



## University of Baltimore Law Review

Volume 5  
Issue 1 Fall 1975

Article 3

1975

# The Impact of Liability for Enhanced Injury

Edward S. Digges Jr.  
*Piper & Marbury*

Follow this and additional works at: <http://scholarworks.law.ubalt.edu/ublr>

 Part of the [Law Commons](#)

### Recommended Citation

Digges, Edward S. Jr. (1975) "The Impact of Liability for Enhanced Injury," *University of Baltimore Law Review*: Vol. 5: Iss. 1, Article 3.  
Available at: <http://scholarworks.law.ubalt.edu/ublr/vol5/iss1/3>

This Article is brought to you for free and open access by ScholarWorks@University of Baltimore School of Law. It has been accepted for inclusion in University of Baltimore Law Review by an authorized administrator of ScholarWorks@University of Baltimore School of Law. For more information, please contact [snolan@ubalt.edu](mailto:snolan@ubalt.edu).

## THE IMPACT OF LIABILITY FOR ENHANCED INJURY

Edward S. Digges, Jr.†

*The author discusses the recent imposition of a duty on automobile manufacturers to design a product that is "crash-worthy." He concludes that the courts will use a "balancing test" to determine the scope of that duty, and discusses the application of this test. Various attendant problems, such as the seat belt defense and the relevance of uniform federal safety standards, are also considered.*

A novel recovery approach known as "crashworthiness"<sup>1</sup> has developed in automobile product litigation. Its thesis is that manufacturers have a duty to design and construct automobiles that will not expose the occupants to an unreasonable risk of injury in the event of a collision.<sup>2</sup> Proof that an alleged defect in the automobile caused or contributed to the initial collision is not conceptually necessary for recovery<sup>3</sup> if the defect, usually in design, was a substantial factor in causing or enhancing<sup>4</sup> injuries.

The typical case involves an allegation that injuries suffered in a collision would not have occurred if the automobile had been designed differently. The initial judicial controversy was whether involvement in

---

†A.B., Princeton University, 1968; J.D., University of Maryland, 1971; Associate, Piper & Marbury, Baltimore, Maryland; Member Maryland Bar.

1. Often referred to as the "second collision" or "secondary impact" theory (see, e.g., *Driesonstok v. Volkswagenwerk, A.G.*, 489 F.2d 1066, 1069 n.3 (1974)), the term "crashworthiness," as defined in the Motor Vehicle Information and Cost Savings Act, "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) (1974).
2. As one commentator summarizes:  
In a nutshell, the proponents contend that common law liability may be imposed upon the automobile industry, based upon an allegation that the car in question could have been made "safer" for collision with other cars or objects, irrespective of how the crash was caused. Hoenic & Goetz, *A Rational Approach to "Crashworthy" Automobiles: The Need for Judicial Responsibility*, 6 Sw. U.L. Rev. 1, 3 (1974) [hereinafter cited as Hoenic & Goetz].
3. Commencing with the landmark case of *MacPherson v. Buick Motor Co.*, 217 N.Y. 382, 111 N.E. 1050 (1916), automobile manufacturers have been subject to liability for damages for injuries resulting from a collision that was proximately caused by a defect in their product.
4. One writer explains:  
These suits are not grounded upon the theory that a defect in the car caused the primary impact, but rather that the injuries sustained were exacerbated by a defect in design. The exacerbation usually occurs as a result of the occupant's collision with the interior of the vehicle, . . . Sklaw, *"Second Collision" Liability: The Need for Uniformity*, 4 SETON HALL L. REV. 499, 507 (1973).

a collision could be considered an "intended use" of an automobile.<sup>5</sup> In *Larsen v. General Motors Corp.*,<sup>6</sup> the recognized "judicial genesis of the 'crashworthiness' theory,"<sup>7</sup> the Court of Appeals for the Eighth Circuit concluded that collisions are "a frequent and inevitable contingency of normal automobile use,"<sup>8</sup> and there is 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 consonant with the state of the art to minimize the effect of accidents."<sup>9</sup> Thus, an automobile manufacturer "is under a duty to use reasonable care in the design of its vehicle to avoid subjecting the user to an unreasonable risk of injury in the event of a collision."<sup>10</sup>

Since *Larsen*,<sup>11</sup> there has been a nationwide trend to recognize this "crashworthiness" duty, of which the Maryland Court of Appeals recently became a part.<sup>12</sup> The *scope* of the manufacturer's duty is still

---

5. *Evans v. General Motors Corp.*, 359 F.2d 822 (7th Cir.), *cert. denied*, 385 U.S. 836 (1966), is the recognized starting point for review of judicial consideration of the issue. In *Evans*, the plaintiff's decedent was killed in a broadside collision while operating a station wagon manufactured by the defendant. There was no contention that any defect in the station wagon caused the collision or that the automobile was unfit for its normal highway use. Rather, the claim was based on the fact that the station wagon was designed with an "X" frame and the driver's seat was located near the intersection of the "X." Unlike the designs of some other automobile manufacturers, the defendant's design did not provide frame siderails. The plaintiff contended that, in the event of a broadside collision, this omission created an unreasonable risk of harm for the occupants of the station wagon and that the use of siderails would have prevented or reduced the occupants' injuries. The court held that while, under Indiana law, a manufacturer's duty is to make a product reasonably safe for its intended use,

The intended purpose of an automobile does not include its participation in collisions with other objects, despite the manufacturer's ability to foresee the possibility that such collisions may occur. *Id.* at 825.

For an earlier case, see *Tamburello v. Travelers Indemnity Co.*, 206 F. Supp. 920 (E.D. La. 1962), which involved a direct action against the insurer of the manufacturer of a baby car seat. The initial collision occurred when a 1960 station wagon went into a ditch, crossed a road and struck a tree. A baby girl seated in the car seat struck the dashboard and the floor. In granting summary judgment for the defendant, the court focused on the causation issue. The court held that the driver's loss of control of the car was the proximate cause of the injury. The failure of the car seat was held to be at most a remote cause. 206 F. Supp. at 923.

