather than fractures, upon impact,[39] when a beverage bottle shatters into particles, some of which enter and damage the eye of the person who threw the bottle,[40] when dangerously combustible wall insulation[41] or other material[42] allows a fire to spread more extensively or to give off noxious fumes, when clothing or other fabrics burn rapidly rather than slowly,[43] when a rigid utility pole[44] or an exposed electri-

372, 403 N.E.2d 391 (1980) (electric company that owned, designed and controlled light poles had duty to design against reasonably foreseeable risks related to environment in which poles used).

37. In Larsen v. General Motors Corp., 391 F.2d 495, 503 n.5 (8th Cir. 1968), the court recognized that an enhanced injury recovery "can rest . . . on general negligence principles." *See also* Baumgardner v. American Motors Corp., 83 Wash. 2d 751, 757-58, 522 P.2d 829, 833 (1974).

38. The doctrine is also applicable when there is no collision but when there is "movement" within the vehicle. *See infra* note 47 and accompanying text.

39. *E.g.*, Filler v. Rayex Corp., 435 F.2d 336 (7th Cir. 1970) (sunglasses). While the court did not utilize "enhanced injury" terminology in resolving *Filler*, the same court subsequently recognized that the *Filler* accident involved an enhanced injury claim. Huff v. White Motor Corp., 565 F.2d 104, 108 (7th Cir. 1977).

40. *See, e.g.*, Venezia v. Miller Brewing Co., 626 F.2d 188 (1st Cir. 1980). In *Venezia* the court recognized that the plaintiff's claim was for an "enhanced injury" ("so-called second collision"). *Id.* at 190. The court determined, however, that the defendant's duty to manufacture a reasonably safe container did not include the responsibility of designing a beer bottle that would not shatter when thrown against a pole. *Id.* at 190-91.

41. In such a case, the fire might be caused by faulty electrical parts or by a fuel leak. Even if he negligently caused the fire, an owner of a vessel, commercial building, or a home has a right to expect that wall or bulkhead insulation will not give off noxious fumes or lead to unduly rapid flame spread when the fire contacts the insulation. *See* Consent Order to Cease and Desist, *In re* Society of the Plastics Industry, Inc. (FTC File No. 7323040) (fire spread characteristics of foamed plastic material).

42. *See, e.g.*, Hentschel v. Baby Bathinette Corp., 215 F.2d 102 (2d Cir. 1954) (fire broke out in bathroom and ignited supports of bathinette). If the same case were litigated today, the Second Circuit in all likelihood would adopt the reasoning set out in Judge Frank's dissenting opinion. Unlike the majority, Judge Frank anticipated the enhanced injury concepts subsequently espoused in Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968), and Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241 (2d Cir. 1981). *See* Hentschel v. Baby Bathinette Corp., 215 F.2d 102, 105-14 (2d Cir. 1954) (Frank, J., dissenting).

43. *See* Howard v. McCrory Corp., 601 F.2d 133 (4th Cir. 1979) (fatal burns suffered when pajamas and bathrobe ignited); Raymond v. Riegel Textile Corp., 484 F.2d 1025 (1st Cir. 1973) (flannelette nightgown burst into flame within two seconds of contacting electric range grill); Brech v. J.C. Penney Co., 532 F. Supp. 916 (D.S.D. 1982) (flannel nightgown caught fire over gas stove); Di Maso v. Wieboldt Stores, Inc., 37 Ill. App. 3d 966, 347 N.E.2d 466 (1976) (pajama tops caught fire while a child was playing with matches); Dye v. Kean's, 412 So. 2d 116 (La. Ct. App. 1982) (heat given off by ignited methyl ethyl ketone, and not the burn characteristics of a work uniform, caused plaintiff's burns); Gryc v. Dayton-Hudson Corp., 297 N.W.2d 727 (Minn. 1980) (flannelette pajamas caught fire when a four year old was leaning over a stove); Smith v. J.C. Penney Co., 269 Or. 643, 525 P.2d 1299 (1974) (burning coat radiated heat and emitted gases when the wearer was exposed to a gasoline fire). Enhanced injury principles were not expressly invoked to resolve any of the above flammable fabrics cases. In several of the cases, however, the courts implicitly recognized the need to show enhancement over and above injuries that would have resulted with nondefective fabrics. Howard v. McCrory Corp., 601 F.2d 133, 137 (4th Cir. 1979); Brech v. J.C. Penney Co., 532 F. Supp. 916, 923 (D.S.D. 1982); Di Maso v. Wieboldt Stores, Inc., 37 Ill. App. 3d at 974, 347 N.E.2d at 473; Dye v. Kean's, 412 So. 2d 116, 120 (La. Ct. App. 1982);

cal wire[45] causes more extensive damages to a person or property than if the pole had been flexible or the wire had been concealed, or when a physician's negligent treatment increases the extent of the injuries suffered in an earlier accident.[46]

The "second collision" concept is an inartful way of describing even a vehicular-impact enhanced injury case. A manufacturer of motor vehicles can be held liable for enhanced injuries even if its vehicle is not involved in a crash or collision.[47] When a vehicle is involved in an impact, a passenger can suffer an enhanced injury without "colliding" with any interior portion of the vehicle. A defectively installed seat belt can fatally injure a passenger even though the initial impact did not cause any interior collision.[48] In a car with a defective door latch, fatal enhanced injuries may result when a passenger is ejected from the vehicle without making injurious contact within the passenger compartment.[49] Fuel tank cases involve burn injuries that are wholly unrelated to any secondary impact between a person and the vehicle.[50]

Several courts have mechanically based important policy decisions on the perceived vitality of the "second collision" concept.[51] For the most part, those courts have superficially compared so-called "second collision" cases to negligence cases involving "concurrent" impacts by two or more negligently driven vehicles.[52] Courts should abandon the "second collision" jargon. Enhanced injury theory should be the product of thoughtful legal analysis and not the

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Gryc v. Dayton-Hudson Co., 297 N.W.2d 727, 731 (Minn. 1980). In Turcotte v. Ford Motor Co., 494 F.2d 173, 181 (1st Cir. 1974), an enhanced injury case involving a ruptured fuel system, the court recognized that flammable fabrics cases involve analogous enhanced injury principles.

44. Enhanced injury analysis should be applied to these and other appropriate cases even when a power company or other entity did not manufacture the pole, road divider, or other object. *See supra* note 36.

45. *See* Bernier v. Boston Edison Co., 380 Mass. 372, 403 N.E.2d 391 (1980).

46. *E.g.*, Zillman v. Meadowbrook Hosp. Co., 45 A.D.2d 267, 358 N.Y.S.2d 466 (1974).

47. See Ford Motor Co. v. Zahn, 265 F.2d 729 (8th Cir. 1959), in which a passenger recovered for the loss of an eye that was damaged when his face struck the jagged edge of a manufacturer-installed dashboard ashtray. The vehicle in which Zahn was riding was not involved in a collision. Zahn's head slammed against the dashboard when the driver stopped suddenly to avoid striking another vehicle.

48. In Fox v. Ford Motor Co., 575 F.2d 774, 778 (10th Cir. 1978), plaintiff alleged that defective seat belts themselves caused extensive abdominal injuries and spinal fractures to two rear seat passengers. Plaintiffs alleged that the belts were assembled at an improper angle. *Cf.* Endicott v. Nissan Motor Corp., 73 Cal. App. 3d 917, 922, 141 Cal. Rptr. 95, 98 (1977) (driver struck vehicle interior when seat belt ruptured); Engberg v. Ford Motor Co., 205 N.W.2d 104, 106 (S.D. 1973) (decedent ejected from vehicle in which seat belt found broken). *See also infra* note 232.

49. *See* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 243 n.2 (2d Cir. 1981). In Jeng v. Witters, 452 F. Supp. 1349, 1355 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979), the court noted that the term "second collision" was not truly descriptive of vehicular ejection cases.

50. Injuries in automobile fuel system cases are usually caused by "spread of . . . fire in the interior of the car." Nanda v. Ford Motor Co., 509 F.2d 213, 220 (7th Cir. 1974). *See infra* notes 157-59 and accompanying text.

51. *See* Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1207-08 (8th Cir. 1982); Fox v. Ford Motor Co., 575 F.2d 774, 787 (10th Cir. 1978); Fouche v. Chrysler Motors Corp., 103 Idaho 249, 253, 646 P.2d 1020, 1024 (1982).

52. This approach was expressly followed in Fox v. Ford Motor Co., 575 F.2d 774, 787 (10th Cir. 1978). *See infra* text accompanying notes 106-10, 186-88.

overloading of other liability concepts.[53]

B. The Nature of the Duty to Protect Against Enhanced Injury

1. The Broad Applicability of the Concept

Enhanced injury cases involve proof of the same general elements required in any tort case.[54] A claimant must establish (1) that the defendant owed a duty to the claimant, (2) that the defendant breached that duty, (3) that the breach was a proximate cause of injury to the claimant, and (4) that the claimant suffered damage.[55]

Except for the more particularized proximate cause issue common to all such cases, enhanced injury litigation offers no unique problems.[56] Subsumed within the enhanced injury concept are such diverse breaches of duty as those involving fuel-powered vehicles, other types of manufactured products, utility poles, electrical and power lines, other publicly located objects, and physicians' services. Each object or type of conduct, moreover, may be governed by separate and distinct duties, calling for different standards of care or safety.[57] The *general* framework of each particular duty, however, is the same in an enhanced injury setting as it is when the same alleged breach actually causes an underlying accident. For example, a product manufacturer's duty to make a reasonably safe product applies with equal force to both accident prevention and to the minimization of injuries resulting from foreseeable accidents involving its product.[58] In a products liability case for enhanced injuries, the

53. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 246 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 742 (3d Cir. 1976).

54. Baumgardner v. American Motors, 83 Wash. 2d 751, 758-59, 522 P.2d 829, 833-34 (1974); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,700 (Okla. 1982) (motion for rehearing pending).

55. *See* Ward v. Hobart Mfg. Co., 450 F.2d 1176, 1181 (5th Cir. 1971); W. PROSSER, LAW OF TORTS § 30 (4th ed. 1971).

56. Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,700 (Okla. 1982) (motion for rehearing pending); *see also* Knippen v. Ford Motor Co., 546 F.2d 993, 1000 n.9 (D.C. Cir. 1976).

57. Courts have imposed different standards relating to the following objects:

(1) "Products" sold by manufacturers must not be defective. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

(2) Electric companies, utilities, and other energy suppliers of high voltage energy have been held to a more stringent standard of care than normal businesses. *See, e.g.*, Dunnaway v. Duquesne Light Co., 423 F.2d 66, 69 n.2 (3d Cir. 1970); Haberman v. Commonwealth Edison Co., 84 Ill. App. 3d 475, 479, 405 N.E.2d 830, 834 (1980); Erbes v. Union Elec. Co., 353 S.W.2d 659, 664 (Mo. 1962); Lorence v. Omaha Pub. Power Dist., 191 Neb. 68, 72, 214 N.W.2d 238, 240 (1974); Black v. Public Serv. Elec. & Gas Co., 56 N.J. 63, 72, 265 A.2d 129, 133 (1970); Miner v. Long Island Lighting Co., 40 N.Y.2d 372, 378-79, 353 N.E.2d 805, 809, 386 N.Y.S.2d 842, 846 (1976); Vannoy v. Pacific Power & Light Co., 59 Wash. 2d 623, 631-32, 369 P.2d 848, 852-53 (1962).

(3) Health care providers are held to that degree of care, skill, and learning expected of a reasonably prudent health care provider in the same specialty. *See, e.g.*, Brown v. Colm, 11 Cal. 3d 639, 642-43, 522 P.2d 688, 689, 114 Cal. Rptr. 128, 129 (1974); Perin v. Hayne, 210 N.W.2d 609, 615 (Iowa 1973); Kortus v. Jensen, 195 Neb. 261, 268, 237 N.W.2d 845, 850 (1976); Starnes v. Taylor, 272 N.C. 386, 392, 158 S.E.2d 339, 343 (1968).

(4) People not held to a particularized standard are required to exercise ordinary and reasonable care, appropriate under the circumstances, in protecting others from objects with injury causing potential. *See, e.g.*, RESTATEMENT (SECOND) OF TORTS §§ 284, 298 (1965).

58. Larsen v. General Motors Corp., 391 F.2d 495, 502 (8th Cir. 1968).

plaintiff has the same burden, as in other products cases, of proving that the manufacturer breached that duty.[59]

2. Scope of the Duty

Defining the scope of any duty, in the context of a particular risk, is a legal rather than a factual matter.[60] In enhanced injury litigation, that function has been undertaken most often in the context of claims against vehicle manufacturers. Those rules should also be applied to other types of enhanced injury cases.[61]

The duty involved in enhanced injury litigation is conceptually simple.[62] Manufacturers[63] and, in other judicially recognized situations,[64] nonmanufacturers, have a duty to take reasonable steps to minimize the injury-producing effects of contact with their products, objects, and conduct.[65] Clearly, the duty is not absolute.[66] While courts uniformly have recognized the relative nature of the obligation, they have had difficulty in defining the breadth of the duty.[67]

In every fully litigated enhanced injury case, the court concerns itself with the duty issue on two distinct occasions. At the outset of the trial, the court performs the threshold task of determining whether, as a matter of law, the plaintiff has alleged a claim within the ambit of enhanced injury theory.[68] In deciding whether the claimant has stated a viable claim, the court's focus on the duty issue is often narrow and exclusionary. Even when accidents involve colorable allegations of both unsafe conditions and enhanced injuries, courts have determined that defendants had no duty to protect against certain types of harm.[69]

In automobile cases, courts have recognized that manufacturers do not

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59. *Id.* at 502.

60. *Id.* at 498; Huddell v. Levin, 537 F.2d 726, 734 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1069 (4th Cir. 1974); Yetter v. Rajeski, 364 F. Supp. 105, 108 (D.N.J. 1973); Kahn v. Chrysler Corp., 221 F. Supp. 677, 678 (S.D. Tex. 1963); Hatch v. Ford Motor Co., 163 Cal. App. 2d 393, 397, 329 P.2d 605, 607 (1958).

61. In Larsen v. General Motors Corp., 391 F.2d 495, 504 (8th Cir. 1968), the court emphasized that it had not "singled out" the automobile industry for "special adverse treatment." In stating that its holding applied to "all manufacturers," the court failed to recognize that the application of enhanced injury theory was not so limited. *But see supra* notes 36-46 and accompanying text.

62. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981).

63. In Barris v. Bob's Drag Chutes & Safety Equip. Inc., 685 F.2d 94, 100 n.8 (3d Cir. 1982), the court erroneously held that enhanced injury theory should not be applied in products liability cases involving manufacturers of component parts. *See supra* notes 36-37, 61.

64. *See infra* notes 66-83 and accompanying text.

65. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1071 (4th Cir. 1974); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968).

66. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 270 (2d Cir. 1981); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968); Bolm v. Triumph Corp., 33 N.Y.2d 151, 157, 305 N.E.2d 769, 772, 350 N.Y.S.2d 644, 649 (1973).

67. *See, e.g.*, Alexander v. Seaboard Air Line R.R., 346 F. Supp. 320, 327 (W.D.N.C. 1971). *See also infra* note 75.

68. Huddell v. Levin, 537 F.2d 726, 734-35 (3d Cir. 1976). *See also supra* note 60 and accompanying text.

69. *See infra* notes 75-77 and accompanying text.

have a duty to produce "crash proof" vehicles.[70] In that vein, courts have stated that manufacturers do not have to make vehicles that "float on water,"[71] that have the "strength and crash-damage resistance features of an M-2 Army tank,"[72] that would withstand a "head-on collision with a large truck at high speed,"[73] or that would survive an impact with "a 114-ton locomotive engine traveling at the rate of 45 miles per hour."[74] In other cases, courts have focused on the remote relationship between the accident and the intended use of the product and determined that a defendant owed no duty.[75]

70. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 247 (2d Cir. 1981); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070 (4th Cir. 1974); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968). *See also* Fox v. Ford Motor Co., 575 F.2d 774, 782 (10th Cir. 1978); Huddell v. Levin, 537 F.2d 726, 735 (3d Cir. 1976); Passwaters v. General Motors Corp., 454 F.2d 1270, 1276 (8th Cir. 1972); Rutherford v. Chrysler Motors Corp., 60 Mich. App. 392, 395, 231 N.W.2d 413, 414 (1975); Brandenburger v. Toyota Motor Sales, U.S.A., Inc., 513 P.2d 268, 274 (Mont. 1973). On the other hand, courts have recognized that manufacturers must provide "more than merely a movable platform capable of transporting passengers from one point to another." *E.g.*, Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073 (E.D. Pa. 1969). A vehicle's roof, moreover, should provide "more than merely protection against the rain." *Id. See also* Sours v. General Motors Corp., 717 F.2d 1511, 1514 (6th Cir. 1983).

71. Larsen v. General Motors Corp., 391 F.2d 495, 502 (8th Cir. 1968); *see also* Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073 (E.D. Pa. 1969). In *Larsen* the court qualified its statement by saying that a manufacturer did not have a duty to manufacture a vehicle with flotation capability "under the present state of the art." *Larsen*, 391 F.2d at 502. *Cf.* Wooten v. White Trucks, 514 F.2d 634, 636 (5th Cir. 1975) (*Larsen* "may indeed require consideration of the cars' flotation capability"). In *Wooten* the court critically referred to "the *Larsen*-induced spectre of one approved automobile design resembling nothing so much as a $100,000 amphibious tank." *Id.*

72. Roberts v. May, 41 Colo. App. 82, 85, 583 P.2d 305, 308 (1978).

73. Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1073 (4th Cir. 1974); Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073 (E.D. Pa. 1969).

74. Alexander v. Seaboard Air Line R.R., 346 F. Supp. 320, 327 (W.D.N.C. 1971). In *Alexander* the district court, applying North Carolina law, "rejected the *Larsen* rule" in its entirety and indicated that, "if the American people are to travel in Sherman tanks," Congress was the authority that should create such a cause of action. *Id. Cf.* Li Puma v. County of Rockland, 81 Misc. 2d 988, 991, 367 N.Y.S.2d 149, 152-53 (1975) (jury issue whether alleged defects in school bus, struck by freight train weighing in excess of 4,000 tons, caused enhanced injuries). The mere fact that the impacting vehicle is a locomotive is not dispositive. In resolving the threshold duty issue, the court must consider all of the circumstances surrounding an accident. *See infra* note 128.

75. *See* Schneider v. Chrysler Motors Corp., 401 F.2d 549, 558 (8th Cir. 1968) (denying recovery to nonoccupant who, when bending down over an opened vent window of an automobile, hit his eye on a sharp corner of the glass); Kahn v. Chrysler Corp., 221 F. Supp. 677, 679 (S.D. Tex. 1963) (manufacturer owed no duty to seven year old bicyclist who drove into the allegedly sharp, elongated rear fins that protruded behind the body of the vehicle); Hatch v. Ford Motor Co., 163 Cal. App. 2d 393, 397, 329 P.2d 605, 608 (1958) (manufacturer owed no duty to six year old child who walked into parked car's radiator ornament).

The "parked car" decisions in *Schneider*, *Hatch*, and *Kahn* have been criticized. In Knippen v. Ford Motor Co., 546 F.2d 993, 1001 (D.C. Cir. 1976) (motorcyclist's claim that injuries enhanced by contact with sharply pointed projection on impacting sedan properly submitted to jury), the court, after distinguishing the "parked car" cases, questioned the vitality of those decisions:

> Both *Hatch* and *Kahn* were decided before their respective jurisdictions adopted the *Larsen* rule. *See* Cronin v. J.B.E. Olson Corp., 8 Cal. 3d 121, 104 Cal Rptr. 433, 501 P.2d 1153 (1972) (en banc); Turner v. General Motors Corp., [514 S.W.2d 497 (Tex. Civ. App. 1974)]. Whatever support those cases may previously have offered to Ford's position their continuing validity is dubious.

In Passwaters v. General Motors Corp., 454 F.2d 1270, 1276 n.5 (8th Cir. 1972) (motorcycle passenger's claim that unshielded metal flanges on wheel cover of colliding sedan enhanced injury), the court disagreed with the "no duty" determinations in *Hatch* and *Schneider*:

> The difficulty is that "foreseeability" is a hazardous term to define in the abstract and,

Similar case-by-case reasoning should be employed in any enhanced injury case in which the accident is so devastating, remote, or bizarre that it is beyond both the "intended use"[76] of the product and the "probable ancillary consequences of normal use."[77]

While it is an important factor, the mere foreseeability of injury-producing contact will not justify creation of a duty to prevent resultant harm. As the Fourth Circuit recognized in *Dreisonstok v. Volkswagenwerk, A.G.*:[78]

> The mere fact, however, that automobile collisions are frequent enough to be foreseeable is not sufficient in and of itself to create a duty on the part of the manufacturer to design its car to withstand such collisions *under any circumstances*. Foreseeability, it has been many times repeated, is not to be equated with duty; it is, after all, but one factor, albeit an important one, to be weighed in determining the issue of duty. Were foreseeability of collision the absolute litmus test for establishing a duty on the part of the car manufacturer, the obligation of the manufacturer to design a crash-proof car would be absolute, a result that *Larsen* itself specifically repudiates. After all, "[N]early every accident situation, [involving an automobile] no matter how bizarre, is 'foreseeable' if only because in the last fifty years drivers have discovered just about every conceivable way of wrecking an automobile."[79]

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like so many other doctrines, must turn on the judgmental process. Interesting contrasts may be seen in the findings of "no duty" rendered in *Hatch* and *Schneider*. The *Schneider* panel implied that a sharp protruding ornament like a radiator cap (the facts of *Hatch*) might have been reasonably foreseeable as creating a risk of harm . . . Generally whether a duty exists is a question of law, yet when a difficult determination depends on policy values underlying the "common affairs of life," it is generally thought that the jury is the best deviner [sic] of such values . . . . Under such a guideline perhaps the mechanics of the foreseeability test would be better left to the jurors' decision.

Id. (citations omitted).

In *Passwaters* the court also recognized that RESTATEMENT (SECOND) OF TORTS § 395 comment i (1965), and 49 C.F.R. § 571.21 (1971), supported its approach. *Passwaters*, 454 F.2d at 1275 nn.2, 4. *See also* Restatement (Second) of Torts § 281 comment c (1965); Note, *The Automobile Manufacturer's Liability to Pedestrians for Exterior Design: New Dimensions in "Crashworthiness,"* 71 MICH. L. REV. 1654, 1669 (1973). Washington's new product liability actions statute, WASH. REV. CODE ANN. § 7.72.010(5) (1983), specifically recognizes that bystanders as well as product users may recover damages if an unsafe product causes injury.

76. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 247 (2d Cir. 1981); Venezia v. Miller Brewing Co., 626 F.2d 188, 191 (1st Cir. 1980); Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1071 (4th Cir. 1974); Larsen v. General Motors Corp., 391 F.2d 594, 502 (8th Cir. 1968).

77. Venezia v. Miller Brewing Co., 626 F.2d 188, 191 (1st Cir. 1980) (no duty to manufacture beer bottle that will not shatter when thrown against pole).

78. 489 F.2d 1066 (4th Cir. 1974).

79. *Id.* at 1070. It would be unreasonable to require a manufacturer to protect against every conceivable accident. Nader & Page, *Automobile Design and the Judicial Process*, 55 CAL. L. REV. 645, 661-62 (1967). It is necessary to distinguish between "intended use" and foreseeability:

> Plaintiff again, as he did in his warranty argument, attempts to expand the scope of the "intended" use concept by resort to the familiar, and sometimes misleading, rubric of "foreseeability." But reliance on such generality is of limited assistance, for "[i]n a sense, in retrospect almost nothing is unforeseeable." Green v. Volkswagen of America, Inc., 485 F.2d 430, 438 (6th Cir. 1973) (quoting Mieher v. Brown, 54 Ill. 2d 539, 301 N.E.2d 307 (Ill. 1973)); *see also* [W. PROSSER, HANDBOOK OF THE LAW OF TORTS] § 43, p. 267-68. One with the time and imagination and aided by hindsight no doubt can conjure up

Whether a duty exists is "ultimately a question of fairness."[80] In routine cases, the duty issue is not difficult.[81] Many enhanced injuries clearly involve the broadly defined duty to take reasonable steps to protect against post-contact harm. In those cases, the primary issues involve the alleged breach of that duty and proximate causation. If the circumstances surrounding an accident are unusual, however, a court must make a "delicate policy judgment"[82] when determining whether a duty exists. This legal determination has a significant subjective component:

> It all depends upon what factors in the evidence a court is willing to isolate and emphasize for the purpose of making this decision, which process in turn depends pretty much on what outcome the court wishes to achieve or thinks to be politic. This factor in the judgment process, in turn, is not usually a matter of conscious choice but may be a function of the judge's accumulated experience in and observations of the world he lives in.[83]

The trial court must again evaluate the duty issue at the time the case is to be submitted to the trier of fact.[84] At this stage of the litigation, the court performs an explanatory,[85] rather than an exclusionary, function. In nonjury cases, this process is formally performed when the court files its conclusions of law. In a jury case, the court's jury instructions describe, in a neutral manner, the scope of the duty to protect against enhanced injuries. The appendix to this Article sets out jury instructions and a verdict form for an illustrative en-

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all sorts of arguably "foreseeable" misuses of a variety of otherwise reasonable safe products.

Venezia v. Miller Brewing Co., 626 F.2d 188, 191 (1st Cir. 1980).

As the court recognized in Yetter v. Rajeski, 364 F. Supp. 105, 108 (D.N.J. 1973):

> It is obvious, of course, that automobiles are unhappily and almost continuously colliding with other motor vehicles, with trees, with culverts, with locomotives, and with every imaginable type of object, either moving or fixed; and they are, indeed, driven off bridges, driven into water, and driven over cliffs; they are, in fact, involved in collisions of limitless variety.

80. Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070 n.9 (4th Cir. 1974); Goldberg v. Housing Auth., 38 N.J. 578, 583, 186 A.2d 291, 293 (1962).

81. Wells v. City of Vancouver, 77 Wash. 2d 800, 808, 467 P.2d 292, 298 (1980) (Finley, J., concurring).

82. Raymond v. Paradise Unified School Dist., 218 Cal. App. 2d 1, 8, 31 Cal. Rptr. 847, 851-52 (1963). In *Raymond* the court said the following about its analytic framework:

> The social utility of the activity out of which the injury arises, compared with the risks involved in its conduct; the kind of person with whom the actor is dealing; the workability of a rule of care, especially in terms of the parties' relative ability to adopt practical means of preventing injury; the relative ability of the parties to bear the financial burden of injury and the availability of means by which the loss may be shifted or spread; the body of statutes and judicial precedents which color the parties' relationship; the prophylactic effect of a rule of liability; in the case of a public agency defendant, the extent of its powers, the role imposed upon it by law and the limitations imposed upon it by budget; and finally, the moral imperatives which judges share with their fellow citizens—such are the factors which play a role in the determination of duty.

Id.

83. Gregory, *Proximate Cause in Negligence—A Retreat from "Rationalization,"* 6 U. CHI. L. REV. 36, 50 (1938).

84. Huddell v. Levin, 537 F.2d 726, 734 (3d Cir. 1976).

85. *Id.*

hanced injury case.[86]

Most of the general legal standards governing ordinary products liability or negligence cases are applicable to enhanced injury litigation.[87] Resolution of an enhanced injury case, however, involves additional, particularized standards that define the scope of this duty. Several of the additional standards are cautionary. Before evaluating a product or other object, the trier of fact should expressly consider the object's inherent characteristics,[88] its price,[89] and the circumstances of the accident.[90] The trier must also recognize that a claimant can only recover for that portion of the damages over and above that which would probably have occurred absent the unsafe condition.[91]

II. PROVING AN ENHANCED INJURY CLAIM

A. The Prima Facie Case

Judicial decisions that recognize a right of recovery have subscribed[92] to the following statement in *Larsen v. General Motors Corp.*[93] as framing the conceptual parameters of recovery:

> Any design defect not causing the accident would not subject the manufacturer to liability for the entire damage, but the manufacturer should be liable for that portion of the damage or injury caused by the defective design over and above the damage or injury that probably would have occurred as a result of the impact or collision absent the defective design.[94]

The courts have, nevertheless, disagreed regarding the nature and relative distinctiveness of enhanced injury theory. At one extreme, courts have charac-

86. *See infra* notes 248-85 and accompanying text.

87. Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,700 (Okla. 1982) (motion for rehearing pending).

88. Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1072-73 (4th Cir. 1974). *See also* Huddell v. Levin, 537 F.2d 726, 740-41 (3d Cir. 1976); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975). Convertibles, vans, and all objects must be evaluated in terms of their own inherent characteristics. Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073 (E.D. Pa. 1969); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975).

89. Fox v. Ford Motor Co., 575 F.2d 774, 783 (10th Cir. 1978); Wooten v. White Trucks, 514 F.2d 634, 636 (5th Cir. 1975); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1072-73 (4th Cir. 1974); Jeng v. Witters, 452 F. Supp. 1349, 1356 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979); Volkswagen of Am., Inc. v. Young, 272 Md. 201, 219, 321 A.2d 737, 746 (1974); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975).

90. *See infra* note 128.

91. Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968); Baumgardner v. American Motors, 83 Wash. 2d 751, 755, 522 P.2d 829, 832 (1974). *See also infra* note 92.

92. Despite significant disagreements about matters of proof, all of the leading decisions have adopted the core statement in Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968), concerning the extent of enhanced injury liability. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 250 n.16 (2d Cir. 1981); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,701-02 (Okla. 1982) (motion for rehearing pending).

93. 391 F.2d 495 (8th Cir. 1968).

94. *Id.* at 503.

terized and treated the theory as being sui generis.[95] At the other extreme, courts have concluded that "orthodox tort principles" governing other types of tort cases can be routinely applied to enhanced injury cases.[96] The disagreement is of more than academic interest. The two[97] different threshold characterizations have produced, or been used to justify, markedly different approaches to the elements of a prima facie enhanced injury case, the burden of proof, and the requirements regarding specificity of proof.

In reality, enhanced injury theory is neither sui generis nor the subject for a mechanical application of other tort formulas. Enhanced injury litigation presents no unique problems in proving an alleged breach of duty, but does require a particularized treatment of the proximate cause issue.[98] Enhanced injury cases involve events that, according to common experience, often result in injuries even if a product or object is reasonably designed to minimize the effects of an accident.[99] For that reason, in enhanced injury litigation, the proximate cause issue should be addressed by the court as two separate, but related, sub-issues involving the occurrence *and* the extent of enhancement.[100]

In an enhanced injury case, the claimant has the burden of proving each of the following three elements by a preponderance of the evidence:

(1) A breach of a duty owed to the claimant;[101]

(2) Proof that the breach caused an enhancement of damage over and above what would otherwise have occurred;[102]

(3) Proof of the extent to which the damage was enhanced as a result of the breach of duty.[103]

The third element has been a source of controversy. The Second Circuit's decision in *Caiazzo v. Volkswagenwerk, A.G.*[104] and other decisions faithful to the theoretical underpinnings of enhanced injury theory have required proof of the extent of enhancement as part of a claimant's prima facie case.[105] If a

95. Huddell v. Levin, 537 F.2d 726, 742 (3d Cir. 1976).

96. Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1207 (8th Cir. 1982); Fox v. Ford Motor Co., 575 F.2d 774, 787 (10th Cir. 1978).

97. California's generally unique approach to products liability litigation places it outside both conceptual frameworks. The California courts apply a two-tier burden of proof model in both ordinary products cases and in enhanced injury cases. Barker v. Lull Eng'g Co., 20 Cal. 3d 413, 431-32, 573 P.2d 443, 455, 143 Cal. Rptr. 225, 237 (1978) (ordinary products liability case); Daly v. General Motors Corp., 20 Cal. 3d 725, 746, 575 P.2d 1162, 1175, 144 Cal. Rptr. 380, 393 (1978) (enhanced injury case).

98. Knippen v. Ford Motor Co., 546 F.2d 993, 1000 n.9 (D.C. Cir. 1976); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,700-01 (Okla. 1982) (motion for rehearing pending).

99. Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968).

100. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 250-51 (2d Cir. 1981).

101. A plaintiff must prove a breach of duty to prevail in any tort case. W. PROSSER, *supra* note 55, at 143.

102. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 250-51 (2d Cir. 1981); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968). *See also infra* note 105.

103. *See supra* note 102.

104. 647 F.2d 241 (2d Cir. 1981).

105. *See* Curtis v. General Motors Corp., 649 F.2d 808, 813 (10th Cir. 1981); Bauman v. Volkswagenwerk, A.G., 621 F.2d 230, 235 (6th Cir. 1980); Stonehocker v. General Motors Corp., 587 F.2d 151, 158 (4th Cir. 1978); Huddell v. Levin, 537 F.2d 726, 742 (3d Cir. 1976); Dreisonstok

defendant's liability is to be limited to those damages "over and above" those which would have occurred absent the breach of duty, a claimant must be required to offer such proof.

In *Fox v. Ford Motor Co.*[106] the Tenth Circuit, ostensibly for doctrinal reasons, held that the third element was not a requisite element of a claimant's prima facie case.[107] In *Fox* the court determined that a claimant need only prove a breach of duty and that the breach was a proximate cause of enhanced injury.[108] According to *Fox*, under "orthodox doctrines of joint liability of concurrent tortfeasors,"[109] a defendant causing an enhanced injury would be liable for the *entirety* of the claimant's damage unless the defendant could both establish that the overall injuries were legally "divisible" and then prove the amount of enhancement.[110] As the Eighth Circuit's decision in *Mitchell v. Volkswagenwerk, A.G.*[111] implies, however, the real concern of the minority of courts following the *Fox* approach is not a doctrinal one. In *Mitchell* the court sacrificed conceptual clarity and the clear procedural implications of *Larsen v. General Motors Corp.* because of its fear that, as a practical matter, such an element of proof would "relegate victims to an almost hopeless state of never being able to succeed."[112]

In *Caiazzo v. Volkswagenwerk, A.G.*[113] the Second Circuit recognized that, depending on the type of the alleged enhancement, a claimant's burden in proving enhancement will be "heavy in some instances and perhaps impossible in others."[114] Nevertheless, that burden does not "erode"[115] *Larsen* or

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v. Volkswagenwerk, A.G., 489 F.2d 1066, 1076 (4th Cir. 1974); Jeng. v. Witters, 452 F. Supp. 1349, 1360 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979); Wernimont v. International Harvester Corp., 309 N.W.2d 137, 140-41 (Iowa Ct. App. 1981); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,704 (Okla. 1982) (motion for rehearing pending); Baumgardner v. American Motors, 83 Wash. 2d 751, 758-59, 522 P.2d 829, 833-34 (1974).

106. 575 F.2d 774 (10th Cir. 1978).

107. *Id.* at 787-88.

108. *Id.* In Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199 (8th Cir. 1982), the court defined this approach to the burden of proof as follows: "[T]he plaintiff's burden of proof should be deemed satisfied against the manufacturer if it is shown that the design defect was a *substantial factor* in *producing damages* over and above those which were probably caused as a result of the original impact or collision." *Id.* at 1206 (emphasis added). The phrase "substantial factor" is nothing more than the stock language set out in the general proximate cause instruction given by the federal courts in ordinary tort cases. *See* 3 E. DEVITT & C. BLACKMAR, FEDERAL JURY PRACTICE AND INSTRUCTIONS § 80.18 (1977).

109. *Fox*, 575 F.2d at 787. *See also* Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1207 (8th Cir. 1982). Other courts have expressly rejected this approach. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 246 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 738 (3d Cir. 1976); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,701-02 (Okla. 1982) (motion for rehearing pending).

110. *Fox*, 575 F.2d at 787.

111. 669 F.2d 1199 (8th Cir. 1982).

112. *Id.* at 1204.

113. 647 F.2d 241 (2d Cir. 1981).

114. *Id.* at 251. Plaintiffs, moreover, must address complex issues in many other types of litigation. *See* Knippen v. Ford Motor Co., 546 F.2d 993, 1000 n.9 (D.C. Cir. 1976); Turner v. General Motors Corp., 514 S.W.2d 497, 506 (Tex. Civ. App. 1974); Baumgardner v. American Motors, 83 Wash. 2d 751, 758, 522 P.2d 829, 833 (1974); Arbet v. Gussarson, 66 Wis. 2d 551, 561-62, 225 N.W.2d 431, 438 (1975).

115. *Mitchell*, 669 F.2d at 1208.

result in the "complete exoneration of the negligent manufacturer":[116]

> Where it is impossible, however, the plaintiff has merely failed to establish his prima facie case, i.e., that it is more probable than not that the alleged defect aggravated or enhanced the injuries resulting from the initial collision. Moreover, in those instances in which the plaintiff cannot offer any evidence as to what would have occurred but for the alleged defect, the plaintiff has not established the fact of enhancement at all.[117]

The concern in *Fox* and *Mitchell* that meritorious claimants should prevail is a legitimate one.[118] The proper way to promote that goal, however, is to formulate realistic and practicable proof requirements. Establishing reasonable requirements for the method and quantum of proof, and not employing the strained and faulty[119] conceptual analysis used in *Fox* and *Mitchell*, is the

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116. *Id.* at 1207-08.

117. *Caiazzo*, 647 F.2d at 251.

118. Equally legitimate is the concern that manufacturers receive fair treatment. In Dawson v. Chrysler Corp., 630 F.2d 950, 962-63 (3d Cir. 1980), *cert. denied*, 450 U.S. 959 (1981), the court discussed the problems faced by even the most careful, safety-oriented automobile manufacturers:

> Although we affirm the judgment of the district court, we do so with uneasiness regarding the consequences of our decision and of the decisions of other courts throughout the country in cases of this kind . . . .
>
> [T]he states . . . delegate to the triers of fact in civil cases arising out of automobile accidents the power to determine whether a particular product conforms to such standards . . . .
>
> The result of such arrangement is that while the jury found Chrysler liable for not producing a rigid enough vehicular frame, a factfinder in another case might well hold the manufacturer liable for producing a frame that is too rigid. Yet, as pointed out at trial, in certain types of accidents—head-on collisions—it is desirable to have a car designed to collapse upon impact because the deformation would absorb much of the shock of the collision, and divert the force of deceleration away from the vehicle's passengers. In effect, this permits individual juries applying varying laws in different jurisdictions to set nationwide automobile safety standards and to impose on automobile manufacturers conflicting requirements. It would be difficult for members of the industry to alter their design and production behavior in response to jury verdicts in such cases, because their response might well be at variance with what some other jury decides is a defective design. Under these circumstances, the law imposes on the industry the responsibility of insuring vast numbers of persons involved in automobile accidents.
>
> Equally serious is the impact on other national social and economic goals of the existing case-by-case system of establishing automobile safety requirements. As we have become more dependent on foreign sources of energy, and as the price of that energy has increased, the attention of the federal government has been drawn to a search to find alternative supplies and the means of conserving energy. More recently, the domestic automobile industry has been struggling to compete with foreign manufacturers which have stressed smaller, more fuel-efficient cars. Yet, during this same period, Congress has permitted a system of regulation by ad hoc adjudications under which a jury can hold an automobile manufacturer culpable for not producing a car that is considerably heavier, and likely to have less fuel efficiency.