6. 391 F.2d 495 (8th Cir. 1968). In *Larsen*, the plaintiff suffered head injuries when the automobile he was driving was involved in a head-on collision with another automobile. The plaintiff sued the manufacturer of his vehicle contending that the design of the steering column caused him injuries he would not have received had a different design been employed. The plaintiff further contended that the rearward displacement of the steering shaft on the frontal impact was greater on his automobile than it would have been in other cars that "were designed to protect against such a rearward displacement." *Id.* at 497.

7. Hoenic & Goetz, *supra* note 2, at 12.

8. 391 F.2d at 502. The federal district court had granted summary judgment for the manufacturer, holding that Michigan law imposed no duty on an automobile manufacturer to make a vehicle that would protect the plaintiff from injury in the event of a head-on collision. 274 F. Supp. 461 (D. Minn. 1967).

9. 391 F.2d at 503.

10. *Id.* at 502.

11. Interestingly, on remand, the *Larsen* trial resulted in a jury verdict for the defendant.

12. See *Volkswagen of America, Inc. v. Young*, 272 Md. 201, 321 A.2d 737 (1974); *Frericks v. General Motors Corp.*, 274 Md. 288, 336 A.2d 118 (1975).

in the evolving stages, however. All of the cases that have adopted the "crashworthiness" doctrine steadfastly adhere to the principles that there should be no duty to make the automobile crashproof and that the manufacturer should not be made an insurer of the user's safety.<sup>13</sup> The questions thus arise: What are the parameters of the manufacturer's duty? Where is the line between "crashworthy" and "crashproof"? This article will examine these problems, as well as a few interesting by-products.

The historical development of the "crashworthiness" doctrine is treated in more detail in *The Young and Frericks cases: Re-examining Traditional Theories of Manufacturer Liability for Product Defects infra*. It should be noted here, however, that utilizing principles of negligence, warranty, or strict liability in tort, the appellate systems of thirteen states have adopted this "crashworthiness" doctrine first accepted in *Larsen*. *Cronin v. J.B.E. Olson Corp.*, 8 Cal. 3d 121, 501 P.2d 1153, 104 Cal. Rptr. 433 (1972); *Evancho v. Thiel*, 297 So. 2d 40 (Fla. App. 1974); *Friend v. General Motors Corp.*, 118 Ga. App. 763, 165 S.E.2d 734, cert. dismissed, 225 Ga. 290, 167 S.E.2d 926 (1969); *Brandenburger v. Toyota Motor Sales, U.S.A., Inc.*, 162 Mont. 506, 513 P.2d 268 (1973) (*But see Ford Motor Co. v. Ruppel*, 161 Mont. 56, 504 P.2d 686 (1972), where a summary judgment for the manufacturer in a "crashworthiness" case was affirmed. Apparently, *Brandenburger*, the later case, is controlling, but the *Brandenburger* court did not expressly overrule the *Ruppel* precedent. Instead, the court quoted extensively from the latter, noting only that the *Ruppel* summary judgment had been granted "under the facts presented." 162 Mont. 506, 511, 513 P.2d 268, 271); *Bolm v. Triumph Corp.*, 33 N.Y.2d 151, 305 N.E.2d 769, 350 N.Y.S.2d 644 (1973); *Johnson v. American Motors Corp.*, 225 N.W.2d 57 (N.D. 1974); *May v. Portland Jeep, Inc.*, 265 Ore. 307, 509 P.2d 24 (1973); *Mickle v. Blackmon*, 252 S.C. 202, 166 S.E.2d 173 (1969); *Engberg v. Ford Motor Co.*, 205 N.W.2d 104 (S.D. 1973); *Ellithrope v. Ford Motor Co.*, 503 S.W.2d 516 (Tenn. 1973); *Turner v. General Motors Corp.*, 514 S.W.2d 497 (Tex. Civ. App. 1974); *Baumgardner v. American Motors Corp.*, 83 Wash. 2d 751, 522 P.2d 829 (1974); *Arbet v. Gussarson*, 66 Wis. 2d 551, 225 N.W.2d 431 (1975). Additionally, federal courts, pursuant to diversity principles, have predicted that the appellate systems in seven other states would follow the "crashworthiness" precept when confronted with the issue. *Nanda v. Ford Motor Co.*, 509 F.2d 213 (7th Cir. 1974) (applying Illinois law); *Perez v. Ford Motor Co.*, 497 F.2d 82 (5th Cir. 1974) (applying Louisiana law); *Turcotte v. Ford Motor Co.*, 494 F.2d 173 (1st Cir. 1974) (applying Rhode Island law); *Driesonstok v. Volkswagenwerk, A.G.*, 489 F.2d 1066 (4th Cir. 1974) (applying Virginia law); *Passwaters v. General Motors Corp.*, 454 F.2d 1270 (8th Cir. 1972) (applying Iowa law); *Huddell v. Levin*, 395 F. Supp. 64 (D.N.J. 1975) (applying New Jersey law) (*But see Yetter v. Rajeski*, 364 F. Supp. 105 (D.N.J. 1973)); *Hardy v. Volkswagen of America, Inc.*, 65 F.R.D. 359 (W.D. Pa. 1975), and *Dyson v. General Motors Corp.*, 298 F. Supp. 1064 (E.D. Pa. 1969) (both cases applying Pennsylvania law).

Conversely, two state appellate systems have adopted the *Evans* viewpoint: Mississippi, in *Walton v. Chrysler Corp.*, 229 So. 2d 568 (Miss. 1969) and Ohio, in *Gleich v. General Motors Corp.*, 29 Ohio App. 2d 28, 277 N.E.2d 566 (1971).