See also Caiazzo, 647 F.2d at 247 n.12. That different juries may arrive at conflicting conclusions is a "hazard" that every national manufacturer necessarily encounters. Turner v. General Motors Corp., 514 S.W.2d 497, 506 (Tex. Civ. App. 1974).

119. In Huddell v. Levin, 537 F.2d 726 (3d Cir. 1976), the court discussed the inapplicability of the doctrine of joint liability of concurrent tortfeasors in enhanced injury cases:

> We do not perceive the analysis of "second collision" or "enhanced injury" cases to track the legal lore surrounding concurrent tortfeasor actions which, in the concurrence's formulation, "have combined *contemporaneously* to cause the injuries." . . . "Second collision" cases do not implicate "clearly established double fault" for the *same* occurrence. Clearly, if the theoretical underpinnings for liability in this case are to be given effect,

manner in which a person with a meritorious claim should be protected.

B. Problems of Proof

1. Method of Proof

In most enhanced injury cases, a substantial part of the claimant's case necessarily will be in the form of expert testimony.[120] Expert testimony is not required in the rare cases that involve design and causation issues within the common knowledge and experience of laymen.[121] In determining whether expert guidance[122] is necessary, the trial court should analyze independently

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Levin may be held liable for *all* injuries, but General Motors may only be held liable for "enhanced injuries." Analogies to concurrent actions combining to cause a *single impact* are simply not applicable. Similarly, analogies to chain collisions are not applicable where, as here, one party is sued on a fault theory for the collision and the other party is sued on the theory of strict liability for the "second collision."

Id. at 738 (citations omitted).

The joint liability-concurrent tortfeasors principles enunciated in Fox v. Ford Motor Co., 575 F.2d 774, 787 (10th Cir. 1978), and Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1203-09 (8th Cir. 1982), are those set out in RESTATEMENT (SECOND) OF TORTS §§ 433A, 433B, 434, 435 (1965). Those Restatement sections, however, do not indicate that their substantive provisions should be applied to enhanced injury cases. The term "second collision" has caused, or been used to justify, such a mechanical application of joint liability-concurrent tortfeasors principles. *Mitchell*, 669 F.2d at 1203; *Fox*, 575 F.2d at 781. In fact, enhanced injury cases do not involve two separate "accidents" or "collisions." Unlike a multiple car accident, an automobile accident causing enhanced injuries involves one impact and the failure of the impacted object to offer reasonable protection against that impact. Characterizing the protective issue as a "second collision" is conceptually imprecise. The injured party's contact with the interior of the vehicle, or with some other injury-causing instrumentality, is not analogous to the impact of a second distinct entity upon the injured party's vehicle. The *Mitchell* and *Fox* courts failed to recognize, moreover, that doctrine is merely an instrument of policy. Terms such as "second collision" may be more attractive because of their brevity than they are useful as tools of comprehension. *See* Olsen v. United States, 521 F. Supp. 59, 63 (E.D. Pa. 1981), *aff'd mem.*, 688 F.2d 823 (3d Cir. 1982), *cert. denied*, 103 S. Ct. 732 (1983). Existing doctrines should only be invoked if they reflect and promote the core principles of the theory of liability to which they would be applied. *See* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 246 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 742 (3d Cir. 1976); Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,704 (Okla. 1982) (motion for rehearing pending). In applying RESTATEMENT (SECOND) OF TORTS §§ 433A, 433B, 434, 435 (1965), the *Mitchell* and *Fox* decisions are inconsistent with the theoretical underpinnings of enhanced injury theory set out in Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968). *See supra* text accompanying note 94.

120. Smith v. Ford Motor Co., 626 F.2d 784, 788 (10th Cir. 1980), *cert. denied*, 450 U.S. 918 (1981); Huddell v. Levin, 537 F.2d 726, 736 (3d Cir. 1976); Jeng v. Witters, 452 F. Supp. 1349, 1356 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979).

121. As the court recognized in Lynd v. Rockwell Mfg. Co., 276 Or. 341, 349, 554 P.2d 1000, 1005 (1976), expert testimony is not always required to prove a products liability case. In Fouche v. Chrysler Motors Corp., 103 Idaho 249, 254-55, 646 P.2d 1020, 1025-26 (1982), involving allegedly defective seat belts and energy-absorbing characteristics of steering column, the court held that even difficult causal issues can be proved without the use of expert testimony. *See also* Smith v. Ariens Co., 375 Mass. 620, 625, 377 N.E.2d 954, 957-58 (1978) (whether unshielded protrusion on a snowmobile constituted a defect was within the knowledge of the jury). Although the Supreme Court of California did not discuss the issue, Horn v. General Motors Corp., 17 Cal. 3d 359, 551 P.2d 398, 131 Cal. Rptr. 78 (1976) (horn cap flew off steering column and motorist's face hit exposed steel prongs) was a case in which expert testimony was not needed to establish a prima facie case. The causal relationship in *Horn* was "immediately apparent." Endicott v. Nissan Motor Corp., 73 Cal. App. 3d 917, 927, 141 Cal. Rptr. 95, 100 (1977).

122. The Third Circuit has recognized that expert testimony must be critically analyzed by the trier of fact. Huddell v. Levin, 537 F.2d 726, 735-36 (3d Cir. 1976) ("[W]ithout intending undue cynicism, we are aware of the realities of expert testimony.").

each of the three requisite elements of the prima facie case.

With respect to the first element, the breach of duty issue, the same rules governing ordinary products liability and negligence cases should be applied in enhanced injury litigation.[123] Expert testimony is not required if the defect, unsafe condition, or other breach of duty is readily apparent or nontechnical.[124] When specialized guidance is required, the expert's function is, nevertheless, a limited one. Determining whether there has been a breach of duty is a mixed question of law and fact that is reserved for the trier of fact.[125] Expert witnesses are not allowed to usurp that function by characterizing a product as "unsafe," "unreasonably dangerous," or in terms of any other applicable legal standard.[126] Their function properly involves only the furnishing of scientific, technical or other specialized knowledge that will assist the trier of fact in determining whether a defendant's product or conduct measures up to the appropriate standard.[127]

An expert witness' method of addressing the breach of duty issue will vary from case to case. In proving the first element, the expert necessarily must consider the circumstances and severity of the particular accident.[128] Defendants are not required to design or protect against extraordinary accidents of unusual circumstance or severity.[129] Manufacturers and other defendants are only obligated to take "reasonable steps in design" to minimize the injury-producing effects of impacts.[130] In an enhanced injury case, the breach of duty issue is not an abstract one. The trier of fact's function is to evaluate an object's performance in the context of the particular risk that was actually encountered.[131]

The second and third elements of a prima facie case, while conceptually

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123. The duty question in enhanced injury cases is not unique. *See* Lee v. Volkswagen of Am., Inc. 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,700 (Okla. 1982) (motion for rehearing pending). The nature of a defendant's duty will depend, however, on the type of activity in which he is engaged. *See supra* notes 56-59 and accompanying text. The different states have, moreover, fashioned a potpourri of different definitions of the duties for each type of activity. *See, e.g.*, Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975) (discussing the states' different approaches to the "defect" requirement set out in § 402A). Courts have properly used a particularized duty definition when discussing enhanced injury cases. *See* Larsen v. General Motors Corp., 391 F.2d 495, 502-03 (8th Cir. 1968).

124. Huddell v. Levin, 537 F.2d 726, 735 (3d Cir. 1976). *See also supra* note 121.

125. *See* Aller v. Rodgers Mach. Mfg. Co., 268 N.W.2d 830, 840 (Iowa 1978); Wagner v. Flightcraft, Inc., 31 Wash. App. 558, 568, 643 P.2d 906, 911 (1982).

126. *See supra* note 125. *See also* WASH. R. EVID. 704 comment (a rule identical to FED. R. EVID. 704) and FED. R. EVID. 704 advisory committee note.

127. *See* FED. R. EVID. 702.

128. As the court held in Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976): "The 'relative severity of the impact' goes to the heart of the issue of defectiveness in terms of the 'ordinary purposes for which the product . . . was designed . . . .'" *See also* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 251 (2d Cir. 1981); Stonehocker v. General Motors Corp., 587 F.2d 151, 154 (4th Cir. 1978); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070, 1073 (4th Cir. 1974); Jeng v. Witters, 452 F. Supp. 1349, 1355 (M.D..Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979); Volkswagen of Am., Inc. v. Young, 272 Md. 201, 219, 321 A.2d 737, 747 (1974); Li Puma v. County of Rockland, 81 Misc. 2d 988, 367 N.Y.S.2d 149 (1975).

129. Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976).

130. Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968).

131. Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976).

distinct from each other, involve common and interrelated types of proof. In most cases, proving the "fact" and the extent of enhancement is an intricate endeavor. To prove those elements, a claimant must prove five sequential factual matters. In proving all three elements, a claimant must present evidence that will allow the trier of fact to perform the following six functions:

1. Determine that the defendant breached a duty owed to the claimant;[132]

2. Evaluate the full nature, extent, and consequences of the injuries actually received in the accident;[133]

3. Quantify the severity of the impact imparted to both the object at issue and to the person or property injured after impact;[134]

4. Define, with a meaningful degree of specificity, the alternative, safer design(s) that claimant alleges the defendant should have used;[135]

5. Evaluate the full nature, extent, and consequences of the injuries, if any, that the claimant hypothetically would have suffered in the very same accident if the alternative, safer design had been used;[136]

6. Calculate in terms of a damage award the difference between the injuries actually suffered and those that hypothetically would have been suffered if the alternative, safer design had been used.[137]

The first and second determinations are the same breach of duty and damage findings that a trier of fact renders in any tort case. The third and fourth determinations provide the baseline data with which to perform the fifth determination. In making the sixth determination, the trier of fact quantifies the difference between the second and fifth determinations. The sixth determination requires the trier both to decide whether there is a difference and, if there is, to render a quantitative measurement of the difference. The sixth determination establishes, subject to reduction for his own failure to mitigate or for comparative responsibility,[138] the claimant's damage award for his

132. For a discussion of the duty issue, see *supra* notes 53-89 and accompanying text.

133. This function is identical to the damage determination rendered in ordinary tort cases.

134. *See supra* note 128.

135. *See* Stonehocker v. General Motors Corp., 587 F.2d 151, 158 (4th Cir. 1978); Huddell v. Levin, 537 F.2d 726, 740 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1073-75 (4th Cir. 1974); Jeng v. Witters, 452 F. Supp. 1349, 1361 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979); Yetter v. Rajeski, 364 F. Supp. 105, 109 (D.N.J. 1973). *Cf.* Connor v. Skagit Corp., 99 Wash. 2d 709, 715, 664 P.2d 1208, 1212 (1983) (in ordinary products liability cases, proof of an alternative design, while relevant to the design defect issue, is not an essential element of proof in every case). In enhanced injury cases, a plaintiff must prove an alternative, safer design, not in order to prove breach of duty, but to establish the *causal* element of his case.

136. *See* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245, 251 (2d Cir. 1981); Stonehocker v. General Motors Corp., 587 F.2d 151, 158 (4th Cir. 1978); Huddell v. Levin, 537 F.2d 726, 737 (3d Cir. 1976); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1074 (4th Cir. 1974).

137. *See* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 738 (3d Cir. 1976); Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968). In some cases, a defendant may contend that the plaintiff's proposed design, while lessening the injuries he actually suffered, would have resulted in additional injuries of a different type. *See* Huddell v. Levin, 537 F.2d 726 738 (3d Cir. 1976).

138. *See infra* notes 189-233 and accompanying text.

enhanced injury.

Determinations one through four are not qualitatively different or more difficult than those made in ordinary tort cases. Because they involve technical matters, however, these issues may require, or best be proved with, expert testimony.[139]

2. Proving the Extent of Enhancement

There are diverse views regarding the relative difficulty of proving the measure of enhancement. In generally characterizing the claimant's task, courts have variously referred to his "impossible burden,"[140] a "highly refined and almost invariably difficult"[141] process, "thorny"[142] issues, "not an insurmountable"[143] problem, and as "simply" involving "matters of proof."[144] Unquestionably, making the fifth determination is the trier of fact's most difficult task in an enhanced injury case.[145] That function requires the trier to determine hypothetically what injuries would more probably than not have occurred if the alternative, safer design proposed by the claimant had been used.[146]

To establish a prima facie case of enhancement, a claimant must present the baseline accident reconstruction and alternative design evidence that the trier needs to make the fifth determination. In most cases, even if such baseline information is proven, the trier of fact will not be able to use that data to reconstruct a hypothetical accident that never occurred.[147] In such cases, as part of his prima facie case, the claimant must produce expert testimony that embraces the ultimate[148] factual issue of the nature and extent of the damages he would have suffered absent the breach of duty.

The claimant's burden is not impossible or unfair.[149] The theoretical underpinnings of the enhanced injury concept create a practicable balance between the interests of claimants and defendants. Although they involve interrelated items of proof, the distinction between the occurrence and the extent of enhancement is important. In proving the occurrence of enhancement, a claimant has established conclusively that his claim is meritorious.[150] Once

139. *See supra* notes 120-21 and accompanying text. The trial court can admit expert testimony to aid the trier of fact even if such testimony is not a requirement of the plaintiff's case. *See* FED. R. EVID. 702 and advisory committee note.

140. Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1204 (8th Cir. 1982).

141. Huddell v. Levin, 537 F.2d 726, 737 (3d Cir. 1976).

142. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981).

143. Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968).

144. Baumgardner v. American Motors Corp., 83 Wash. 2d 751, 759, 522 P.2d 829, 834 (1974).

145. Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1204-05 (8th Cir. 1982); Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981).

146. *See* Huddell v. Levin, 537 F.2d 726, 737 (3d Cir. 1976).

147. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 250 (2d Cir. 1981).

148. FED. R. EVID. 704 allows such proof. Testimony on mixed issues of law and fact should not be allowed. *See supra* notes 125-27 and accompanying text.

149. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 250 (2d Cir. 1981).

150. In establishing the occurrence of enhancement, a plaintiff has proved that the defendant caused injuries over and above those that should have been suffered. As the court recognized in

a claimant has adduced substantial evidence supporting such a threshold, qualitative finding, the court will submit the claim to the trier of fact even if the proof of the extent of enhancement is not precise or exact.[151] Triers of fact

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Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968), a defendant "should be [held] liable" in such cases. Even if the extent of enhancement is "difficult to assess," such a plaintiff should not be "abandon[ed] . . . to his dismal fate." *Id.* In Horn v. General Motors Corp., 17 Cal. 3d 359, 369, 551 P.2d 398, 403, 131 Cal. Rptr. 78, 83 (1976), the court took a lenient approach to the requirement that the extent, as well as the "fact," of enhancement be proved: "Having found that plaintiff suffered aggravated injuries, the jury was under a duty to fix the amount of damages from the evidence available."

151. This approach is not a novel one. In other areas of law, courts have recognized that, once the "fact" of wrongful damage has been established, the plaintiff is entitled to recover even if the amount is not susceptible to exact proof:

> We have recognized a distinction between proof of the fact that damages have been sustained and proof of the amount of those damages. If it is speculative and uncertain whether damages have been sustained, recovery is denied. If uncertainty lies only in the amount of damages, recovery may be had if there is a reasonable basis in the evidence from which the amount can be inferred or approximated.

Larsen v. United Fed. Sav. & Loan Ass'n, 300 N.W.2d 281, 288 (Iowa 1981) (citations omitted). *See also* Leoni v. Bemis Co., 255 N.W.2d 824, 826 (Minn. 1977); Bader v. Cerri, 96 Nev. 352, 357, 609 P.2d 314, 318 (1980); Kozlowski v. Kozlowski, 80 N.J. 378, 388, 403 A.2d 902, 908 (1979); Berley Indus., Inc. v. City of New York, 45 N.Y.2d 683, 687, 385 N.E.2d 281, 283, 412 N.Y.S.2d 589, 591 (1978); Allen v. Kleven, 306 N.W.2d 629, 636 (N.D. 1981).

In May v. Portland Jeep, Inc., 265 Or. 307, 311-12, 509 P.2d 24, 26-27 (1973), the court recognized that enhanced injury cases also produce "inexact situations" that cannot be translated into "mathematically precise awards":

> From the above narration of what occurred, we believe a jury could reasonably conclude that a major portion of plaintiff's injuries would not have occurred in the absence of the collapse of the bar. There is no way of determining, of course, what the exact extent of plaintiff's injuries would have been had the roll bar not collapsed. However, we allow juries to make somewhat similar inexact determinations, such as the extent of pain and suffering and its value in money. We do so because we believe such pain and suffering should be compensable, and there is no way of determining its extent and value other than to allow the jury to use its best judgment. The only alternative in this case is to say that plaintiff probably was additionally injured by the collapse of the bar, but that, because we cannot determine exactly what his injuries would have been if it had not collapsed, he cannot recover at all. This is not an acceptable alternative, and it is usual to allow the jury to use its judgment in similar inexact situations. It was proper to allow the jury to make its best estimate of that portion of plaintiff's injuries attributable to the collapse of the bar.

Because the trier of fact must compare what actually happened with what arguably should have happened, resolution of an enhanced injury claim necessarily produces rough and generalized damage determinations. " '[W]hat might have happened is rarely susceptible of proof.' " Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981) (quoting Caiazzo v. Volkswagenwerk, A.G., 468 F. Supp. 593, 598 (E.D.N.Y. 1979)).

The mechanism for setting enhanced injury awards was described realistically by the district court in Caiazzo v. Volkswagenwerk, A.G., 468 F. Supp. 593, 602 (E.D.N.Y. 1979), *rev'd in part on other grounds*, 647 F.2d 241 (2d Cir. 1981):

> The jury had to evaluate the damage evidence which it heard to form a judgment about the distribution of physiological damage and pain and suffering as between the collision and rollover itself and, on the other hand, the ejection from the vehicle in the course of the rollover. None of the physiological injury and pain and suffering could be precisely quantified, nor quantified except within very wide limits. The problem required just the sixth sense, life-experience evaluation that has been traditionally—and gratefully—given over to the judgment of juries.

See also Stahl v. Ford Motor Co., 64 Ill. App. 3d 919, 924, 381 N.E.2d 1211, 1215 (1978). Mathematical, overly precise, or rigid proof requirements would make proof of the extent of damage impossible. Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,702 (Okla. 1982) (motion for rehearing pending). Arguments calling for such requirements should be rejected. *Id.* In Huddell v. Levin, 537 F.2d 726, 743-44 (3d Cir. 1976), the court properly defined the nature of the plaintiff's burden of proof:

are allowed to make similar inexact determinations in returning awards in personal injury cases involving pain and suffering,[152] in resolving wrongful death cases in which young children's net lifetime earnings are projected,[153] in setting condemnation awards,[154] in making comparative negligence determinations,[155] and in business interruption and lost profits lawsuits in which the trier hypothetically must determine what profits would have been earned absent the defendant's wrongful conduct.[156]

Abstract conclusions regarding the difficulty of proving enhancement can be misleading. The complexity of proof varies depending on the type of injury suffered by the claimant. Most of the reported cases involve personal injuries suffered in vehicular accidents. Among the serious injuries suffered in those accidents are burns, brain or spinal cord damage, and fractures or soft tissue injuries related to inward vehicle crush or to occupant movement during vehicle deceleration. Such accidents have also resulted in death from those and other injury mechanisms.

3. Specific Types of Cases

(a) Burn injuries

When burn injuries are involved, the enhancement issue in cases involving allegedly defective fuel systems is resolved easily.[157] Burns are clearly distinguishable from bruises, fractures, or other injuries unrelated to the failure

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> We are mindful of the difficulties of calculating damages in a case like this; mathematical exactitude is not required. The plaintiff, however, bears the burden of proof and it is the responsibility of the plaintiff to provide for the jury some evidentiary and logical basis for calculating or, at least, rationally estimating a compensatory award. "[S]heer conjecture cannot be the basis of a jury finding."

152. In May v. Portland Jeep, Inc., 265 Or. 307, 311, 509 P.2d 24, 27 (1973), the court expressly compared the inexact awards in enhanced injury cases to those returned for pain and suffering. See the *May* excerpt set out in note 151, *supra*.

153. Such awards are routinely returned in states in which the estate of a decedent is entitled to recover an award for his projected net future accumulations.

154. This analogy was made in Larsen v. General Motors Corp., 391 F.2d 495, 503-04 (8th Cir. 1968).

155. *Id.*

156. The flexibility of proof requirements in this area of law were described in V. C. Edwards Constructing Co. v. Port of Tacoma, 83 Wash. 2d 7, 15, 514 P.2d 1381, 1386 (1973).

157. As the court recognized in Jeng v. Witters, 452 F. Supp. 1349, 1360 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979):

> One type of second collision case in which plaintiffs have been successful is where a defective gas tank has caused a fire and the plaintiff's injury consists mainly of burns. *See* Turcotte v. Ford Motor Company, 494 F.2d 173 (lst Cir. 1974). Obviously a burn is a much different injury than bruises or fractures which typically occur in an accident, and separating the extent of injuries caused by the defect is not as difficult as the case where the bruises or fractures have been made more severe because of the lack of safety features in a car. Insurmountable problems of proof might be presented to a plaintiff in cases where a product is clearly defective and unreasonably dangerous but the injury is incapable of apportionment.

See also Fietzer v. Ford Motor Co., 590 F.2d 215, 218 (7th Cir. 1978) (no problem segregating fuel fire injuries); Polk v. Ford Motor Co., 529 F.2d 259, 267 (8th Cir.) (all proven injuries occurred as a result of the fire), *cert. denied*, 426 U.S. 907 (1976). Identifying the enhanced portion of fire damage in cases involving building or flammable fabrics fires can be far more difficult. In such cases, all of the damage, enhanced and nonenhanced, is fire damage.

of a fuel system.[158] Invariably, a claimant's witnesses describe an alternative fuel system that would have prevented fuel system failure, or design features that would have allowed adequate escape time. Consequently, in a fuel system case in which the vehicle is defective, the claimant will have no difficulty in proving that his injuries were enhanced by the full measure of the burns suffered.[159]

(b) Brain and spinal cord injuries

Similarly, many cases involving serious brain or spinal cord injuries can be resolved routinely. Often the central question in such cases is "how" the injury occurred and not the more difficult issue involving "how much" of an injury is attributable to a defect. The factual situation alleged in *Mitchell v. Volkswagenwerk, A.G.*,[160] ejection of a driver through an open door,[161] is a common one. In *Mitchell* plaintiff suffered serious neurological injuries.[162] *Mitchell* did not involve a quantitative segregation between inevitable injuries and a defect-caused worsening of those injuries.[163]

In such cases, a properly instructed jury's task is a conceptually simple one. The *Mitchell* jury found that the door of plaintiff's vehicle was defective.[164] Consequently, if it further found both that Mitchell was ejected through that door and that his spinal cord injuries occurred outside the car,[165] the jury should necessarily have returned a verdict against Volkswagen for the full amount of the damages attributable to the spinal cord injuries.[166]

In *Mitchell* the special verdict answers indicated that the jury had not

158. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 245 (2d Cir. 1981).

159. This statement assumes that there are no other, unrelated fire sources causing injury to the plaintiff. In a given accident more than one vehicle may suffer a fire-initiating fuel loss.

160. 669 F.2d 1199 (8th Cir. 1982).

161. John Mitchell was a passenger in a Karmann Ghia that, for an unknown reason, left the road, struck an embankment, and rolled over at least once. Mitchell was ejected. The right front passenger door was found to be open. *Id.* at 1201.

162. As a result of the accident, Mitchell suffered a spinal cord injury that rendered him a T2-T3 paraplegic (spinal cord severed between second and third thoracic vertebra), with a separate additional 75-80% upper right extremity disability caused by nerve root avulsion at all levels between C6-T1 (sixth cervical and first thoracic vertebra). Mitchell contended that the door opened because of a defect, that he was ejected through the open door, that his paraplegia and upper extremity injury occurred outside the vehicle, and that, like the driver who was not ejected, he would have suffered only minor injuries absent the allegedly defective door. Volkswagen contended that Mitchell was ejected through a back window and that the spinal injury causing paraplegia was sustained inside the car during the rollover prior to ejection. *Id.*

163. *Id.*

164. *Id.*

165. Volkswagen admitted that the C6-T1 nerve root avulsions occurred outside the car. With respect to that injury, the jury's only relevant concern was whether Mitchell exited through the allegedly defective door or through the nondefective window. *Id.* at 1201.

166. Even though the jury determined that the door was defective, it would necessarily have returned a verdict for Volkswagen if it determined that Mitchell was ejected through the nondefective window. If the jury determined that Mitchell was ejected through the defective door, but that the T2-T3 spinal injury causing paraplegia occurred inside the car, the jury's award against Volkswagen should have been limited to the full amount of damages attributable to the C6-T1 upper extremity injury.

properly understood the issues it was to resolve.[167] For that reason the judgment properly was reversed. The Eighth Circuit should have limited its analysis to the observation that the jury's findings were totally inconsistent with the evidence.[168] Instead, the court used the *Mitchell* case to launch the following misguided attack on the majority rule enunciated in *Caiazzo v. Volkswagenwerk, A.G.*:[169]

> A rule of law which requires a plaintiff to prove what portion of indivisible harm was caused by each party and what might have happened in lieu of what did happen requires obvious speculation and proof of the impossible. This approach converts the common law rules governing principles of legal causation into a morass of confusion and uncertainty.[170]

In *Mitchell* the court erroneously concluded that the plaintiff's burden of proving enhancement would lead to such an untenable result. In fact, the measure of enhancement in such indivisible injury cases is the *full* extent of the injury.

Even more disturbing in *Mitchell* is the court's casual, almost unknowing, rejection of the requirement that a claimant prove the occurrence of enhancement:

> The argument is made that since the manufacturer's liability is only for the enhanced injury, without plaintiffs proving that the injury would not have occurred in the first collision, there is no proof of an enhanced injury. The difficulty with this reasoning is that where there is but a single indivisible injury (e.g., death, paraplegia) it requires plaintiffs to rely on pure speculation, since in many instances it is *impossible* to show *which* tortfeasor caused the indivisible harm. Such a rule ignores common law principles on legal causation. Our statement in *Larsen* should not be construed so as to subject a jury to a complete [*sic*] conjectural result.[171]

Such reasoning is a wholesale repudiation of *Larsen* and enhanced injury theory. Application of that reasoning to the *Mitchell* case unjustly would result in Volkswagen liability for Mitchell's spinal injury even if plaintiff was unable to prove that the injury occurred *outside* the vehicle as a result of ejection through the defective door.

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167. *Id.* at 1202-03.

168. The court correctly so held. *Id.* at 1209. In determining that the defective door caused $360,000 of the plaintiff's damages, the jury returned an award that was either too high for the upper extremity injury or too low for both the upper extremity injury and the paraplegia. *Id.* at 1202. With its verdict, the jury necessarily determined that the door was defective, that a reasonably safe door would not have opened in the accident, that Mitchell was ejected through the door and that the upper extremity injury was attributable to the defect. For that reason, on appeal, the Eighth Circuit should have limited its analysis to the recognition that the jury either never clearly determined how the T1-T2 injury occurred, or was simply unaware that its "how" determination necessarily and inescapably led to a particular all or nothing damage determination for each of the two separate physical injuries.

169. 647 F.2d 241 (2d Cir. 1981).

170. *Mitchell*, 669 F.2d at 1205 (emphasis added). Volkswagen did not even contend that either spinal injury was itself internally "divisible."

171. *Id.* at 1205 (emphasis added). The Eighth Circuit panel that resolved the *Mitchell* case did not include Judge Blackmun or the other two judges that formed the *Larsen* panel.

(c) Fractures and soft tissue injuries

Proof of enhancement is most difficult when a claimant probably would have been injured even without a breach of a defendant's duty, but suffered a more severe form of the same basic injury because of it.[172] Such injuries occur when the claimant's proposed alternative design would have lessened, rather than eliminated, injurious contact.[173] Cases presenting such a segregation problem commonly involve fractures or damage to muscle tissue, peripheral nerves, or the vascular system.

Plaintiff in *Dreisonstok v. Volkswagenwerk, A.G.*,[174] a passenger in a Volkswagen van, sustained injuries to her ankle and femur when the van struck a telephone pole while traveling at approximately forty miles per hour.[175] In *Dreisonstok* the Fourth Circuit directed that a judgment in favor of Volkswagen be entered.[176] Plaintiff's burden in *Dreisonstok*, however, was not insurmountable. Plaintiff's proof simply failed to address the proper issues. Plaintiff made no showing that her lower extremity injury was enhanced by an alleged defect in the vehicle.

Cases involving inevitable injuries made more severe by a defendant require a more sophisticated level of proof. To prove such a claim, a plaintiff often will need to coordinate the disciplines of engineering, kinematics and medicine. In *Dreisonstok* plaintiff's engineering expert testified that the van was unsafe because it positioned the lower extremities of front seat passengers in a primary front-end crush zone.[177] Her treating physicians were able to testify to the actual injuries she suffered in the accident.

Quantifying the severity of the *Dreisonstok* accident required a multi-faceted analysis involving accident reconstruction,[178] identification and measurement of the damage to the van, the occupant kinematics[179] during the accident, and the injuries resulting from the accident. The accident reconstruction, vehicle damage, and kinematics issues usually are addressed by the same engineering expert. The causal relationship between those physical cir-

172. Jeng v. Witters, 452 F. Supp. 1349, 1360 (M.D. Pa. 1978), *aff'd mem.*, 591 F.2d 1335 (3d Cir. 1979).

173. Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,701 (Okla. 1982) (motion for rehearing pending).

174. 489 F.2d 1066 (4th Cir. 1974).

175. *Id.* at 1068.

176. *Id.* at 1074, 1076.

177. *Id.* at 1068-69.

178. In Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 843 n.13 (3d Cir. 1981), *cert. denied*, 454 U.S. 867 (1981), the court discussed the nature of this discipline:

> An accident reconstruction expert's expertise allows him to determine "the sequence of events by application of the laws of physics and known behavioral characteristics of the vehicle . . . in conjunction with the circumstances of the accident. The pertinent data may include . . . impact damage, the length and nature of tire marks, the location of the point of collision and of positions of rest of the vehicles, the speed of the vehicles, and the maneuvers, if any, which had been performed."

Id. (citation omitted).

179. As defined in DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 820 (J. Friel 25th ed. 1974), "kinematics" is "that phase of mechanics which deals with the possible motions of a material body."

cumstances and plaintiff's injuries is best addressed by medical experts having specialized biomechanical[180] knowledge.[181] In *Dreisonstok* establishing such a relationship was a simple matter. Plaintiff clearly suffered her injuries when her leg was entrapped or crushed between the dashboard and the front seat.[182]

The *Dreisonstok* claim was dismissed because plaintiff failed to offer evidence of a safer van design. As a result, the trier of fact had no basis for determining that the alleged defect enhanced her injuries. The complexity of plaintiff's burden of proof did not lead to the dismissal. The dismissal of her claim was a direct result of a failure to identify the requisite elements of her prima facie case. Instead of showing how the "crashability" of the van could be improved, she offered evidence that the only reasonable frontal design was that of an American mid-sized sedan.[183]

Dreisonstok was a case in which an enhanced injury claim, if properly conceived and presented, might have been successful. Plaintiff could have proposed alternative van design features that would have arguably improved the impact characteristics of the Volkswagen van. Undoubtedly, proving that she would have suffered lesser injuries in an alternatively designed van would not have been a simple matter. In all likelihood, plaintiff would have suffered some injury to the same leg even if she had been riding in a redesigned vehicle. To establish enhancement, plaintiff necessarily would have had to present expert testimony regarding the extent of the inward intrusion and other damage that the redesigned vehicle would have experienced in the same accident. Plaintiff's expert then could have correlated that hypothetical damage estimate with the occupant kinematics that would be involved in the same hypothetical accident. In *Dreisonstok* even if plaintiff had established generally both the part of the redesigned vehicle that would have contacted the occupant and the force and manner of the occupant contact, she would still have had to prove what physical injuries she would have suffered as a result of such a hypothetical contact.[184]

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180. "Biomechanics" is "the application of mechanical laws to living structures, specifically to the locomotor system of the human body." *Id.* at 201.

181. In most jurisdictions, trial courts evaluate the qualifications of expert witnesses on a case-by-case basis. Some courts have allowed engineers and "accident reconstructionists" to testify about this relationship. *See* Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 843-44 (3d Cir.) (expert based opinions on testimony given by physicians in independently admissible depositions), *cert. denied*, 454 U.S. 867 (1981); Gray v. General Motors Corp., 434 F.2d 110, 112 (8th Cir. 1970) (ruling partly based upon adverse party's inviting such comments during cross-examination and upon the failure to challenge the witness' qualifications). *Cf.* Yetter v. Rajeski, 364 F. Supp. 105, 109 (E.D.N.J. 1973) (medical testimony necessary to prove what injuries would have been suffered in alternatively designed van).

182. *Driesonstok*, 489 F.2d at 1068.

183. *Id.* at 1074-75.

184. If provided with such information, the jury would have a basis for qualitatively determining that enhancement had taken place. In cases in which a jury so determines, it would be able to roughly calculate, in monetary terms, the difference between the injuries actually suffered and those that would have been suffered absent the defendant's breach of duty. Such calculations will necessarily be general in nature. In rendering its award, however, the jury should consider all the different aspects of both the actual and hypothetical injuries. In an accident similar to that in *Dreisonstok*, a van passenger might require an above the knee leg amputation as the combined result of a severely comminuted tibial fracture, derangement of the knee joint, nerve damage and

(d) Death

Death is qualitatively different than even the severest of injuries. On first impression, there seems to be no way to measure the extent of enhancement in death cases. Actually, the damage elements of a wrongful death recovery can be quantitatively compared with the damage elements in personal injury actions.

The metaphysical distinctions between life and death are beyond meaningful quantification. Even in an ordinary wrongful death case, however, the spiritual aspects of death are not elements of recovery. In most states, wrongful death statutes allow the recovery of the following three damage elements:

1. Funeral expenses and medical expenses incurred prior to death as a result of the accident;

2. An award consisting of the net assets that the decedent would have left in his estate had he lived to his normal life expectancy, or the survivors' claims for the specific contributions that survivors would have received from the decedent had he not died;

3. Damages to the survivors for the loss of love, companionship, care, advice and society of the decedent.[185]

By definition, all three elements are capable of being translated into monetary damage awards.

Enhanced injury accidents resulting in death, like those that cause nonfatal injuries, can be classifed into two broad ctegories. The first type of death case is that in which the only significant injuries are the fatal injuries caused by the defect. Proving the extent of enhancement in such cases is a simple matter. All of the decedent's damages will be attributable to the defendant's alleged wrongdoing. In *Fox v. Ford Motor Co.*[186] the Tenth Circuit considered such a straightforward case. The *Fox* court correctly recognized that the defendant's liability is for the full measure of decedent's wrongful death dam-

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a ruptured femoral artery. The passenger's actual general and special damages related to the amputation would have several different aspects. His general damages would be based on, among other things, the nature and extent or his injury, disfigurement resulting from the amputation, and pain and suffering. Special damage items in such a case could include amounts for loss of wages, impairment of future earning capacity, medical and hospital bills, and costs related to vocational retraining.

The plaintiff's experts might conclude that, in a safe van, the passenger's injuries would have been limited to a severe, but less extensively comminuted, tibial fracture that would cause residual problems but which would not require amputation. The total damages attributable to the leg amputation suffered by the passenger would vary from the lesser hypothetical damages in several different aspects of general and special damages. By determining the overall difference, the trier makes the ultimate determination regarding the *extent* of enhancement. Fixing a dollar amount that roughly reflects the difference is a matter left to the trier's best judgment. Certainly, the parties can simplify the trier's task by using expert damage testimony and other evidentiary tools that highlight, aspect by aspect, the different ramifications of the actual and the hypothetical injuries.

185. The exact language used to describe this element of wrongful death recovery varies from jurisdiction to jurisdiction. For a formulation similar to that in the accompanying text, see Fox v. Ford Motor Co., 575 F.2d 774, 788 (10th Cir. 1978) (discussing Wyoming statute).

186. 575 F.2d 774 (10th Cir. 1978).

ages when the fatal injuries caused by the defect were the decedent's only significant injuries.

The analysis in *Fox*, however, is faulty. The court broadly determined that *all* enhanced injury death awards were "indivisible."[187] In making such an all-encompassing statement, the court failed even to recognize that a second type of enhanced injury death case existed. Contrary to the reasoning in *Fox*, there are enhanced damage death cases in which the trier of fact will be required to measure the extent of enhancement. In such death cases, in addition to the fatal injuries caused by the defect, the decedent also may suffer serious injuries wholly unrelated to any alleged defect.

If a defective steering column causes a fatal aortic rupture, and the decedent suffered no other injuries, the trier of fact evaluates the three elements of wrongful death recovery as it would in any tort case. It would be unfair for the trier of fact to use the same analysis when, unrelated to any defect, the decedent also suffered a severed spine at the fourth cervical (C4) vertebra in the same accident. The trier of fact must consider the ramifications of such unrelated injuries in computing the three elements of its award.[188]

Even if the decedent would have been a C4-level quadriplegic had he lived, his estate or survivors are entitled to recover funeral expenses because those costs would not have been incurred except for his death. Any award for pre-death medical costs should be limited to those related to the fatal injuries. Any treatment costs for the spinal injury are not compensable.

The major component of the second wrongful death damage element is the decedent's future net earnings. When a decedent would have been a C4-level quadriplegic had he survived, the trier of fact must decide to what extent, if any, the damages were enhanced by the defect. Even though defect-related fatal injuries absolutely terminate a decedent's earning capacity, C4-level quadriplegia often produces the same result. In such a case, the second ele-

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187. *Id.* at 787.

188. Such an analysis can be as readily performed in death cases as in personal injury litigation. In discussing analogous cases involving the negligent deprivation of a person's survival chances, one commentator recognized that the recovery by the decedent's estate must be based upon what the decedent's condition *would have been* had the negligent act not occurred:

> To illustrate, consider a patient who suffers a heart attack and dies as a result. Assume that the defendant-physician negligently misdiagnosed the patient's condition, but that the patient would have had only a 40% chance of survival even with a timely diagnosis and proper care. Regardless of whether it could be said that the defendant caused the decedent's death, he caused the loss of a chance, and that chance-interest should be completely redressed in its own right. Under the proposed rule, the plaintiff's compensation for the loss of the victim's chance of surviving the heart attack would be 40% of the compensable value of the victim's life *had he survived* (including what his earning capacity would otherwise have been in the years following death). The value placed on the patient's life would reflect such factors as his age, health, and earning potential, including the fact that he had suffered the heart attack and the assumption that he had survived it. The 40% computation would be applied to that base figure.