Federal courts have reasoned that the appellate systems of four states other than Indiana (*Evans* was decided on Indiana law) would not find the existence of a "crashworthiness" duty: *Polk v. Ford Motor Co.*, 2 CCH PROD. LIAB. REP. ¶ 7305 (8th Cir. 1974) (applying Missouri law); *Yetter v. Rajeski*, 364 F. Supp. 105 (D.N.J. 1973) (applying New Jersey law); *Alexander v. Seaboard Air Line R.R.*, 346 F. Supp. 320 (W.D.N.C. 1971), *aff'd per curiam*, [1970-1973 Transfer Binder] CCH PROD. LIAB. REP. ¶ 6748 (4th Cir. 1972) (applying North Carolina law); *McClung v. Ford Motor Co.*, 333 F. Supp. 17 (S.D.W. Va. 1971), *aff'd per curiam*, 472 F.2d 240 (4th Cir. 1973) (applying West Virginia law).

For a useful reference on the conflicting authorities on the crashworthiness issue, see Annot., 42 A.L.R.3d 560 (1972).

13. See, e.g., *Evancho v. Thiel*, 297 So. 2d 40 (Fla. App. 1974); *Brandenburger v. Toyota Motor Sales, U.S.A., Inc.*, 162 Mont. 506, 513 P.2d 268 (1973); *Bolm v. Triumph Corp.*, 33 N.Y.2d 151, 305 N.E.2d 769, 350 N.Y.S.2d 644 (1973).

THE SCOPE OF THE MANUFACTURER'S DUTY—  
THE MARYLAND VIEWPOINT

*Volkswagen of America, Inc. v. Young*<sup>14</sup> was the first Maryland Court of Appeals case to raise the issue of "the extent of an automobile manufacturer's liability for a design defect resulting in enhanced injuries. . . ."<sup>15</sup> The court held:

In sum, "traditional rules of negligence" lead to the conclusion that an automobile manufacturer is liable for a defect in design which the manufacturer could have reasonably foreseen would cause or enhance injuries on impact, which is not patent or obvious to the user, and which in fact leads to or enhances the injuries in an automobile collision.<sup>16</sup>

14. 272 Md. 201, 321 A.2d 737 (1974). The issue reached the Maryland Court of Appeals from the United States District Court for the District of Columbia by way of the Uniform Certification of Questions of Law Act, MD. ANN. CODE, Cts. and Jud. Proc. Art., § 12-601 et seq.
15. 272 Md. at 206, 321 A.2d at 740. The Maryland Court of Special Appeals was actually the first Maryland appellate court to consider the issue. See *Frericks v. General Motors Corp.*, 20 Md. App. 518, 317 A.2d 494 (1974), *vacated in* 274 Md. 288, 336 A.2d 118 (1975).
16. 272 Md. at 216, 321 A.2d at 745. The court also held: "The standard to be applied is the traditional one of reasonableness." *Id.* at 217, 321 A.2d at 746. Additionally, in both *Young*, at 272 Md. at 220-22, 321 A.2d at 747-48 and *Frericks*, at 274 Md. at 298-99, 336 A.2d at 124, the Maryland Court of Appeals declined to accept the doctrine of strict liability in tort espoused in RESTATEMENT (SECOND) OF TORTS § 402A (1965). However, the *Young* court noted:

Regardless of whether the theory of § 402A of the *Restatement* should be accepted in other contexts, we are convinced that it has no proper application to liability for *design* defects in motor vehicles. 272 Md. at 220-21, 321 A.2d at 747. The court in *Young* concluded that the thrust of Section 402A distinguishes between a "construction defect" and a "defect in design" in that Section 402A eliminates a seller's care from consideration while "the existence of a defective design depends upon the reasonableness of the manufacturer's action, and depends upon the degree of care which he has exercised. . . .", 272 Md. at 221, 321 A.2d at 747. In short, the court took a very literal reading of a concept that was formulated to ease the proof burden of a plaintiff by allowing him to rely on a kind of "enterprise liability." For a good discussion of the expression "enterprise liability," see McNichols, *The Kirkland v. General Manufacturers' Products Liability Doctrine—What's In a Name?*, 27 OKLA. L. REV. 347, 352 (1974).

At least twelve decisions have adopted the theory of "crashworthiness" within the Section 402A context. *Nanda v. Ford Motor Co.*, 509 F.2d 213 (7th Cir. 1974) (applying Illinois law); *Turcotte v. Ford Motor Co.*, 494 F.2d 173 (1st Cir. 1974) (applying Rhode Island law); *Passwaters v. General Motors Corp.*, 454 F.2d 270 (8th Cir. 1972) (applying Iowa law); *Grundmanis v. British Motor Corp.*, 308 F. Supp. 303 (E.D. Wis. 1970); *Dyson v. General Motors Corp.*, 298 F. Supp. 1064 (E.D. Pa. 1969); *Cronin v. J.B.E. Olson Corp.*, 8 Cal. 3d 121, 501 P.2d 1153, 104 Cal. Rptr. 433 (1972); *Brandenburger v. Toyota Motor Sales, U.S.A., Inc.*, 162 Mont. 506, 513 P.2d 268 (1973); *May v. Portland Jeep, Inc.*, 265 Ore. 307, 509 P.2d 24 (1973); *Engberg v. Ford Motor Co.*, 205 N.W.2d 104 (S.D. 1973); *Ellithrope v. Ford Motor Co.*, 503 S.W.2d 516 (Tenn. 1973); *Turner v. General Motors Corp.*, 514 S.W.2d 497 (Tex. Civ. App. 1974); *Baumgardner v. American Motors Corp.*, 83 Wash. 2d 751, 522 P.2d 829 (1974).