King, *Causation, Valuation, and Chance in Personal Injury Torts Involving Preexisting Condition and Future Consequences*, 90 YALE L.J. 1353, 1382 (1981) (emphasis added) (footnotes omitted).

In Huddell v. Levin, 537 F.2d 726, 738 (3d Cir. 1976), the court noted that, in enhanced injury cases involving death, the decedent's estate must do more than show that absent a defect the accident was "survivable."

ment must be calculated in the strict context of what the decedent probably would have accumulated in the future if he had suffered C4-level quadriplegia, but not death.

The third wrongful death element is an intangible one. Nevertheless, any award for the loss of the decedent's love, companionship, and care must be computed in the context of the unrelated serious injuries that the decedent inevitably would have suffered. Especially with respect to providing physical care for others, a C4-level quadriplegic's capabilities are more limited than those of a non-injured person. Consequently, any award for the third element should only be for the love and other intangible support that the survivors would have received if the decedent had lived the rest of his life as an otherwise healthy quadriplegic.

III. AFFIRMATIVE DEFENSES

A. Generally

The states have not followed a uniform course in determining whether, and how, the doctrines of comparative negligence, assumption of the risk, misuse, and mitigation of damages will be applied in products liability actions. Some courts have held that a comparative negligence defense cannot be asserted to reduce a strict liability in tort award.[189] Many of those same courts will allow a defendant to assert the absolute defenses of assumption of the risk[190] or misuse[191] in such cases. The modern trend is to consolidate prod-

189. *See, e.g.*, McCarty v. F.C. Kingston Co., 22 Ariz. App. 17, 18, 522 P.2d 778, 779 (1974); Gangi v. Sears, Roebuck & Co., 33 Conn. Supp. 81, 84-85, 360 A.2d 907, 908 (1976); Collins v. Musgrave, 28 Ill. App. 3d 307, 311-12, 328 N.E.2d 649, 652 (1974); Clausen v. Ed Fanning Chevrolet, Inc., 8 Ill. App. 3d 1053, 1058, 291 N.E.2d 202, 206 (1972); Henderson v. Ford Motor Co., 519 S.W.2d 87, 89-90 (Tex. 1974). The Restatement takes the postition that only that form of contributory negligence constituting assumption of risk can be asserted as a defense. *See infra* note 190 (text of § 402A comment n).

190. The most commonly invoked formulation of that defense in strict liability in tort cases is that set out in RESTATEMENT (SECOND) OF TORTS § 402A comment n (1965), which is as follows:

> Since the liability with which this Section deals is not based upon negligence of the seller, but is strict liability, the rule applied to strict liability cases (*see* § 524) applies. Contributory negligence of the plaintiff is not a defense when such negligence consists merely in a failure to discover the defect in the product, or to guard against the possibility of its existence. On the other hand the form of contributory negligence which consists in voluntarily and unreasonably proceeding to encounter a known danger, and commonly passes under the name of assumption of risk, is a defense under this Section as in other cases of strict liability. If the user or consumer discovers the defect and is aware of the danger, and nevertheless proceeds unreasonably to make use of the product and is injured by it, he is barred from recovery.

The assumption of risk defense is recognized in virtually all jurisdictions that have adopted § 402A and not expressly modified its provisions by adopting a unitary comparative defense.

191. The most commonly invoked statement of this defense is that set out in RESTATEMENT (SECOND) OF TORTS § 402A comment g (1965), which is as follows:

> The rule stated in this Section applies only where the product is, at the time it leaves the seller's hands, in a condition not contemplated by the ultimate consumer, which will be unreasonably dangerous to him. The seller is not liable when he delivers the product in a safe condition, and subsequent mishandling or other causes make it harmful by the time it is consumed. The burden of proof that the product was in a defective condition at the time that it left the hands of the particular seller is upon the injured plaintiff; and

ucts liability defenses and allow the unitary defense of comparative fault[192] to be asserted as an award-reducing, rather than absolute, defense.[193]

In enhanced injury cases, unlike ordinary products liability cases, a claimant's fault[194] in *causing* the accident is not a basis for reducing his recovery.[195]

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unless evidence can be produced which will support the conclusion that it was then defective, the burden is not sustained.

Safe condition at the time of delivery by the seller will, however, include proper packaging, necessary sterilization, and other precautions required to permit the product to remain safe for a normal length of time when handled in a normal manner.

According to the Restatement, proof that there has been no change in condition is an element of the plaintiff's prima facie case.

192. UNIF. PROD. LIABILITY ACT, 44 Fed. Reg. 62,734 (1979)). Courts have also used the terms "equitable apportionment of loss" and "comparative negligence" to describe this unitary defense. Because the term "comparative fault" has already gained such "wide acceptance by courts and in the literature, all courts should adopt its use." Daly v. General Motors Corp., 20 Cal. 3d 725, 742, 575 P.2d 1162 1172, 144 Cal. Rptr. 380 390 (1978).

193. This approach was adopted in the UNIF. COMPARATIVE FAULT ACT § 1, 12 U.L.A. 36 (1977). Section 1 of that Act sets up the following unitary comparative fault system:

(a) In an action based on fault seeking to recover damages for injury or death to person or harm to property, any contributory fault chargeable to the claimant diminishes proportionately the amount awarded as compensatory damages for an injury attributable to the claimant's contributory fault, but does not bar recovery. This rule applies whether or not under prior law the claimant's contributory fault constituted a defense or was disregarded under applicable legal doctrines, such as last clear chance.

(b) "Fault" includes acts or ommissions that are in any measure negligent or reckless toward the person or property of the actor or others, or that subject a person to strict tort liability. The term also includes breach of warranty, unreasonable assumption of risk not constituting an enforceable express consent, misuse of a product for which the defendant otherwise would be liable, and unreasonable failure to avoid an injury or to mitigate damages. Legal requirements of causal relation apply both to fault as the basis for liability and to contributory fault.

While the Act itself has no legislative effect, the Supreme Court of California indicated that the Act "points in the direction of a responsible national trend." Daly v. General Motors Corp., 20 Cal. 3d 725, 741-42, 575 P.2d 1162, 1172, 144 Cal. Rptr. 380, 390 (1978). In *Daly* the court listed various jurisdictions and commentators that favor such a unitary comparative approach. *Id.* at 739-42, 575 P.2d at 1170-71, 144 Cal. Rptr. at 388-89.

194. It makes no difference whether the fault is what formerly had been characterized as negligence or as misuse.

195. In Larsen v. General Motors Corp., 391 F.2d 495, 502 (8th Cir. 1968), the court recognized that the reasons for the accident had no bearing on an enhanced injury claim:

The manufacturer should not be heard to say that it does not intend its product to be involved in any accident when it can easily foresee and when it knows that the probability over the life of its product is high, that it will be involved in some type of injury-producing accident. . . . Collisions with or without fault of the user are clearly foreseeable by the manufacturer and are statistically inevitable.

See also Engberg v. Ford Motor Co., 205 N.W.2d 104, 108 (N.D. 1973).

Several courts have implicitly recognized that negligence in causing an accident to occur is not a basis for reducing an enhanced injury award. Higginbotham v. Ford Motor Co., 540 F.2d 762, 767 n.6 (5th Cir. 1976); Huddell v. Levin, 537 F.2d 726, 735 (3d Cir. 1976); Passwaters v. General Motors Corp., 454 F.2d 1270, 1275-76 (8th Cir. 1972); Grundmanis v. British Motor Corp., 308 F. Supp. 303, 306 (E.D. Wis. 1970); Dyson v. General Motors Corp., 298 F. Supp. 1064, 1972-73 (E.D. Pa. 1969); Roberts v. May, 41 Colo. App. 82, 86-87, 583 P.2d 305, 307 (1978); Brandenburger v. Toyota Motor Sales, U.S.A., Inc., 162 Mont. 506, 516, 513 P.2d 268, 274 (1973); Mickle v. Blackmon, 252 S.C. 202, 230, 166 S.E.2d 173, 185 (1969); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 542 P.2d 774 (1975). *See also* Knippen v. Ford Motor Co., 546 F.2d 993, 1002 n.12 (D.C. Cir. 1976) (issue raised, but held moot).

In Frericks v. General Motors Corp., 274 Md. 2d 288, 304-05, 336 A.2d 118, 127-28 (1975), the court's policy discussion parallels that in *Larsen*. In *Frericks*, however, the court's ruling was not consistent with its own policy statement. While recognizing that the "initial cause of the accident" did not "abrogate the manufacturer's duty" to design a safe vehicle, it held that at least in a

Undoubtedly, many accidents are the result of the injured party's negligence.[196] Nevertheless, a manufacturer's duty is that of minimizing the injurious effects of contact *however* caused. The inevitability of both operator negligence and injury-producing contact was a primary reason for the judicial recognition of the duty to protect against enhanced injuries.[197] The cause of the contact has no bearing on the issue of whether an object's response to the contact was a reasonable one.[198] The trier of fact's analysis must be limited to the nature and severity of the contact and the object's response. A negligent operator is entitled to the same protection against unnecessary injury as the careful user of the same product is entitled.

A claimant's recovery should be reduced for any comparative fault, including a failure to mitigate damages, causally related to the enhancement of his injuries.[199] In enhanced injury litigation, such comparative fault will ordinarily involve one of two general types of conduct. The first is failing to have a manufacturing or durability problem repaired.[200] The second type of con-

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negligence-based case, an enhanced injury award would be barred by a driver's negligence in causing the accident. *Id.*

Other courts also have concluded erroneously that such negligence should reduce a plaintiff's recovery in an enhanced injury case. *See* Fietzer v. Ford Motor Co., 590 F.2d 215, 218-19 (7th Cir. 1978) (negligence in causing accident will reduce enhanced injury award); Trust Corp. of Mont. v. Piper Aircraft Corp., 506 F. Supp. 1093, 1098 (D. Mont. 1981) (ruled erroneously after properly defining issue); Daly v. General Motors Corp., 20 Cal. 3d 725, 731-32, 575 P.2d 1162, 1165, 144 Cal. Rptr. 380, 383 (1978) (failed to distinguish between enhanced injury cases and ordinary products liability cases); Albertson v. Volkswagenwerk, A.G., 230 Kan. 368, 369-73, 634 P.2d 1127, 1129-32 (1981) (ruling based upon general decision to reduce strict liability in tort claims by percentage of comparative negligence); Cousins v. Instrument Flyer, Inc., 58 A.D.2d 336, 339, 396 N.Y.S.2d 655, 657 (1977) (after expressly considering plaintiff's argument that accident-causing and injury-causing factors were distinct); Duncan v. Cessna Aircraft Co., 632 S.W.2d 375, 388-89 (Tex. Civ. App. 1982) (negligence in piloting an aircraft was viable defense in enhanced injury case); Arbet v. Gussarson, 66 Wis. 2d 551, 557-58, 225 N.W.2d 431, 436 (1975) (confusing issue of whether vehicle performed reasonably in given accident with "issue" of contributory negligence).

Both the Uniform Comparative Fault Act and the Uniform Product Liability Act fail to address this issue.

196. Larsen v. General Motors Corp., 391 F.2d 495, 502 (8th Cir. 1968).

197. *Id.*

198. For that reason, evidence regarding the inebriation of a plaintiff-driver, or other drivers or passengers, should be excluded unless that evidence is relevant to some other issue. Badorek v. General Motors Corp., 11 Cal. App. 3d 902, 932, 90 Cal. Rptr. 305, 325 (1970). Evidence regarding why the accident occurred is irrelevant. *See supra* note 195. If a participant testified regarding the speeds, physical forces, or other circumstances relating to how the product performed, limitations regarding his ability to perceive how the accident happened can properly be explored. *See* Fietzer v. Ford Motor Co., 590 F.2d 215, 217 (7th Cir. 1978) (involving, although not discussing, such a situation in an enhanced injury case). *See also* FED. R. EVID. 401; *infra* text accompanying notes 236-39.

199. This is the approach taken in the UNIF. COMPARATIVE FAULT ACT § 1, 12 U.L.A. 36 (1977).

200. There are no reported cases specifically addressing the award-reducing effect of this type of conduct. Contributory fault should operate as an award-reducing factor in ordinary products liability cases. *See supra* note 193 and accompanying text. In enhanced injury cases, when the contributory fault is an "injury-enhancing," rather than an "accident-causing" factor, such negligence should also operate as an award-reducing factor.

It seems clear that a failure to repair constitutes "comparative fault" as that term is defined in the Uniform Comparative Fault Act. In Wade, *Product Liability and Plaintiff's Fault—The Uniform Comparative Fault Act*, 29 MERCER L. REV. 373, 388 (1978), Professor John W. Wade, Chairman of the special committee drafting the Act, noted the following:

duct is the failure to use a product's own safety features or devices.[201]

Some courts erroneously have determined that a consumer may assume the risk of obvious defects in a product's design.[202] Allowing a defendant to assert such a defense, either as a comparative factor or as an absolute bar, is both unfair and conceptually unsound. A product manufacturer has the sole responsibility of safely *designing* a product. Consumers have no corresponding duty, or ability, to analyze even obvious design features. Manufacturers cannot fairly state that a consumer acted wrongfully in purchasing and using the products that the manufacturer has represented to be reasonably safe.[203]

The Act would apply the comparative fault principle to the case in which the manufacturer is strictly liable and the plaintiff was contributorily negligent, regardless of whether the plaintiff's negligence was concerned with maintaining the safety aspects of the product or with some other tort rule imposing liability in order to promote safety.

A failure to repair would also be the basis for the award-reducing "comparative responsibility" defense proposed in UNIF. PROD. LIAB. ACT, §§ 111, 112(A)(2), and 112(B)(1), 44 Fed. Reg. 62,734-37 (1979). In states adhering to the approach taken in RESTATEMENT (SECOND) OF TORTS § 402A comment n (1965), such a failure would operate as a defense only if it constituted a voluntary and unreasonable encountering of a known risk. A defendant would have difficulty in proving subjective knowledge about a specific danger. *See* Good v. A.B. Chance Co., 39 Colo. App. 70, 565 P.2d 217 (1977); Heil Co. v. Grant, 534 S.W.2d 916 (Tex. Civ. App. 1976). The Restatement defense, if established, is an absolute bar to recovery.

201. *See infra* notes 206-33 and accompanying text. UNIF. COMPARATIVE FAULT ACT § 1, 12 U.L.A. 36 (1977), expressly provides that an unreasonable failure to avoid injury or to mitigate damages constitutes comparative fault. The text of § 1 is set out *supra* note 193.

202. *See* Wooten v. White Trucks, 514 F.2d 634, 637-40 (5th Cir. 1975); Horn v. General Motors Corp., 17 Cal. 3d 359, 369-70, 551 P.2d 398, 403, 131 Cal. Rptr. 78, 83 (1976); Buccery v. General Motors Corp., 60 Cal. App. 3d 533, 550, 132 Cal. Rptr. 605, 616 (1976); Ellithorpe v. Ford Motor Co., 503 S.W.2d 516, 522 (Tenn. 1973); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 148-49, 542 P.2d 774, 779 (1975). Other courts have reached the same untenable result by holding that a manufacturer cannot be held liable for a defective design if the defect was "patent" or "obvious" to the user. Bremier v. Volkswagen, 340 F. Supp. 949, 951 (D.D.C. 1972); Bolm v. Triumph Corp., 33 N.Y.2d 151, 156-57, 305 N.E.2d 769, 772, 350 N.Y.S.2d 644, 648-49 (1973). Section 112(A)(2) of the Uniform Product Liability Act is so broadly drafted that it can be construed to allow the assertion of such a conceptually unsound defense:

> (2) *Claimant's failure to observe an apparent defective condition*. When the product seller proves by a preponderance of the evidence that the claimant, while using the product, was injured by a defective condition that would have been apparent, without inspection, to an ordinarily reasonably prudent person, the claimant's damages shall be subject to reduction . . . .

44 Fed. Reg. 62,736 (1979).

In fact, the "obviousness" of a design feature and a purchaser's "assumptions" and expectations are factors bearing upon the breach of duty issue. As one of the erring courts itself recognized, the central consideration in determining whether a vehicle is "not reasonably safe" is whether it is unsafe to an "extent beyond that which would be reasonably contemplated by the ordinary consumer." Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 148, 542 P.2d 774, 779 (1975). A defendant should not be allowed to set up that same "obviousness" argument a second time, albeit in a subjective format as an affirmative defense.

203. The RESTATEMENT (SECOND) OF TORTS § 402A comment c (1965), directly addressed this issue:

> c. On whatever theory, the justification for the strict liability has been said to be that the seller, by marketing his product for use and consumption, has undertaken and assumed a special responsibility toward any member of the consuming public who may be injured by it; that the public has the right to and does expect, in the case of products which it needs and for which it is forced to rely upon the seller, that reputable sellers will stand behind their goods; that public policy demands that the burden of accidental injuries caused by products intended for consumption be placed upon those who market them . . . .

Comment n to § 402A recognizes that a consumer cannot be held responsible for "failing to dis-

Some products, however, are defective because they fail to conform to a manufacturer's own design criteria. No manufacturer can eliminate totally manufacturing, durability, and quality control problems. Indeed, a defect reducing a product's crash protection might not become obvious, or even develop, until the product has been used for a substantial period of time. While a manufacturer is liable for such a defect, the trier of fact fairly may determine that the claimant's conduct was also a cause of his suffering the more severe injury. Consumers should not be legally obligated to inspect products for manufacturing defects.[204] A comparative fault defense should be allowed when a product user is injured by a manufacturing defect of which he was aware or that would have been obvious to an ordinary reasonably prudent person.[205]

When a defendant has proved negligent use of a defective product, the trier of fact must determine the relative culpability of the parties for allowing the defect to exist. This same qualitative judgment is performed in ordinary negligence cases. A claimant's recovery is reduced in direct proportion to his percentage of causal responsibility. In fixing the claimant's percentage, the trier has no conceptual framework with which to measure the *extent* of en-

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cover" a defect. As comment c impliedly recognizes, it would be equally unjust to charge a consumer with an obligation to observe, and act upon, the "apparent" conditions that make up the inherent, planned design of a product.

204. Section 112(A)(1) of the Uniform Product Liability Act provides the following rule:

> A claimant is not required to have inspected the product for a defective condition. Failure to have done so does not render the claimant responsible for the harm caused or reduce the claimant's damages.

44 Fed. Reg. 62,736 (1979). *See also supra* notes 202-03.

205. Section 112(A)(2) of the Uniform Product Liability Act so provides. See *supra* note 202 for the text of that section. Therefore, a user with actual knowledge of a defect should have his recovery reduced. *See* UNIF. PROD. LIABILITY ACT § 112(B)(1), 44 Fed. Reg. 62,736-37 (1979).

In its analysis, the Department of Commerce discussed the legitimate reasons for reducing an award even when a user does not have actual knowledge of an apparent defect:

> (2) *Claimant's Failure to Observe an Apparent Defective Condition*. Cases can arise where a defect would be apparent, without inspection, to an ordinary reasonably prudent person. Subsection (A)(2) incorporates the Task Forces's views in this area, permitting the trier of fact to consider this conduct and reduce claimant's damages. Under Comment n to the "Restatement (Second) of Torts" Section 402A, an individual who failed to discover an apparent defective condition would, theoretically, still be allowed a full claim. On the other hand, if that person knew about the defect and proceeded anyway, the claim would be totally barred. This approach has led to considerable litigation and expense over the issue of whether a claimant knew or did not know about a particular defect. *See* "Task Force Report" at VII-51-53; *see also* "Karabatsos v. Spivey Co.," 49 Ill. App. 3d 317, 364 N.E.2d 319 (1977); "Teagle v. Fischer & Porter Co.," 89 Wash. 2d 149, 570 P.2d 438 (1977); "Poches v. J.J. Newberry Co.," 549 F.2d 1166 (8th Cir. 1977). The Act eliminates this distinction and focuses on the true responsibility of the product user.
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> Thus, if a claimant with good eyesight ate a candy bar that had bright green worms crawling over it, Subsection (A)(2) permits the trier of fact to find that the claimant should bear some responsibility for any ill effects suffered. This example involves a defective condition that can be discovered without inspection. *Cf.* "Auburn Mach. Works Co. v. Jones," 366 So.2d 1167 (Fla. 1979).
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> Subsection (A)(2) will not promote misconduct by products sellers. If they were aware of the defect in the goods at the time of sale, the punitive damages section of the Act (Section 120) would provide a strong incentive not to sell such a product.

44 Fed. Reg. 62,737 (1979).

hancement attributable to the plaintiff's comparative negligence. In such a case, both the defendant's breach of duty and the claimant's fault combine to produce the same, undifferentiated injury. The defendant is liable to the claimant for any enhancement of injuries over and above those that would have occurred absent the defect. Because the claimant is also responsible for the defect's existence, his net award should be computed by reducing the total amount of enhanced damages in proportion to his comparative fault.

B. The Seat Belt Issue

The second general type of award-reducing conduct, the failure to use safety devices, most often has been addressed in the context of automotive seat belts and harnesses.[206] Some state legislatures have enacted statutes prohibiting the assertion of any defense based on the failure to wear belts.[207] In other states, courts have judicially imposed the same prohibition.[208] Unfortunately, in states prohibiting such a defense, there has been no recognition of the difference between ordinary negligence cases and enhanced injury litigation.[209] De-

206. The issue also has been addressed in airplane cases. *See, e.g.*, Trust Corp. of Mont. v. Piper Aircraft Corp., 506 F. Supp. 1093, 1096 (D. Mont. 1981); Wilson v. Piper Aircraft Corp., 282 Or. 61, 69, 577 P.2d 1322, 1327 (1978).

207. In Miller v. Miller, 273 N.C. 228, 231, 160 S.E.2d 65, 68 (1968), the court noted that, as of that time, Minnesota, Virginia, and Tennessee had enacted legislation specifying that the failure to use seat belts should not be deemed contributory negligence. In Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368 (E.D. Va. 1978), the court distinguished the Virginia statute from the other two states' statutes. It held that the Virginia statute did not prohibit the introduction of evidence of nonuse of a seat belt in enhanced injury cases. According to *Wilson*, such evidence could be considered in mitigation of damages. *Id.* at 1373-74. *See also* Ellithorpe v. Ford Motor Co., 503 S.W.2d 516, 520 (Tenn. 1973) (discussing TENN. CODE ANN. § 59-930, now codified at § 55-9-214 (1981)); MINN. STAT. ANN. § 169-685(4) (1981); VA. CODE § 46.1-309.1(b) (1974). In Sours v. General Motors Corp., 717 F.2d 1511, 1520 n.5 (6th Cir. 1983), the court discussed the different positions taken by the states on the seat belt issue.

208. In Amend v. Bell, 89 Wash. 2d 124, 133-34, 570 P.2d 138, 143-44 (1977), the court listed the courts that had previously rejected the seat belt defense. The court noted that the majority of the courts considering the issue had rejected the defense. *Id.*

209. In those states in which the seat belt defense has been rejected, evidence of a manufacturer's installation of the belt should be allowed. The incorporation of a belt in the vehicle bears upon the design issue and the trier's determination regarding whether the manufacturer breached its duty to design a safe vehicle. The manufacturer has a right to address this aspect of the plaintiff's prima facie case even if the affirmative defense of nonuse is not allowed. As the court recognized in Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1370-71 (E.D. Va. 1978), the trier's function is that of determining whether the vehicle "as a whole" was unsafe. In *Wilson* the trier needed to evaluate not only the allegedly defective roof but also seat belts and the vehicle's other intrinsic safety devices that tended to prevent injuries such as those suffered by the plaintiff. *See also* Sours v. General Motors Corp., 717 F.2d 1511, 1522 (6th Cir. 1983). In Daly v. General Motors Corp., 20 Cal. 3d 725, 746, 575 P.2d 1162, 1174-75, 144 Cal. Rptr. 380, 392-93 (1978), the court discussed the reasons for allowing evidence on the incorporation of belts:

> [The plaintiffs] urge that only the precise malfunctioning component itself, and alone, may be considered in determining whether injury was caused by a defectively designed product. We disagree, concluding that the issue of defective design is to be determined with respect to the product as a whole, and that the trial court's instruction was correct.
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> The jury could properly determine whether the Opel's overall design, including safety features provided in the vehicle, made it "crashworthy," thus rendering the vehicle nondefective. Product designs do not evolve in a vacuum, but must reflect the realities of the market place, kitchen, highway, and shop. Similarly, a product's components are not developed in isolation but as part of an integrated and interrelated whole. Recognizing that finished products must incorporate and balance safety, utility, competitive merit,

fendants should be allowed to assert the seat belt defense in enhanced injury cases.[210] As the draftsmen of the 1977 Uniform Comparative Fault Act have generally recognized, a claimant's award should be proportionately diminished for any "unreasonable failure to avoid injury or to mitigate damages."[211] Courts that have properly analyzed the issue in enhanced injury litigation have independently reached the same result.[212]

In *Amend v. Bell*,[213] a negligence case, the Supreme Court of Washington discussed the four grounds most commonly advanced for rejection of the seat belt defense. In rejecting the defense as a matter of law, the court made the following policy determinations:

1. Because the plaintiff has no duty to anticipate the defendant driver's negligence in causing the accident, the plaintiff's failure to protect himself from the consequences of such negligence should not diminish his recovery;[214]

2. Because seat belts are not required, or present, in all vehicles, the

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and practicality under a multitude of intended and foreseeable uses, courts have struggled to evolve realistic tests for defective design which give weight to this necessary balancing. Thus, a number of California cases have recognized the need to "weigh" competing considerations in an overall product design, in order to determine whether the design was "defective."

The danger of piecemeal consideration of isolated components has been expressly recognized. Specifically, it has been observed that a design rendered safe in one situation may become more dangerous in others. However phrased, these decisions emphasize the need to consider the product as an integrated whole.

Id. (citations omitted). In Seese v. Volkswagenwerk, A.G., 648 F.2d 833, 842-43 (3d Cir.), *cert. denied*, 454 U.S. 867 (1981), the court held that evidence of incorporation of belts was inadmissible unless the belts were conceived by the company's engineers as an integral part of the allegedly defective system that failed. The court held that such evidence was properly rejected because the company's engineers did not design the van's window retention system with the assumption that belts would be used. *Id.* In rendering such a ruling the court failed to note that the relevant concern was how the vehicle as a whole performed. A company's conduct, favorable or unfavorable, is irrelevant. As an overwhelming majority of courts have recognized, the proper focus in such cases is on the product and not the manufacturer's conduct. *See* Sherk v. Daisy-Heddon, 498 Pa. 594, 613, 450 A.2d 615, 631 (1982). A company's engineering analysis has no bearing on the trier's assessment of a vehicle's performance. A manufacturer, moreover, should not be penalized because a component is designed with the intent that it will survive an impact and not require the protective capabilities of a failsafe device.

Even in those states in which the seat belt defense has been rejected, in some cases evidence of nonuse of the belt must be admitted. When there is a legitimate dispute regarding the mechanism of a plaintiff's injury, the defendant must be allowed to forthrightly discuss the plaintiff's position and movements within the vehicle after impact. *See* Sours v. General Motors Corp., 717 F.2d 1511, 1521-22 (6th Cir. 1983) (in arguing that unrestrained "dive" into roof rail, and not collapse of roof, caused plaintiff's broken neck, manufacturer made it "patently obvious" that plaintiff was not wearing seatbelt).

210. *See infra* notes 211-212, 230-33 and accompanying text.

211. UNIF. COMPARATIVE FAULT ACT § 1, 12 U.L.A. 36 (1977).

212. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 251-52 (2d Cir. 1981); Melia v. Ford Motor Co. 534 F.2d 795, 799 n.6 (8th Cir. 1976) (whether seat belt issue was properly submitted was moot on appeal); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1373-74 (E.D. Va. 1978); Spier v. Barker, 35 N.Y.2d 444, 450-51, 323 N.E.2d 164, 167-68, 363 N.Y.S.2d 916, 921 (1974). *See also* Daly v. General Motors Corp., 20 Cal. 3d 725, 744-45, 575 P.2d 1162, 1173-74, 144 Cal. Rptr. 380, 391-92 (1978) (prospectively allowing such defense, and in so doing, overruling Horn v. General Motors Corp., 17 Cal. 3d 359, 369-71, 551 P.2d 398, 403-04, 131 Cal. Rptr. 78, 83-84 (1976), on this point); Roberts v. May, 41 Colo. App. 82, 583 P.2d 305 (1978) (reaching correct result by mischaracterizing nonuse as "misuse" or "assumption of the risk").

213. 89 Wash. 2d 124, 570 P.2d 138 (1977).

214. *Id.* at 133, 570 P.2d at 143.

defendant driver should not be entitled to take advantage of the fortuitous circumstance that the plaintiff's car was so equipped;[215]

3. The majority of motorists do not habitually use seat belts;[216]

4. Because the seat belt defense would lead to a "veritable battle of experts" regarding what injuries would have been avoided had the belt been used, the defense would require "substantial speculation" by the trier of fact.[217]

Whatever vitality such reasoning has in ordinary negligence cases is wholly absent in enhanced injury litigation. The first reason is philosophically inconsistent with enhanced injury theory. A manufacturer's duty is based upon the need to minimize the injurious effects of statistically inevitable accidents. When asserting an enhancement claim against a manufacturer, a claimant should be charged with the same generalized knowledge and responsibility.[218] Allowing the assertion of the defense in an ordinary negligence case would require a comparison of qualitatively different causal elements. A negligent driver will often be 100 percent responsible for causing an accident. If wearing a seat belt would have prevented all injuries resulting from the accident, it could be argued that, in failing to wear a belt, the plaintiff was 100 percent responsible for injuries being suffered. In enhanced injury cases, the assertion of the seat belt defense does not require the trier of fact to perform such a conceptually flawed analysis. Assertion of the defense in enhanced injury cases, moreover, does not create the same visceral sense[219] of unfairness as that generated when a defendant asserts the defense in an ordinary negligence case. Like the injured claimant, the manufacturer of the vehicle did not cause the accident to occur.

The second reason for rejecting the defense is equally inapposite in an enhanced injury case. In evaluating a design claim against a manufacturer, the presence of a seat belt in the accident vehicle is anything but fortuitous. The manufacturer placed the belt in the vehicle in order to minimize the ef-

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215. *Id.*

216. *Id.*

217. *Id.*

218. In Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968), the court recognized that consumers, as well as manufacturers, should be charged with such knowledge:

> The intended use and purpose of an automobile is to travel on the streets and highways, which travel more often than not is in close proximity to other vehicles and at speeds that carry the possibility, probability, and potential of injury-producing impacts. The realities of the intended and actual use are well known to the manufacturer *and to the public* and these realities should be squarely faced by the manufacturer and the courts.

Id. at 502-03 (emphasis added). *See also* Grundmanis v. British Motor Corp., 308 F. Supp. 303, 306 (E.D. Wis. 1970); Baumgardner v. American Motors, 83 Wash. 2d 751, 757-58, 522 P.2d 829, 832 (1974).

219. In Amend v. Bell, 89 Wash. 2d 124, 570 P.2d 138 (1977), the court did not directly address this issue. This concern, however, is implicit in the court's statement that a defendant should not be entitled "to take advantage" of the plaintiff's vehicle having seat belts. *Id.* at 133, 570 P.2d at 143. *See also* Miller v. Miller, 273 N.C. 228, 237, 160 S.E.2d 65, 73 (1968) ("harsh and unsound" to deny recovery and "exonerate active tortfeasor" in ordinary negligence case when failure to buckle belt did not contribute to the accident); Sours v. General Motors Corp., 717 F.2d 1511, 1519-20 (6th Cir. 1983) (Ohio's rejection of the defense in negligence cases based upon "antipathy" to defendant who "caused" an accident asserting such a defense).

fects of an accident. The third reason is not a legitimate basis for the wholesale rejection of the seat belt defense. That many occupants negligently fail to use readily available seat belts does not mean that any particular occupant is justified in so acting.[220] A manufacturer whose vehicle has a defective door latch cannot escape liability because many other manufacturers' vehicles contain the same defect.

The fourth reason for rejecting the defense is fallacious in the context of both enhanced injury litigation and ordinary negligence cases. Modern litigation often requires the trier of fact to evaluate conflicting expert testimony. Even in an ordinary negligence case, the trier often will necessarily analyze the conflicting testimony of two accident reconstructionists. Courts do not disallow enhanced injury claims because the presentation of the prima facie case, and the defendant's response to it, creates a "veritable battle of experts."[221] In fact, plaintiffs have been allowed to prove that their injuries were enhanced *because* a vehicle's seat belt failed and did not perform its protective function.[222] Evaluating the seat belt defense is no more speculative than an analysis of such a seat belt failure claim. Both issues require the trier of fact to

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220. *See supra* note 218.

221. As recognized in the concurring opinion in Amend v. Bell, 89 Wash. 2d 124, 135, 570 P.2d 138, 144 (1977) (Dolliver, J., concurring), the "specter" of such a battle was "just that: a ghostly apparition with no substance." The majority opinion in *Amend* seems result-oriented when compared with the Supreme Court of Washington's own reasoning in Baumgardner v. American Motors, 83 Wash. 2d 751, 758, 522 P.2d 829, 833 (1974), a case of first impression recognizing the right to recover for enhanced injuries:

> We strongly disavow the notion that the judicial system is incapable of dealing with a technical issue simply because it may involve testimony from expert witnesses. That is a common experience which judges and juries deal with daily. The strength of the system is that it has absorbed, accommodated and resolved disputes of immense complexity and novelty. Indeed, this very case involves nothing more complex than an allegedly defective seat locking mechanism and an allegedly defective seatbelt buckle.

See also Arbet v. Gussarson, 66 Wis. 2d 551, 561-62, 225 N.W.2d 431, 438 (1975).

222. *See, e.g.*, Schnable v. Ford Motor Co., 54 Wis. 2d 345, 347, 195 N.W.2d 602, 604 (seat belt failed during rollover accident allowing decedent to be thrown about inside vehicle), *reh'g denied*, 54 Wis. 2d 345, 198 N.W.2d 161 (1972); Engberg v. Ford Motor Co., 87 S.D. 196, 205 N.W.2d 104, 106 (1973) (affirmed judgment for enhanced injuries resulting from seat belt that severed because it was improperly located causing it to rub on the frame); Endicott v. Nissan Motor Corp., 73 Cal. App. 3d 917, 921, 141 Cal. Rptr. 95, 97 (1977) (enhanced injury claim based upon alleged rupturing of seat belt submitted to jury); Trust Corp. of Mont. v. Piper Aircraft Corp., 506 F. Supp. 1093, 1094 (D. Mont. 1981) (enhanced injuries allegedly caused by airplane's lack of shoulder harnesses); Stahl v. Ford Motor Co., 64 Ill. App. 3d 919, 921, 381 N.E.2d 1211, 1212 (1979) (seat belt mechanism detached); Wilson v. Piper Aircraft Corp., 282 Or. 61, 69, 577 P.2d 1322, 1327 (1978) (failure to equip plane's seats with shoulder harnesses).

As the court noted in Spier v. Barker, 35 N.Y.2d 444, 452, 323 N.E.2d 164, 168-69, 363 N.Y.S.2d 916, 922 (1974), the effectiveness of seat belts cannot be disputed:

> At this juncture, there can be no doubt whatsoever as to the efficiency of the automobile seat belt in preventing injuries. Simply stated, "[t]he seat belt, properly installed *and properly worn*, still offers the single best protection available to the automotive occupant exposed to an impact." (Snyder, *Seat Belt as a Cause of Injury*, 53 MARQ. L. REV. 211). Furthermore, though it has been repeatedly suggested that the seat belt itself causes injury, to date the device has never been shown to worsen an injury, but, on the contrary, has prevented more serious ones (p. 213). The studies on the subject overwhelmingly indicate that the seat belt fulfills its purpose of restraining the automobile occupant during and immediately after the initial impact; in so doing, it significantly reduces the likelihood of ejection and frequently prevents "the second collision" of the occupant with the interior portion of the vehicle.

determine what injuries would have been suffered if the occupant had been wearing a reasonably safe belt. In either case, unsubstantiated claims will be dismissed by the court as a matter of law.[223]

Frequently, determining the extent of enhancement associated with the failure to wear a belt is a simple matter. A seat belt holds an occupant in his seat and prevents ejection, casting about within the vehicle, and the thrusting of the head and thorax against the front of the vehicle during its deceleration. Consequently, the injuries that a seat belt would have prevented are often readily identifiable. As was the case in *Caiazzo v. Volkswagenwerk, A.G.*[224] and *Mitchell v. Volkswagenwerk, A.G.*,[225] many ejection cases involve accidents in which belted claimants would have avoided the entirety of particular injuries that they suffered. Because a seat belt eliminates certain types of injurious contact, this affirmative defense will, in many instances, not involve an analysis of the extent to which an inevitable injury was made worse.

Once a state has recognized the availability of the defense, it must define its effect as an award-reducing factor. In *Caiazzo* the Second Circuit held that, in enhanced injury cases, a plaintiff who unreasonably fails to wear his belt cannot recover damages for *any* injuries that use of the belt would have prevented.[226] The New York rule of law[227] applied by the Second Circuit in *Caiazzo* is the soundest approach[228] to the seat belt issue. It is based upon the

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Cf. Miller v. Miller, 273 N.C. 228, 231-32, 160 S.E.2d 65, 69-70 (1968); Kleist, *The Seat Belt Defense—An Exercise in Sophistry*, 18 HASTINGS L.J. 613, 614 (1967). *See also infra* note 232.

223. The defendant has the burden of proving comparative fault. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 252 (2d Cir. 1981); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1373 (E.D. Va. 1978); Spier v. Barker, 35 N.Y.2d 444, 453, 323 N.E.2d 164, 169, 363 N.Y.S.2d 916, 922 (1974).

224. 647 F.2d 241 (2d Cir. 1981).

225. 669 F.2d 1199 (8th Cir. 1982).

226. *Caiazzo*, 647 F.2d at 251-52. The New York seat belt rule invoked in *Caiazzo* was formulated by the New York Court of Appeals in Spier v. Barker, 35 N.Y.2d 44, 323 N.E.2d 164, 363 N.Y.S.2d 916 (1974). In *Spier* the court adopted the following approach:

> [B]y not fastening his seat belt the plaintiff may, under the circumstances of the particular case, be found to have acted unreasonably and in disregard of his own interests, and, thus, should not be permitted to recover damages for those injuries which a seat belt would have obviated.

Id. at 450-51, 323 N.E.2d at 167, 363 N.Y.S.2d at 920-21.