The discussion in *Cronin v. J.B.E. Olson Corp.*, *supra*, illustrates the narrowness of the *Young* court's distinction:

The most obvious problem we perceive in creating any such distinction [construction v. design] is that thereafter it would be advantageous to characterize a defect in one rather than the other category. It is difficult to prove

In concluding that a manufacturer has a "crashworthiness" duty, the *Young* court relied somewhat on the reasoning of the New York Court of Appeals in *Bolm v. Triumph Corp.*,<sup>17</sup> which predicated the existence of the duty on the foreseeability of the injury.<sup>18</sup> However, in defining the scope of the duty, the *Young* court was attracted to the approach taken by the Fourth Circuit Court of Appeals in *Dreisonstok v. Volkswagenwerk, A.G.*<sup>19</sup>

The *Dreisonstok* court seized upon the *Larsen* precept that a "manufacturer is under a duty to use reasonable care in the design of its vehicle to avoid subjecting the user to an unreasonable risk of injury in the event of a collision."<sup>20</sup> It then explained that "[w]hether or not this [creation of an unreasonable danger] has occurred should be determined by general negligence principles, which involve a balancing of the likelihood of harm, and the gravity of harm if it happens against the burden of the precautions which would be effective to avoid the harm."<sup>21</sup>

In connection with this "balancing" approach, the *Dreisonstok* court articulated several factors to be considered:

1. the defect's obviousness;<sup>22</sup>
2. the vehicle's purposes, including design, utility, style, attractiveness and marketability;<sup>23</sup>

---

that a product ultimately caused injury because a widget was poorly welded—a defect in manufacture—rather than because it was made of inexpensive metal difficult to weld, chosen by a designer concerned with economy—a defect in design . . . . Furthermore, we find no reason why a different standard, and one harder to meet, should apply to defects which plague entire product lines. We recognize that it is more damaging to a manufacturer to have an entire line condemned, so to speak, for a defect in design, than a single product for a defect in manufacture. But the potential economic loss to a manufacturer should not be reflected in a different standard of proof for an injured consumer. 8 Cal. 3d at 134, 501 P.2d at 1163, 104 Cal. Rptr. at 443.

If Maryland should adopt Section 402A without obliterating this distinction between a design defect and a construction defect, the distinction will provide a defense hurdle for plaintiffs in design defect cases who are desirous of avoiding the negligence requisite of lack of due care and the vagaries of the Uniform Commercial Code's statutory scheme requirements and allowances. At present though, the "crashworthiness" doctrine is available to plaintiffs in Maryland only when their cases are premised on theories of negligence or implied warranty.

17. In *Young*, the court quoted with approval this language from *Bolm v. Triumph Corp.*, 33 N.Y.2d 151, 158, 305 N.E.2d 769, 772-73, 350 N.Y.S.2d 644, 649 (1973):

[T]he manufacturer should not be permitted to argue that a user of its product assumes dangers from unknown or latent defects, either in construction or design, which the manufacturer can reasonably foresee will cause injury on impact. The standards for imposing liability for such unreasonably dangerous design defects are, thus, general negligence principles . . . . 272 Md. at 212, 321 A.2d at 743.

18. *Id.* at 219, 321 A.2d at 746.

19. 489 F.2d 1066 (4th Cir. 1974).

20. *Id.* at 1070 n.11, quoting from *Larsen v. General Motors Corp.*, 391 F.2d 495, 502 (8th Cir. 1968) (emphasis added).

21. 489 F.2d at 1071.

22. *Id.*

23. *Id.* at 1071-72.

3. the vehicle's price and, in particular, the effect which added safety features would have upon the price relative to marketability;<sup>24</sup> and,

4. the circumstances of the particular collision.<sup>25</sup>

The *Young* court, mindful of these factors, pronounced:

[I]n determining "reasonableness," many factors must be considered. . . . The style and type of vehicle, and its particular purpose, must be taken into consideration. . . . Price must be a pertinent factor, as the cost of a particular design change may in some instances be so great, while adding little to safety, that the vehicle will be taken "out of the price range of the market to which it was intended to appeal." . . . And the price of the vehicle itself should be considered, . . . . The nature of the accident is to be taken into account, . . . . [for] to impose liability, the trier of the facts must be able to conclude that the design was unreasonable in light of all of the relevant considerations.<sup>26</sup>

Under *Young*, then, as under *Dreisonstok*, a manufacturer will be held liable for a violation of the "crashworthiness" duty only if the court finds—after delicately balancing the utility of the vehicle, in light of the above factors, against the likelihood and gravity of harm—that an unreasonable risk of injury exists in the event of a collision.

#### THE PROTECTIVE STAGES AND THE JUDICIAL PROCESS

The expression of the manufacturer's "crashworthiness" duty in terms of "reasonable care in the design of a vehicle in order to avoid subjecting a user to an unreasonable risk of injury in a collision"<sup>27</sup> aids in defining the scope of that duty. However, the questions remain: How safe is "crashworthy" as opposed to "crashproof"?<sup>28</sup> Where is the line to be drawn? To what extent can the courts expand the "crashworthiness" duty and yet maintain sensibility on liability for enhanced injury?

The problem can be analyzed in terms of the "three-stage protective barrier" generally offered a vehicle occupant for purposes of isolating him from direct confrontation with excessive impact forces. These three stages of protection have been aptly described as follows in an engineering paper:

24. *Id.* at 1072-73.

25. *Id.* at 1073. For the court's application of the articulated factors, see 489 F.2d at 1073-76.

26. 272 Md. at 219, 312 A.2d at 746-47. *See also* *Turner v. General Motors Corp.*, 514 S.W.2d 497, 504-05 (Tex. Civ. App. 1974).

27. 272 Md. at 219, 321 A.2d at 746.

28. One author believes the distinction is one of semantics since both terms are undefinable in practical terms—he explains:

The first stage relates to the crushable structure ahead, behind, to the sides and below the motorist which serves to deform and resist passenger compartment intrusion. The padded surfaces, energy absorbing controls and interior trim constitute the second stage forces . . . the third protective barrier is provided by internal restraints positioned about the motorist for the purpose of directing and attenuating the forces of the second collision, the impact exposure of the motorist with his vehicle interior.<sup>29</sup>

In considering the reasonableness of care in design of each of these "protective barriers," the courts should realize that "[t]he realities of the crash environment are such that cars collide in every conceivable manner, at all conceivable speeds, with all conceivable objects."<sup>30</sup> Consequently, if the judicial process is to function in this area, it is suggested that the courts adhere closely to the refined approach set out in *Dreisonstok*.<sup>31</sup> Otherwise, the manufacturer does become an insurer of his product, since every automobile, practically speaking, can arguably be made safer vis-a-vis its performance in a collision.