227. *Caiazzo*, 647 F.2d at 243 was a diversity case involving the application of the substantive law of New York.

228. The four possible approaches to the seat belt issue are discussed in Kirscher, *The Seat Belt Defense—State of the Law*, 53 MARQ. L. REV. 172, 173 (1970). In Spier v. Barker, 35 N.Y.2d 444, 450-51, 323 N.E.2d 164, 167, 363 N.Y.S.2d 916, 920-21 (1974), the court rejected two approaches that define nonuse in terms of contributory negligence. Even in comparative negligence jurisdictions, the seat belt defense is best characterized as a mitigation of damages rule. However characterized, in comparative negligence jurisdictions, the defense is an award-reducing factor rather than an absolute bar. *See, e.g.*, UNIF. COMPARATIVE FAULT ACT § 1, 12 U.L.A. 36 (1977). The Uniform Comparative Fault Act does not specifically address either enhanced injury litigation or the seat belt issue. Section 2(b) of the Act provides that, when a plaintiff has acted unreasonably, the trier of fact must determine percentages of causal fault. That approach is inappropriate in enhanced injury cases involving nonuse of seat belts.

The focus of the defense, once plaintiff's nonuse is characterized as "unreasonable," is upon the amount of damage the belt would have prevented and not upon a percentage comparison of causal wrongdoing (the defect that enhances the injury versus the failure to use a safety device that would itself have, nevertheless, prevented the injury). The latter issue is not one to be submit-

inherent proviso that, even when a product is defective, a claimant's damages are limited to those that he could not have reasonably averted.[229]

New York's "mitigation rule" is a fair one. A claimant's recovery is not reduced for his negligence in causing an accident. However an accident is caused, a manufacturer should be liable when its vehicle does not contain reasonable crash safety features. Accidents are inevitable and the manufacturer's duty applies to all accidents however caused.[230] Conversely, in vehicular accidents, the failure and deformation of component parts, however characterized, are also inevitable. A seat belt operates as, among other things, a failsafe device that protects occupants when the inevitable vehicle damage and deceleration occur. Engaging a seat belt is a manifestly simple operation. When there is no justification for not wearing the belt, it would be unfair to assess damages for injuries against which the vehicle offered reasonable protection. When the vehicle as a whole offers reasonable crash protection, the characterization of a component failure as a "defect" should not be the basis for a damage award.

The New York rule's focus on the claimant's status allows a flexible approach. When a defect causes an enhancement of injuries, a manufacturer is liable for those injuries unless it can prove that the claimant acted unreasonably by not wearing a belt. In virtually all cases, the trial court should determine as a matter of law that an adult's failure to use a belt is unreasonable.[231] In an appropriate case, however, the trier of fact should be allowed to determine whether pregnant women,[232] children, or occupants with particular

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ted to the trier of fact. It is a philosophical and policy matter that must be resolved by the court. When considering a similar issue, courts have not allowed the trier of fact to determine whether vehicular accidents are "foreseeable," thereby requiring a design that provides reasonable protection to occupants. *See supra* notes 17-18, 60 and accompanying text. Once the trier of fact determines that nonuse was unreasonable, it need only determine the full amount of damage that use of the seat belt would have prevented. In New York, the *Spier* court decided, without discussion that if it was unreasonable not to wear a belt under the circumstances, even though a defect causes injury, a plaintiff cannot recover for any injury that the belt would have prevented. *Spier*, 35 N.Y.2d at 450-51, 323 N.E.2d at 167, 363 N.Y.S.2d at 920-21. *See also* Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 251-52 (2d Cir. 1982).

229. Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 251-52 (2d Cir. 1981); Codling v. Paglia, 32 N.Y.2d 330, 342, 298 N.E.2d 622, 628-29, 345 N.Y.S.2d 461, 469-70 (1973).

230. *See supra* notes 195-99 and accompanying text.

231. As a matter of policy, the courts should determine that, unless there is evidence of a justifiable reason, the trier of fact should be instructed to reduce an enhanced injury award by the amount of damage that use of the belt would have prevented. When no bona fide excuse is offered, the trier should not be allowed on a case-by-case basis to make value-laden characterizations as to the "reasonableness" of nonuse. The trier of fact in such cases will simply determine what damages could have been avoided if the belt had been used. The trier's function does not include an impressionistic comparison of the defective component and the nonuse of the belt that would have fully eliminated the effects of the defect. Multiple and diverse triers of fact must not be allowed to render inconsistent "factual findings" on what is really a broad-based policy judgment.

232. Experts that have studied the issue recommend that pregnant women wear three-point belts rather than travel unrestrained. *See* Crosby, *Trauma During Pregnancy: Maternal and Fetal Injury*, 29 OBSTETRICAL & GYNECOLOGICAL SURVEY, 683, 691 (1974); Galle & Anderson, *A Case of Automobile Trauma During Pregnancy*, 54 OBSTETRICS & GYNECOLOGY, 467, 469 (1979); Crosby, King & Stout, *Fetal Survival Following Impact: Improvement with Shoulder Harness Restraint*, 112 AM. J. OF OBSTETRICS & GYNECOLOGY, 1101, 1106 (1972). Lap belt restraints (two-point belts), however, have been associated with uterine, placental, and fetal injuries. The amount of force directed to the pregnant uterus when the body of the mother flexes over the lap belt may

problems acted unreasonably under the circumstances. In such a case, a manufacturer is held liable even though its vehicle was equipped with safety equipment that could have prevented the injuries. While imperfect, the New York rule is not unfair to manufacturers. Before the trier even makes a mitigation determination, the claimant will have to prove both that one or more vehicle components were defective and the occurrence of enhancement. In evaluating the crash safety of such components, moreover, manufacturers are necessarily aware that not all occupants use their belts.[233]

IV. INDEMNITY AND CONTRIBUTION

Accident claims often involve multiple defendants. Consequently, an essential element of any state's tort system is a set of rules defining the circumstances under which one wrongdoer is entitled to indemnity or contribution from another who is also legally responsible, in whole or in part, for a claimant's injuries. The modern trend, as expressed in the 1977 Uniform Comparative Fault Act,[234] is that of establishing pro rata contribution among tortfeasors based upon proportionate responsibility.[235] That concept requires the trier of fact to make a factual determination about each defendant's percentage share of causal fault. The threshold premise of this approach is that the conduct of the plaintiff and the various wrongdoers can be compared on a percentage basis.

In ordinary negligence and products liability cases, the Uniform Act offers a fair, practicable and conceptually sound method for allocation of fault. Using 100 percent as the total proximate fault, the trier of fact can render its rough judgment about the parties' relative responsibility in causing an accident. The Uniform Act's approach works well even when both a defendant driver's negligence and a vehicle defect combine to cause an accident.[236]

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exceed that occurring in unrestrained mothers. Increases in uterine compression caused by such flexion may result in fetal injury or death. Crosby, King & Stout, *supra*, at 1101; Crosby, *supra*, at 691; Pepperell, Rubinstein & MacIssac, *Motor-Car Accidents During Pregnancy*, 54 OBSTETRICAL & GYNECOLOGICAL SURVEY, 659, 660-61 (1977). By better distributing the load, three-point belts significantly reduce, but do not necessarily eliminate, the risk of belt-related injuries. Crosby, King & Stout, *supra*, at 1101, 1106; Crosby, *supra*, at 691; Pepperell, Rubinstein & MacIssac, *supra*, at 660. Physicians have concluded that, on balance, a mother and her fetus are less likely to suffer traumatic injury if the mother wears a three-point belt rather than travels in an unrestrained condition. Crosby, *supra*, at 691; Galle & Anderson, *supra*, at 468-69.

233. In Ellithorpe v. Ford Motor Co., 503 S.W.2d 516, 521 (Tenn. 1973), an enhanced injury case in which a Tennessee statute, and not the court, prohibited the seat belt defense, the court noted that such knowledge justified the rejection of the seat belt defense in its entirety. *See also* Amend v. Bell, 89 Wash. 2d 124, 570 P.2d 138, 143 (1977).

234. UNIF. COMPARITIVE FAULT ACT, 12 U.L.A. 35 (Supp. 1979).

235. *See id.* §§ 2 & 4, 12 U.L.A. 38-39, 42-43 (Supp. 1979). Section 2(b) of the Act provides the following: "In determining the percentages of fault, the trier of fact shall consider both the nature of the conduct of each party at fault and the extent of the causal relation between the conduct and the damages claimed." The same approach is taken in the UNIF. PROD. LIABILITY ACT, §§ 111, 113, 44 Fed. Reg. 62,734-36, 62,739-40 (1979).

236. In resolving contribution or indemnity claims, as long as the focus is exclusively on the cause of an accident, the conceptual distinction between negligence theory and the doctrine of strict liability is immaterial. Both types of liability can be meaningfully compared in terms of their proportionate causal relationship to an accident. *See* Daly v. General Motors Corp., 20 Cal. 3d 725, 734-35, 575 P.2d 1162, 1167-72, 144 Cal. Rptr. 380, 385-90 (1978). The trier of fact should

The Uniform Act's rules, however, cannot be applied in cases involving both an enhanced injury claim and a claim that either negligence or an unrelated product defect caused the underlying accident to occur. In cases with both ordinary tort and enhanced injury components, there is no basis for a proportionate comparison between the ordinary tort and the defect or activity causing the enhanced injury. The exclusive focus in an ordinary tort case is on the causal responsibility for the accident. A tortfeasor causally responsible for the accident is liable for all of the claimant's resulting damage. Because of that focus, in an ordinary tort analysis there can be no damage differentiation. Resolving an enhanced injury claim requires a qualitatively different approach. Causal responsibility for the underlying accident is irrelevant. In enhanced injury litigation, the trier's ultimate task is that of distinguishing inevitable damage from that which reasonably could have been prevented.

The Uniform Act's proportionate system can be used only to compare parties' relative responsibility for causing an accident. The extent to which a defect *enhances* an injury cannot be compared with another's relative responsibility in *causing* the underlying accident. For that reason, even in states adopting the Uniform Act, neither an ordinary tortfeasor nor a defendant causing an enhanced injury can seek contribution against the other. In such mixed cases, indemnity is the only measure of recovery. Indemnity, moreover, is available only to an ordinary tortfeasor. A defendant responsible for causing an enhanced injury can never recover indemnity against an ordinary tortfeasor. In all mixed cases, ordinary tortfeasors have a right to be indemnified, by one causing enhanced injuries, for the full amount of the enhanced injury judgment.

The core principle on which enhanced injury liability is based dictates such a result. Such liability is premised on the threshold policy judgment that objects, in many cases because of operator negligence, inevitably will be involved in accidents. However caused, a manufacturer's products must be reasonably designed to minimize the injurious effects of such accidents. A manufacturer cannot eliminate or reduce his liability to a plaintiff by alleging that the accident would not have occurred except for the plaintiff's negligence. For the same reason, in analyzing the relationship between ordinary tortfeasors and those who cause enhanced injuries, the negligence of ordinary tortfeasors in causing an accident is wholly immaterial. By definition, in resolving the plaintiff's prima facie case, the trier of fact determines that, no matter what caused the accident to occur, the enhanced injuries should not have resulted from the accident.

The resolution of indemnity claims in cases with both ordinary tort and enhanced injury components is an exclusively judicial function. That function is best described in the context of an illustrative case. A typical mixed case

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have "no real difficulty" in comparing the kindred concepts of negligence and strict liability in tort. UNIF. COMPARATIVE FAULT ACT § 1 comment, 12 U.L.A. 37 (Supp. 1979). Concerns about semantic and conceptual difficulties involved in comparing "fault" with "strict liability" are "more theoretical than real." MODEL UNIF. PROD. LIABILITY ACT, analysis of § 111, 44 Fed. Reg. 62,735 (1979).

might involve a two vehicle collision in which a truck driver negligently makes an abrupt, unsignaled left turn in front of a slightly inattentive driver of a frontally defective van. The van driver suffers a severe leg injury and total damages of $200,000, $100,000 of which would not have occurred except for the defect. Application of the Uniform Act's comparative fault provisions fairly resolves the van driver's claim against the truck driver. Even though the accident should have caused only $100,000 in damages, the truck driver is liable for all of plaintiff's damages.[237] If the jury returned a ten percent comparative fault finding, the court would enter a $180,000 judgment against the truck driver. Judgment in the amount of $100,000 would be entered in plaintiff's favor against the van manufacturer.

In such a case, plaintiff is entitled to execute his judgments to secure a total recovery of $190,000. In computing plaintiff's total award, only the $100,000 damages attributable to his nonenhanced injuries should be subjected to a ten percent comparative reduction. His comparative fault in causing the accident is not a basis for reducing the enhanced damage component of his award.[238] As a matter of law, the court should further determine that the truck driver can compel indemnity from the van manufacturer for the full amount of any execution against the truck driver in excess of $90,000. Between defendants, the van manufacturer should be ultimately liable for the $100,000 in damages attributable to the defect in its van.[239]

This approach has long been followed in analogous cases in which a physician's subsequent negligence enhances his patient's original injury. In *Zillman v. Meadowbrook Hospital*[240] the New York Court of Appeals deter-

237. Under traditional tort principles, a tortfeasor who causes an accident to occur is liable for the entirety of the damage caused by the accident. *See* Mitchell v. Volkswagenwerk, A.G., 669 F.2d 1199, 1203 (8th Cir. 1982); Zillman v. Meadowbrook Hosp. Co., 45 A.D.2d 267, 269, 358 N.Y.S.2d 466, 469 (1974); UNIF. COMPARATIVE FAULT ACT § 2(c), 12 U.L.A. 39 (Supp. 1979); RESTATEMENT (SECOND) OF TORTS § 435 (1965). An original tortfeasor is liable even for the portion of a plaintiff's injuries enhanced as a result of a defect in a manufacturer's product. Polk v. Ford Motor Co., 529 F.2d 259, 268 (8th Cir.), *cert. denied*, 426 U.S. 907 (1976); *Mitchell*, 669 F.2d at 1203; Caiazzo v. Volkswagenwerk, A.G., 647 F.2d 241, 244 (2d Cir. 1981); Huddell v. Levin, 537 F.2d 726, 738-39 (3d Cir. 1976). *Cf.* Section 9 of the Product Liability Act set out in Senate Bill 2631 (modifying the traditional rule of joint and several liability). Section 9(c)(d) of the Product Liability Act sets out the following rules:

> (c) The court shall enter judgment against each party determined to be liable in proportion to its percentage of responsibility for the claimant's harm, as determined under subsection (b)(2), unless section 11(a) requires a different result.
>
> (d) If a claimant has not been able to collect on a judgment in a product liability action, and if the claimant makes a motion within 1 year after the judgment is entered, the court shall determine whether any part of the obligation allocated to a person who is party to the action is not collectable from such a person. Any amount of obligation which the court determines is uncollectable from that person shall be reallocated to the other persons who are parties to the action and to whom responsibility was allocated and to the claimant according to the respective percentages of their responsibility as determined under subsection (b).

S. 2631, 97th Cong., 2d Sess. § 9(c)-(d) (1979) (Product Liability Act).

238. The formula to be used in computing the amount of a plaintiff's total recovery appears *infra* note 284. For a discussion of the irrelevance of accident-causing fault in enhanced injury cases, see *supra* notes 194-98 and accompanying text.

239. *See infra* notes 240-47 and accompanying text.

240. 45 A.D.2d 267, 358 N.Y.S.2d 466 (1974).

mined that an original tortfeasor causing an injury-producing accident is liable to the plaintiff for the full extent of the plaintiff's injury.[241] The physician's liability to the plaintiff is limited to those enhanced damages that would not have resulted absent his subsequent negligence.[242] In *Zillman* the court recognized that such a physician[243] has no right to indemnity from the original[244] tortfeasor.[245] The physician's professional calling and legal duty was that of treating such an injury however caused.[246] He could not justifiably complain that he would not have been required to engage in his livelihood if his codefendant had not been negligent. The *Zillman* court held that an original tortfeasor has a right to indemnity against the negligent physician for that amount of plaintiff's damages that would not have occurred except for the negligent medical treatment.[247] As between the two defendants in *Zillman*, sound policy dictated that the physician be ultimately liable for the enhanced injuries he caused.

In all cases with both ordinary tort and enhanced injury components, the ordinary tortfeasor's right to indemnity is automatic and partial. After the jury returns its verdict, the court need only make mechanical, nondiscretionary determinations wholly based upon the jury's special verdict interrogatory answers.

VI. CONCLUSION

The distinctive aspects of enhanced injury theory have not, as yet, attracted the interest of Congress, state legislators, or the model code draftsmen. Furthermore, even the most modern efforts to codify tort reform are imperfect. Because they do not expressly exclude enhanced injury cases from the applicable scope of their provisions, such codes will necessarily mislead courts and litigants.

Most courts that have considered the issue have recognized the right of a wrongfully injured party to recover damages for enhanced injuries. Few judicial decisions, however, have done more than recognize the viability of the theory. If the litigation of enhanced injury claims is to lead to fair and predictable results, it will be necessary for the courts, state legislatures or Congress to

241. *Id.* at 270, 358 N.Y.S.2d at 469. *See also* RESTATEMENT (SECOND) OF TORTS § 457 (1965).

242. *Zillman*, 45 A.D.2d at 270, 358 N.Y.S.2d at 469.

243. In *Zillman* the defendant held liable for enhanced injuries was Mid-Island Hospital, the institution employing that physician. *Id.* at 270, 358 N.Y.S.2d at 468-69.

244. The original tortfeasor in *Zillman* was Meadowbrook Hospital Company, the institution at which plaintiff first received medical treatment. *Id.* at 468-69.

245. *Id.* at 271, 358 N.Y.S.2d at 470-71; Huffman v. Coren, 75 A.D.2d 575, 426 N.Y.S.2d 584 (1980).

246. Indemnity or contribution, is, moreover, unnecessary since a person who causes enhanced injuries is "*ab initio* liable to the plaintiff only for the portion of injury" attributable to his own wrongful act. Huffman v. Coren, 75 A.D.2d 575, 426 N.Y.S.2d 584 (1980).

247. *Zillman*, 45 A.D.2d at 270, 358 N.Y.S.2d at 470; *cf.* Huffman v. Coren, 75 A.D.2d 575, 426 N.Y.S.2d 584 (1980) (distinguishing another case in which original tortfeasor had right of contribution against subsequent tortfeasor).

make a greater effort in developing a functional analytic framework for such claims.

Although enhanced injury liability is a simple concept, the litigation of enhanced injury claims often requires a highly refined trial presentation. Terminological imprecision and faulty analysis have resulted in unnecesary confusion. The terms "second collision" and "crashworthiness" mask the broad applicability of enhanced injury theory. The term "second collision" is, moreover, analytically unsound. Both terms should be avoided. Conceptual confusion can be eliminated, and complexity minimized, if the courts avoid the mechanical application of inappropriate concepts from other areas of tort law. In developing a systematic approach to enhanced injury litigation, the courts should instead concern themselves with the underlying policies and philosophy of enhanced injury theory.

APPENDIX: JURY INSTRUCTIONS AND THE VERDICT FORM

In jury cases, the trial judge must instruct the jury on the legal standards governing its deliberations. The court's jury instructions must define enhanced injury theory in terms that will be understood by the average layman. Few judicial decisions have considered this critical aspect of enhanced injury litigation. As a result, there is no general agreement on the number or form of the instructions that should be submitted to a jury in an enhanced injury case. Fortunately, the analytical language and policies expressed in *Larsen v. General Motors Corp.*[248] and other well-reasoned decisions provide a sound basis for the drafting of enhanced injury instructions.