#### THE FIRST STAGE—STRUCTURAL INTEGRITY

It is pertinent to note that comprehensive safety standards are beginning to have an effect on maintaining passenger compartment integrity within the state of the art. For example, there are now standards on roof crush resistance, fuel system integrity, capacity of

---

If "defectiveness" of a car is to be judged by its performance in a collision then every car is arguably "defective" in some way since one can always contend in retrospect that it could have been "safer," depending on the circumstances. The realities of the crash environment are such that cars collide in every conceivable manner, at all conceivable speeds, with all conceivable objects. Any given crash or accident can generate a claim, for example, that the front end should have been more rigid in the one case and more crushable in the other; that seats should have been firmly anchored in one case and able to collapse in another case; that fuel tanks should be located in front in one case, in the rear in another and at the side in still another. The examples could be multiplied. A car equipped with a lap and shoulder belt not in use will be claimed to be "crashworthy" because it was not equipped with airbags. If a manufacturer made a car which withstood a 40 mile an hour frontal collision without any injury, there would be those who would claim lack of "second collision" protection in a crash at 41 miles per hour, or at higher speeds, and so on. Thus, given the wide variety and numbers of claims which can, and, in fact, have been made, a general duty to protect against "second collision" injuries is on a cumulative basis, really a duty to make a "crashproof" car. Hoenig, *Understanding "Second Collision" Cases in New York; A Suggested Guide to the Application of Bolm*, 20 N.Y.L.F. 29, 46-47, n.53 (1974) [hereinafter cited as Hoenig].

29. Severy, Brink & Blaisdell, *Smaller Vehicle Versus Larger Vehicle Collisions*, S.A.E. Paper No. 710861 (1971) in Proceedings of the Fifteenth Stapp Car Crash Conference 386, 428-49 (1971).

30. Extracted from Hoenig, *supra* note 28, at 46, n.53.

31. 489 F.2d at 1071-73.



door locks and door retention components, side door strength and windshield mounting.<sup>32</sup> These will assist in eliminating the potential for an anomaly when, for example, a plaintiff contends that a fuel tank located in the vehicle front is a frontal crash hazard and therefore should be in the rear,<sup>33</sup> while another plaintiff contends that because of the high incidence of rear-end collisions the fuel tank should be placed somewhere in the vehicle front.<sup>34</sup>

Uniform safety standards, while certainly desirable, do not eliminate, however, the need for judicial concern with the variables involved in various types of accidents. One important variable in particular requires realistic judicial attention: the circumstances of the particular collision. Cases in several jurisdictions have emphasized the need for limitations on this variable.<sup>35</sup>

In *Dyson v. General Motors Corp.*,<sup>36</sup> the plaintiff was injured when the 1965 Buick Electra hardtop in which she was a passenger left the roadway and overturned onto its roof. The plaintiff charged in her complaint, which was silent on vehicle speed, that the vehicle was defectively designed because of the removal in that year's model of the center posts, the reduction in the door frame and the change in angle of the corner roof-supports. She further contended that these defects so weakened the roof structure that the roof collapsed completely when the vehicle overturned. The court, while not dismissing the complaint because of a prediction that Pennsylvania's highest state court would follow the *Larsen* rationale and because there could conceivably be liability for the particular defective condition alleged,<sup>37</sup> did instructively state:

[I]t could not reasonably be argued that a car manufacturer should be held liable because its vehicle collapsed when involved in a head-on collision with a large truck, at high speed.<sup>38</sup>

---

32. 49 C.F.R. §§ 571.216, .301, .206, .214 and .212 (1974), respectively.

33. See *Shumard v. General Motors Corp.*, 270 F. Supp. 311 (S.D. Ohio 1967) (plaintiff's decedent received fatal injuries when his 1962 Corvair became involved in a head-on collision with another vehicle and burning gasoline escaped from a crushed fuel tank located in the front—placement of the fuel tank was attacked).

34. See *Grundmanis v. British Motor Corp.*, 308 F. Supp. 303 (E.D. Wis. 1970) (plaintiff received injuries when the 1962 MGB in which the plaintiff was a passenger became involved in a collision with another vehicle and fire emerged from the ruptured fuel tank—placement of the fuel tank under the trunk and immediately behind the passenger compartment was questioned).

35. *Nanda v. Ford Motor Co.*, 509 F.2d 213 (7th Cir. 1974); *Dreisonstok v. Volkswagenwerk, A.G.*, 489 F.2d 1066 (4th Cir. 1974); *Dyson v. General Motors Corp.*, 298 F. Supp. 1064 (E.D. Pa. 1969); *Volkswagen of America, Inc. v. Young*, 272 Md. 201, 321 A.2d 737 (1974); *Turner v. General Motors Corp.*, 514 S.W.2d 497 (Tex. Civ. App. 1974). All five follow the rationale as set forth in *Larsen*.

36. 298 F. Supp. 1064 (E.D. Pa. 1969).

37. The trend is that a plaintiff's claim will not simply be barred because it involves a "second collision;" the issue has become whether there could conceivably be liability for the particular defective condition allegedly involved.

38. 298 F. Supp. at 1073.

The court had noted with respect to the case as presented that "[t]here is no evidence or allegation as to the speed of the vehicle when it left the roadway. . . ." <sup>39</sup>

In *Dreisonstok v. Volkswagenwerk, A.G.*,<sup>40</sup> a case in which a 1968 Microbus collided with a utility pole at 40 mph, the court, in reversing a judgment for the plaintiff, commented:

It may be that in every case the injuries may be somewhat different but any "head-on" collision at a speed of 40 miles an hour or more will result in severe injuries to the occupants of a vehicle and, certainly in 1968, no design short of an impractical and exorbitantly expensive tank-like vehicle could have protected against such injuries; in fact, it is doubtful that even such a vehicle could have.<sup>41</sup>

Two other cases, *Turner v. General Motors Corp.*,<sup>42</sup> and *Nanda v. Ford Motor Co.*,<sup>43</sup> have implicitly approved the *Dreisonstok* approach. In *Turner*, plaintiff was operating a 1969 Chevrolet Impala hardtop sedan when, in order to avoid striking a truck, he left the highway and the vehicle overturned and landed on its top. Plaintiff was seatbelted, but the right front portion of the roof collapsed and came into contact with his head, resulting in paralysis of his limbs. He sued the manufacturer alleging design deficiency in connection with the roof structural support and suggested incorporation of a roll bar as an alternative. The court, indicating that the plaintiff should be permitted further trial court proceedings, seemed in agreement with the balancing test criteria of *Dreisonstok*, which it termed a "moderate approach . . . to the issue of crashworthiness."<sup>44</sup>

The *Nanda* court, while not verbalizing the *Dreisonstok* criteria for determining unreasonable risk and resultant liability, implicitly recognized the role of speed for purposes of calculating collision forces in

39. *Id.* The court continued, ". . . and I must therefore assume, for present purposes, that no greater force was exerted upon the roof than the weight of the vehicle itself, as it came to rest upside-down on a lawn." *Id.*

40. 489 F.2d 1066 (4th Cir. 1974).

41. *Id.* at 1076 (citations omitted). *Cf.* *Seattle-First National Bank v. Volkswagen of America, Inc.*, 11 Wash. App. 929, 525 P.2d 286 (1974). In this case, occupants of a 1958 Volkswagen Microbus were fatally injured when it collided with the rear of a Ford flatbed truck. Plaintiffs alleged defective design relative to the structural integrity of the vehicle's front end. The court refused to dismiss on the basis of *Dreisonstok*, distinguishing that case by saying: "In the present case we do not have a speed of 40 m.p.h., but an alleged speed of 20 m.p.h. or less." *Id.* at 935, 525 P.2d at 290.

42. 514 S.W.2d 497 (Tex. Civ. App. 1974).

43. 509 F.2d 213 (7th Cir. 1974).

44. 514 S.W.2d at 505. The *Turner* court stated, after reviewing the resident federal court's decision in *Willis v. Chrysler Corp.*, 264 F. Supp. 1010, 1011-12 (S.D. Tex. 1967), which had predicted Texas would adopt the *Evans* rationale as the law of Texas: "[W]e do not believe that *Larsen* imposes a duty to design an automobile which will withstand the type of high-speed, head-on collision described in *Willis*." 514 S.W.2d at 502.

order to assess design tolerance capability.<sup>45</sup> However, because of clear factual evidence conflicts on pertinent factors, the jury's plaintiff verdict governed inferences.<sup>46</sup> The plaintiff's 1967 Ford Cortina had been rear-ended twice during the accident and the vehicle had burst into flames. An eyewitness had estimated 10 mph for the first impact; the driver of the second impacting vehicle indicated she was traveling 40 mph when she first observed the Ford Cortina, but she further indicated that she had braked before impact and had felt her brakes grab.

The Maryland Court of Appeals has also emphasized the "nature of the accident,"<sup>47</sup> and in particular, the speed aspect. Of course, the "nature of the accident" includes not only speed but also consideration of the masses involved—car with car (size differentials),<sup>48</sup> car with fixed barrier (for example, with a concrete bridge abutment),<sup>49</sup> or even car with another type of moving object (train),<sup>50</sup>—and the collision types, such as frontal,<sup>51</sup> rear-end<sup>52</sup> or, possibly, rollover.<sup>53</sup>

Pertinent to other balancing criteria, *Dyson* intimates and *Dreisonstok* pronounces that, for purposes of determining defective design, *vehicles of the same type are to be compared*. *Dyson* explains:

[A]ll that is involved is differentiation between various models of automobiles, and a recognition of the inherent characteristics of each. The manufacturer cannot be expected to provide a convertible which is as safe in roll-over accidents as a standard four-door sedan with center posts and full-door frames. But the

---

45. 509 F.2d at 218.

46. *Id.* at 220.

47. 272 Md. at 219, 321 A.2d at 747.

48. *Johnson v. American Motors Corp.*, 225 N.W.2d 57 (N.D. 1974) (Cadillac rear-ends Rambler station wagon); *Seattle-First National Bank v. Volkswagen of America, Inc.*, 11 Wash. App. 800, 525 P.2d 286 (1974) (Microbus rear-ends flatbed truck).

49. *Hardy v. Volkswagen of America, Inc.*, 65 F.R.D. 359 (W.D. Pa. 1975).

50. *Alexander v. Seaboard Air Line R.R.*, 346 F. Supp. 320 (W.D.N.C. 1971), *aff'd per curiam*, [1970-1973 Transfer Binder] CCH PROD. LIAB. REP. ¶ 6748 (4th Cir. 1972). *See also Walz v. Erie-Lackawanna R.R.*, [1965-1967 Transfer Binder] CCH PROD. LIAB. REP. ¶ 5722 (N.D. Ind. 1967).

51. *Bremier v. Volkswagen of America, Inc.*, 340 F. Supp. 949 (D.D.C. 1972); *Hardy v. Volkswagen of America, Inc.*, 65 F.R.D. 359 (W.D. Pa. 1975); *Willis v. Chrysler Corp.*, 264 F. Supp. 1010 (S.D. Tex. 1967); *Ford v. Ruppel*, 161 Mont. 56, 504 P.2d 686 (1972).

52. *Nanda v. Ford Motor Co.*, 509 F.2d 213 (7th Cir. 1974); *Perez v. Ford Motor Co.*, 497 F.2d 82 (5th Cir. 1974); *Turcotte v. Ford Motor Co.*, 494 F.2d 173 (1st Cir. 1974); *Badorek v. General Motors Corp.*, 11 Cal. App. 3d 902, 90 Cal. Rptr. 305 (1970); *Evancho v. Thiel*, 297 So. 2d 40 (Fla. App. 1974); *Volkswagen of America, Inc. v. Young*, 272 Md. 201, 321 A.2d 737 (1974); *Johnson v. American Motors Corp.*, 225 N.W.2d 57 (N.D. 1974).