A trial judge should read an advance oral instruction to all of the prospective jurors before jury selection. Such an advance instruction might take the following form in a case with both ordinary negligence and enhanced injury components:

> This is a civil case by plaintiff John Smith against defendant Robert Jones and National Motor Company. The case arises out of leg injuries suffered by Mr. Smith on January 2, 1984, when his 1965 National Motor Company van was involved in a collision with Robert Jones' truck. Plaintiff alleges that Mr. Jones negligently drove his truck and that such alleged negligence was a proximate cause of plaintiff's injuries. Defendant Robert Jones denies plaintiff's claim. Mr. Jones further alleges that plaintiff negligently drove his van and that such alleged negligence was a proximate cause of his own injuries.
>
> Plaintiff and defendant Jones have not alleged that the National Motor Company van caused the accident to occur. They have alleged that the National van did not provide a reasonably safe environment for its occupants during accidents. In that regard, they have alleged that the injuries plaintiff suffered in the accident were increased over and above those he would have suffered in a reasonably safe van. National Motor Company denies this claim. National further alleges that Mr. Smith acted unreasonably in not wearing his seat belt and that this failure caused his injuries to be more severe than those he would have suffered had he been wearing the belt.
>
> Both defendants deny the extent of plaintiff's alleged damages.

When submitting that same illustrative case to the jury, the court would necessarily provide the jury with instructions that specifically address the enhanced injury claim. The legal standards that relate solely to the illustrative enhanced injury issues can be addressed in four separate instructions. The general subject matter of those four instructions, which could be submitted in the following form, would be a recitation of plaintiff's claim and codefendants cross-claim against the manufacturer, a description of the manufacturer's duty, a statement of plaintiff's burden of proving the enumerated elements of

248. 391 F.2d 495 (8th Cir. 1968).

an enhanced injury case, and a statement of the manufacturer's burden of proving its comparative fault defense:

A. Statement of Claim Instruction

Plaintiff has filed this case against National Motor Company for personal injuries he sustained in his January 2, 1984 vehicular accident. On that date, plaintiff was driving his 1965 National Motor Company van when it was involved in an impact with Robert Jones' truck. Defendant Jones has filed a crossclaim against National for any damages that he may be held liable to pay plaintiff.

You are instructed that the National van was not a proximate cause of the accident itself. Plaintiff and defendant Jones claim, however, that the van was not reasonably safe as designed by National. In that respect, they allege that the van was not reasonably designed to minimize the injury-producting effect of impacts with other vehicles or objects. Plaintiff and defendant Jones specifically contend that one or more of the following alleged deficiencies rendered the van not reasonably safe:

1. Inadequate structural and energy-absorbing members in the front of the vehicle;

2. Placement of occupants' lower extremities in an impact crush zone where a frontal collision will cause severe inward vehicular intrusion;

3. The use of passenger compartment components that deform upon impact in a way that causes occupant injury.

Plaintiff and defendant Jones claim that because of the van's alleged safety deficiencies plaintiff suffered damages over and above the damage he would have suffered if the van had been reasonably safe.

National Motor Company denies these claims and further denies the extent of plaintiff's damages.

The foregoing is merely a summary of the claims against National Motor Company. You are not to take the same as proof of the matters claimed, and you are to consider only those matters which are established by the evidence. These claims have been outlined solely to aid you in understanding the issues.[249]

B. Duty Instruction

A manufacturer of motor vehicles has a duty to take reasonable steps in the design of its vehicles to minimize the injury-producing effects of impacts with other vehicles or objects. If a manufacturer's vehicle is not reasonably safe, the manufacturer is liable to plaintiff but only for the portion of plaintiff's damages caused by the unsafe

249. This instruction follows the general statement of claim format set out in ILL. PATTERN JURY INSTR.-CIVIL 1.01 (West Supp. 1977). *See also* WASH. CIVIL PATTERN JURY INSTR. 20.01 (West 1980).

design that is over and above the damages that probably would have occurred even if the vehicle had been reasonably safe.[250]

C. *Elements of Proof Instruction*

Plaintiff and defendant Jones have the burden of proving each of the following propositions against National Motor Company:

1. That the 1965 National Motor Company van was not reasonably safe;[251]

2. That there was, at the time the 1965 National van was designed and manufactured, an alternative, safer design for the front end of the vehicle;[252]

3. That front-end safety deficiencies in National's 1965 van were a proximate cause of damage to plaintiff over and above the damage he would probably have suffered if the alternative safer design discussed in paragraph 2 of this instruction had been used and had been subjected to the same accident;[253]

4. The extent to which plaintiff's injuries were increased over and above what they probably would have been if said alternative design had been used and had been subjected to the same accident.[254]

In determining whether the four elements have been proved, you should be guided by the following principles:

1. With respect to the first element of proof, you are instructed that National Motor Company's duty was not that of manufacturing a vehicle that would guarantee absolute safety to its users in the event of an accident.[255] "Reasonable safety" as that term is used in these instructions is a relative rather than an absolute concept.[256] The vehicle at issue in this case is a van. The safety of the 1965 National van is to be evaluated only by what is reasonable, practical and appropriate for that type of vehicle.[257] In determining whether National employed a reasonably safe design for its 1965 van, you should consider the following:

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250. This language is taken from Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968). A similar instruction was given in McGee v. Cessna Aircraft Co., 82 Cal. App. 3d 1005, 1013, 147 Cal. Rptr. 694, 698-99 (1978).

251. The states have used different terminology in addressing the "defect" issue in strict liability in tort actions. *See supra* notes 4, 123. This formulation of the breach of duty issue is the one used in Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975).

252. *See supra* note 135 and accompanying text.

253. This language is taken from Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968).

254. *See supra* notes 136-37 and accompanying text.

255. *See supra* notes 70-77 and accompanying text.

256. This language is taken from Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 542 P.2d 774, 779 (1975). *See also* Curtis v. General Motors Corp., 649 F.2d 808, 811 (10th Cir. 1981); Dreisonstock v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070-73 (4th Cir. 1974); Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1372 (E.D. Va. 1978); Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073 (E.D. Pa. 1969).

257. *See* Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1070-73 (4th Cir. 1974), *supra* notes 70-77, 254-55 and accompanying text.

(a) The date of manufacture of the van;[258]

(b) The style and utility inherent in that type of vehicle;[259]

(c) The price of the vehicle;[260]

(d) The function and safety of the vehicle and its component parts as compared to similar component parts of a comparable van. In that regard, you are instructed that a vehicle is not necessarily unsafe merely because it is not the latest, best, or safest design.[261] The availability and performance capabilities of other designs is only one factor for you to consider in determining whether a given design is reasonably safe;

(e) The obviousness of the design of the 1965 National van to the average user;[262]

(f) The nature and circumstances of the accident, including the speed the vehicles were traveling at the time of impact, the parts of the vehicles involved in the impact, the severity of the impact, and the manner in which the van responded to the impact.[263]

In determining whether the van was reasonably safe, you should not consider the negligence, if any, of John Smith or Robert Jones in causing the accident.[264] While relevant to other aspects of this case, why the accident occurred has no bearing on your determination of whether the van responded in a reasonably safe manner to the accident.

2. As used in paragraph 2 and elsewhere in this instruction, the phrase "alternative design" means an alternate design for the front end of a van, available to National when[265] it manufactured its 1965 model year van, that was reasonably safe, practicable, and appropriate for that type of vehicle.

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258. The relevant test is whether the product was defective "at the time" it left the control of the manufacturer. RESTATEMENT (SECOND) OF TORTS, § 402A comment g (1965). *See also* Stonehocker v. General Motors Corp., 587 F.2d 151, 156 (4th Cir. 1978); Ward v. Hobart Mfg. Co., 450 F.2d 1176, 1182 n.16 (5th Cir. 1971).

259. Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1073-75 (4th Cir. 1974). *See also supra* notes 70-77 and accompanying text.

260. Wooten v. White Trucks, 514 F.2d 634, 636 (5th Cir. 1975); Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1072-73 (4th Cir. 1974); Volkswagen of Am., Inc. v. Young, 272 Md. 201, 219, 321 A.2d 737, 746-47 (1974); Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975).

261. It is important to caution a jury that a manufacturer is not legally required to use the most technologically advanced and safest design available. Price, function, and the frequency and gravity of occupant risks are among the elements that must be evaluated in resolving the breach of duty issue. *See supra* notes 257-60 and *infra* 262-63. *See also* Ward v. Hobart Mfg. Co., 450 F.2d 1176, 1182 (5th Cir. 1971); Dyson v. General Motors Corp., 298 F. Supp. 1064, 1073-74 (E.D. Pa. 1969); Thomas v. General Motors Corp., 13 Cal. App. 3d 81, 88-89, 91 Cal. Rptr. 301, 305 (1970). A product is not defective merely because it could have been made even safer. Curtis v. General Motors Corp., 649 F.2d 808, 811 (10th Cir. 1981); Weakley v. Fishback & Moore, Inc., 515 F.2d 1260, 1267-68 (5th Cir. 1975).

262. The reasonable expectations of the ordinary consumer are central to the design issue. Seattle-First Nat'l Bank v. Tabert, 86 Wash. 2d 145, 154, 542 P.2d 774, 779 (1975). As the court recognized in Dreisonstok v. Volkswagenwerk, A.G., 489 F.2d 1066, 1073 (4th Cir. 1974), "a Cadillac may be expected to include more in the way of . . . 'crashworthiness' than the economy car."

263. *See supra* note 128 and accompanying text.

264. *See supra* notes 195-205, 236-47 and accompanying text.

265. *See supra* note 258.

3. In determining whether the third element has been proved, you must compare plaintiff's actual injuries to those that he would, more probably than not, have suffered if the alternative design for the van's front end had been used and subjected to the very same accident.[266] You must determine that plaintiff has proved this element if you find that his actual injuries were more severe than those he would have suffered if the alternative design had been involved in this accident. A plaintiff suffers "more severe" injuries, as that phrase is used in these instructions, when he either suffers an additional injury of a type that he would not otherwise have suffered at all or when he suffers a worse injury to a particular body part than he would otherwise have suffered.[267] It is possible that a plaintiff's injuries can be made more severe in both respects. If you determine that plaintiff's injuries would not have been less severe in a vehicle using the alternative design that he has proposed, you must determine that plaintiff and defendant Jones have not proved the third element of proof.

4. If you determine that plaintiff's injuries were increased as a result of the van not being reasonably safe, then you must compute the extent to which the injuries were so increased.[268] The law has not furnished us with any fixed method for computing the fourth element of proof.[269] In determining the extent to which plaintiff's actual injuries were increased, you must be governed by your own judgment,[270] by the evidence in the case and by these instructions. Plaintiff is not required to prove the extent of increased injury with mathematical precision.[271] Your award, however, must be based upon evidence and not upon speculation, guess, or conjecture.[272]

The damage elements for the injuries plaintiff allegedly suffered in the actual accident are listed in the general damage instruction that I will later read to you. In determining the extent to which plaintiff's injuries were increased, you should compare each element of damage actually suffered to each element of damage that would, more probably than not, have been suffered in a van having the alternative design.

Your answers to the questions set out on the verdict form will allow the court to resolve Mr. Jones' crossclaim against National. The net effect of the crossclaim is that, as between the two defendants, National, and not Mr. Jones, will be ultimately liable to plain-

266. *See supra* notes 136-37 and accompanying text.

267. Lee v. Volkswagen of Am., Inc., 1982-1983 PROD. LIAB. REP. (CCH) ¶ 9399, at 22,701 (Okla. 1982) (motion for rehearing pending).

268. *See supra* notes 93-94, 136-37 and accompanying text.

269. *See supra* notes 149-51 and accompanying text.

270. *Id.*

271. *Id.*

272. *See* CALIF. CIVIL JURY INSTRS. 14.60 (1977); ILL. PATTERN JURY INSTRS.—CIVIL 1.01 (West 1965); MO. APPROVED JURY INSTRS. 2.01 (Vernon Law Book Co. 1964); WASH. CIVIL PATTERN JURY INSTRS. 30.01 (West 1980). *See also* Huddell v. Levin, 537 F.2d 726, 743-44 (3d Cir. 1976).

tiff for that portion of plaintiff's damages, if any, that you find are attributable to an unsafe condition in the National van.

D. Mitigation of Damage Instruction

You are instructed that Mr. Smith acted unreasonably in not wearing his seat belt.[273] If you determine that an unsafe condition in the van increased Mr. Smith's injuries over and above those he would otherwise have suffered, you will then determine which of those injuries he would have avoided had he been wearing his seat belt.[274] Mr. Smith's recovery against National will be reduced by the monetary value of the injuries that use of the seat belt would have avoided.[275]

National has the burden of proving that the seat belt would have lessened plaintiff's injuries and the extent to which those injuries would have been reduced.[276] National is not required to prove the extent of injury reduction with mathematical precision. Your determination, however, must be based upon evidence and not upon speculation, guess, or conjecture.[277]

The verdict form submitted by the court should be clear and as simply phrased as possible. It must, however, elicit several specific findings that will allow the court both to resolve automatically an ordinary tortfeasor's cross-claim and to reduce plaintiff's total damages in proportion to his comparative fault or his failure to mitigate enhanced injuries. A special verdict form[278] for Mr. Smith's illustrative case might be organized, and answered, in the following manner:

We, the jury, make the following answers to the questions submitted by the court:

1. Was there negligence on the part of Robert Jones?

ANSWER: *Yes* (Yes or No)[279]

(If this question is answered "no," do not answer Questions 2, 3, 4, 5 or 6.)

2. Was Mr. Jones' negligence a proximate cause of plaintiff's accident?

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273. This direction is based upon the hypothetical assumption that there was no arguable justification, and therefore no issue of fact, regarding nonuse of the belt. *See supra* notes 227-34 and accompanying text.

274. *See supra* notes 226-33 and accompanying text.

275. *Id.*

276. *See supra* note 223 and accompanying text.

277. *See supra* note 272 and accompanying text. A similar instruction was given in Wilson v. Volkswagen of Am., Inc., 445 F. Supp. 1368, 1373 (E.D. Va. 1978).

278. Special verdict interrogatories assist juries to focus upon the proper issues in complicated cases. Bauman v. Volkswagenwerk, A.G., 621 F.2d 230, 235-36 (6th Cir. 1980). *Cf.* Higginbotham v. Ford Motor Co., 540 F.2d 762, 765 (5th Cir. 1976) ("irreconcilable inconsistency" in jury's answers to two interrogatories required a reversal).

279. *See* 2 E. DEVITT & C. BLACKMAR, FEDERAL JURY PRACTICE AND INSTRUCTIONS § 74.10 (1977). This and special verdict interrogatories two through six, as set out in this hypothetical verdict form, are standard special verdict interrogatories directed to the negligence, proximate cause, damage, and comparative negligence issues. *See, e.g., id.*; CALIF. JURY INSTRS. 14.96 (West 1977); WASH. CIVIL PATTERN JURY INSTRS. 45.02 (West 1980).

ANSWER: *Yes* (Yes or No)

(If this question is answered "no," do not answer Questions 3, 4, 5 or 6.)

3. What is the total amount of plaintiff's damages suffered as a result of the accident?

ANSWER: *$200,000*

4. Was there negligence by plaintiff in the driving of his vehicle?

ANSWER: *Yes* (Yes or No)

(If this question is answered "no," do not answer Questions 5 or 6.)

5. Was plaintiff's negligence in driving his vehicle a proximate cause of the accident?

ANSWER: *Yes* (Yes or No)

(If this question is answered "no," do not answer Question 6.)

6. Using 100% as the total combined negligence of plaintiff and defendant Robert Jones in causing the accident, what percentage of that negligence is attributable to plaintiff?

ANSWER: *10%*

7. Was the 1965 National van that plaintiff was driving reasonably safe?

ANSWER: *No* (Yes or No)[280]

(If this question is answered "yes," do not answer any further questions.)

8. Did the unsafe condition of the van increase plaintiff's injuries over and above those he would more probably than not have suffered in a van having a safer design?

ANSWER: *Yes* (Yes or No)[281]

(If this question is answered "no," do not answer any further questions.)

9. State the amount of money that fairly compensates plaintiff for injuries caused by the van's unsafe condition over and above the injuries he probably would have suffered if the safer design had been used and subjected to the same accident.

ANSWER: *$100,000*[282]

10. With respect to the dollar amount you returned in Answer No. 9, what injuries and related damages, expressed in dollar amount, would not have occurred if Mr. Smith had been wearing his seat belt?

ANSWER: *$50,000*[283]

DATED: _____, 19___.

Foreperson

On the basis of the special verdict answers, the court would enter judgment in favor of plaintiff and against defendant Jones in the sum of $180,000,

280. *See supra* note 251 and accompanying text.

281. *See supra* notes 250-54 and accompanying text.

282. *Id.*

283. *See supra* notes 273-77 and accompanying text.

enter judgment in favor of plaintiff and against National in the sum of $50,000, allow plaintiff to execute his judgments for a total recovery of $185,000,[284] and recognize defendant Jones' right to compel indemnity against National for the amount of any plaintiff's execution in excess of $135,000.[285]

284. A plaintiff will never be allowed to execute his judgments for an amount in excess of the trier of fact's total damage finding. In Smith v. Jones, Smith's total recovery could not exceed the $200,000 finding set out in Answer No. 3. Because of his comparative fault in causing the accident, the plaintiff's total recovery must be for a lesser amount. The exact amount of a plaintiff's total recovery in such a mixed case can be calculated by applying the formula (Answer 9 − Answer 10) + ((Answer 3) − (Answer 9 − Answer 10) × (100% − Answer 6)) = Total Recovery. In Smith v. Jones the court would make the following sequential calculations:

(1) TR = ($100,000 − $50,000) + (($200,000 − $50,000) × (.90))
(2) TR = $50,000 + ($150,000 × .90)
(3) TR = $50,000 + $135,000
(4) TR = $185,000

Such a formula offers a balanced approach. It allows the plaintiff to receive the most favorable damage award consistent with the theoretical underpinnings upon which his enhanced injury and ordinary tort claims are based. The formula does not allow him to secure a windfall.

In conceptual terms, the formula recognizes that Net Enhanced Damages (Gross Enhanced Damages minus Enhanced Damages Plaintiff Unreasonably Failed to Avert) + Prorated Remaining Damages (the difference between Total Damages and Net Enhanced Damages and reduction of that amount by the percentage of accident-related fault) = Total Recovery. Because Smith suffered $50,000 in compensable enhanced damages, he recovers that amount. His negligence in causing the accident is not a basis for reducing that claim. *See supra* notes 194-98 and accompanying text. Subject to reduction for Smith's comparative negligence, defendant Jones is liable to Smith for the entirety of his damages, including the $50,000 damage that a seat belt would have prevented. *See supra* note 237 and accompanying text. Because Smith's ordinary tort claim is the only basis for recovery of the remaining $150,000 of the $200,000 in total damages, the full $150,000 should be subjected to a 10% comparative negligence reduction.

The total recovery formula produces fair results even in mixed cases involving markedly different special verdict answers. If Smith suffered $200,000 total damages, $175,000 of which were enhanced, unreasonably failed to avoid $125,000 of his enhanced damages, and was 80% causally responsible for the accident, he would be awarded judgments of $40,000 and $50,000 against Jones and National, respectively. Smith would be permitted to execute those judgments until he secured a total recovery of $80,000.

285. National should be ultimately responsible for $50,000 of the $185,000 recovery since those damages should not have occurred even in a negligently caused accident. *See supra* notes 194-98, 239-47 and accompanying text.