53. *See Dyson v. General Motors Corp.*, 298 F. Supp. 1064 (E.D. Pa. 1969); *Culpepper v. Volkswagen of America, Inc.*, 33 Cal. App. 3d 510, 109 Cal. Rptr. 110 (1973); *Frericks v. General Motors Corp.*, 274 Md. 288, 336 A.2d 118 (1975); *May v. Portland Jeep, Inc.*, 265 Ore. 307, 509 P.2d 24 (1973); *Turner v. General Motors Corp.*, 514 S.W.2d 497 (Tex. Civ. App. 1974).

manufacturer can be expected to provide a convertible which is as safe as it reasonably can be made, and which is not appreciably less safe than other convertibles.<sup>54</sup>

*Dreisonstok* adds:

[I]n determining whether a vehicle has been negligently designed so far as safety is concerned, the special purpose and character of the particular type of vehicle must be considered, and a microbus is no more to be compared with a standard 1966 passenger type car than the convertible instanced in *Dyson* is to be compared with a standard hardtop passenger car.<sup>55</sup>

Moreover, the vehicle's purposes and the vehicle's price should act as the guidelines for selection of the comparison model.<sup>56</sup>

Nonetheless, the collision's nature should be the most persuasive factor, a conclusion patently compelled by the recent decisions discussed *supra*. Also, the judicial process, in examining this factor, must make serious efforts to prevent liability from attaching to collisions beyond the contemplation of the federal standards. Otherwise, the automobile manufacturer, practically speaking, will become the insurer of his product.<sup>57</sup>

#### THE SECOND STAGE— PASSENGER COMPARTMENT INTERIOR COMPONENTS

Product liability litigation has no doubt contributed in part to the improved protection now afforded passenger compartment occupants from potential aggravated injuries resulting from steering assemblies, dashboard protrusions, seat mechanism characteristics, and other passenger compartment components by hastening the process through which federal safety standard requirements have become applicable to manufacturers.<sup>58</sup> Passengers in automobiles involved in accidents now have improved protection from potential aggravated injuries.

For example, the Mississippi trilogy,<sup>59</sup> while decided in favor of the manufacturer based on the *Evans* interpretation of duty, undoubtedly

54. 298 F. Supp. at 1073.

55. 489 F.2d at 1076.

56. *Id.* at 1071-73.

57. *Id.* at 1076.

58. See discussion at p. 6-7 *supra*.

59. *General Motors Corp. v. Howard*, 244 So. 2d 726 (Miss. 1971) (occupant's aggravated injury concerned a telescopic steering column which did not telescope in collision with another truck); *Ford Motor Co. v. Simpson*, 233 So. 2d 797 (Miss. 1970) (occupant of a pick-up truck involved in a head-on collision was injured when her knee struck a heater knob attached to the bottom of the dashboard); and, *Walton v. Chrysler Corp.*, 229 So. 2d 568 (Miss. 1969) (occupant received enhanced injuries when his seat belt collapsed in a rear-end collision).

assisted in focusing attention on passenger compartment interior needs. Similarly, cases in various jurisdictions involving the characteristics of steering assemblies have heightened the debate, for example, over the merits of a collapsible or non-rigid column.<sup>60</sup> Also, the cases dealing with seat rigidity and seat-locking devices have certainly caused engineers to focus on the need to find the optimum safety standard for the subject.<sup>61</sup>

In fact, uniform safety standards, objective and practicable, are a needed item for the design of all safety related interior components of a vehicle. *Gray v. General Motors Corp.*<sup>62</sup> is an illustration of the reason for the need. There the plaintiff sued the manufacturer for failure to install a "pop-out" windshield, alleging that her injuries were enhanced when she was thrown through the windshield in a collision. However, Federal Motor Vehicle Safety Standard 212<sup>63</sup> requires that windshield mounting be retained in a 30 mph forward crash into a rigid concrete barrier, thereby pronouncing the view that a windshield should not "pop-out."

Comprehensive safety standards for all components involved with the passenger compartment interior would narrow litigation in this area to a manufacturer's non-compliance with the standards promulgated.<sup>64</sup> The judicial process then would be dealing only with specific and objective levels of performance by which to gauge potential liability, a task for which the system is traditionally well-suited.

---

60. In *Yetter v. Rajeski*, 364 F. Supp. 105 (D.N.J. 1973), plaintiff included an allegation that the 1965 vehicle should have been equipped with a collapsible steering column ("E-A" column) not found in any 1965 production vehicle. Interestingly, a study prepared for the Department of Transportation found through comparisons of accident collision performance among vehicles not having the E-A column and those with the energy absorbing device that in some injury classifications there was an increase in injury attributable to the device. T. Anderson, *Analysis of Vehicle Injury Sources*, Cornell Aeronautical Laboratory Report No. ZM-5010-V-2R (Rev. Sept. 1972).

61. *Cf. Walton v. Chrysler Corp.*, 229 So. 2d 568 (Miss. 1969), where plaintiff complained that seats collapsed in collision and *Seattle First National Bank v. Talbert*, [1970-73 Transfer Binder] CCH PROD. LIAB. REP. ¶ 6550 (Wash. Sup. Ct. 1970), where plaintiff complained that seats remained rigidly anchored during the collision.

62. 434 F.2d 110 (8th Cir. 1970) (plaintiff failed to recover).

63. 49 C.F.R. § 571.212 (1974).

64. Standards have already been promulgated concerning rearview mirrors (49 C.F.R. § 571.111 (1974)), interior padding (49 C.F.R. § 511.201 (1974)), steering (49 C.F.R. § 571.204 (1974)), and seating systems (49 C.F.R. § 571.207 (1974)).

Other interior component second collision cases include: *Ford Motor Co. v. Zahn*, 265 F.2d 729 (8th Cir. 1959) (occupant struck defectively jagged ashtray during emergency braking); *Evancho v. Thiel*, 297 So. 2d 40 (Fla. App. 1974) (front seat locking device failed and exposed forward moving rear seat passenger to sharp edges of rails upon which the seat was mounted); *Friend v. General Motors Corp.*, 118 Ga. App. 763, 165 S.E.2d 734 (1968), *cert. denied*, 225 Ga. 290, 167 S.E.2d 926 (1969) (folding of front seat when rear of seat struck); *Mickle v. Blackmon*, 252 S.C. 202, 166 S.E.2d 173 (1969) (gear shift lever knob shattering and impaling occupant); and *Ellithrope v. Ford Motor Co.*, 503 S.W.2d 516 (Tenn. 1973) (occupant's face struck prongs of insignia on steering wheel when vehicle rear-ended).

## THE THIRD STAGE—OCCUPANT SAFETY DEVICES

It is generally conceded that when a safety device designed to protect an occupant in the event of a crash fails to perform as intended due to an inherent defect, an action for “enhanced injury” is certainly permissible, regardless of whether the particular jurisdiction follows the *Evans* or *Larsen* rule.<sup>65</sup>

A review of a few cases illustrates the handling of the focal issue—

[W]hether a defect unknown to the user created a condition which prevented or interfered with the ability of the safety device to do its intended job.<sup>66</sup>

In *Engberg v. Ford Motor Co.*,<sup>67</sup> plaintiff’s decedent received fatal injuries due to ejection during a single vehicle accident because of an apparently defective seat belt. The seat belt had been found buckled but broken; there had been no evidence of blood in the vehicle; and, the passenger compartment had remained essentially intact after the accident. The defect evidence showed that the seat belt, designed to withstand a load of 5000 pounds, failed to perform under a significantly lower load because of inadequate materials used for the belt webbing. The Supreme Court of South Dakota, affirming the trial court judgment (jury verdict) in favor of the plaintiff, stated:

[T]he seat belts in Engberg’s station wagon were provided for the specific purpose of protecting the driver in the event of an accident. The evidence was sufficient for the jury to find that if the seat belt had performed as reasonably expected of it, Engberg’s injuries would not have been so severe.<sup>68</sup>

In *Huddell v. Levin*,<sup>69</sup> plaintiff’s decedent received fatal injuries because his head was driven into the protruding edge of a head restraint when his vehicle was rear-ended while stopped on a bridge. The court, noting that “the only ‘intended use’ of the head restraint was to provide occupant protection in the event of rear-end collisions,”<sup>70</sup> concluded on the existence of a manufacturer’s duty<sup>71</sup> to the decedent, that:

---

65. See, e.g., *Huddell v. Levin*, 395 F. Supp. 64 (D.N.J. 1975).

66. Hoenig, *supra* note 28, at 52-53.

67. 205 N.W.2d 104 (S.D. 1973).

68. 205 N.W.2d at 108. See also *Devaney v. Sarno*, 125 N.J. Super. 414, 311 A.2d 208 (App. Div. 1973), *aff’d* 65 N.J. 235, 323 A.2d 449 (1974); *Baumgardner v. American Motors Corp.*, 83 Wash.2d 751, 522 P.2d 829 (1974).

69. 395 F. Supp. 64 (D.N.J. 1975).

70. *Id.* at 73.

71. The court also noted that “the decision need not be based on the broad theories of ‘second collision’ case law.” *Id.*

It would be illogical to hold . . . that a manufacturer has no duty to provide a non-defective head restraint because its "intended use" does not contemplate passenger movement after forceful accidents.<sup>72</sup>

Looking then at the sufficiency of the evidence for purposes of deciding the post-trial motion of the manufacturer, the court, indicating agreement that "plaintiff's testimony amply demonstrated that the head restraint was defective,"<sup>73</sup> stated, in summary:

Because the soft foam provided little protection, a rearward motion of the head would bring it into contact with the sharp "ax-like" metal edge of the head restraint, which concentrated all forces against a one-half inch area of the skull; the metal edge itself was not easily deformable, so that there was no "cushioning" effect.<sup>74</sup>

In *May v. Portland Jeep, Inc.*,<sup>75</sup> plaintiff, who was wearing his seatbelt, sustained injuries when his jeep vehicle landed upside down while descending a sand dike and a roll bar, which was bolted to wheel wells welded to the vehicle body, collapsed. The Supreme Court of Oregon affirmed the trial court judgment (jury verdict) in favor of the plaintiff indicating that there was sufficient evidence that the roll bar should have withstood the load. The court also concluded that "second collision" cases "are not applicable to situations where the defect is in equipment, the sole purpose of which is to protect occupants from injury in the case of accident."<sup>76</sup>

Each of the above case examples involved a defect which was unknown to the user and which created a condition that prevented or interfered with the ability of the safety device to fulfill its intended purpose. In each case a jury's finding of manufacturer liability was affirmed by the court principally because a device provided to accomplish a specific safety task should achieve performance goals contemplated by the manufacturer, a fact belied by the evidence. Conceivably, another type of example which may result in the future will involve an "airbag"<sup>77</sup> which does not inflate despite being designed to inflate upon a crash and restrain the occupant. In any event, the

---

72. *Id.*

73. *Id.* at 75.

74. *Id.*

75. 265 Ore. 307, 509 P.2d 24 (1973).

76. *Id.* at 312, 509 P.2d at 27. See also *Turner v. General Motors Corp.*, 514 S.W.2d 497 (Tex. Civ. App. 1974).

77. "An 'airbag' is a passive inflatable occupant restraint system." Upon a collision, an explosive gas charge rapidly inflates "a large bag which restrains the occupant as he moves toward the windshield, dashboard or steering wheel of the car and then deflates itself." The performance cycle is to restrain the occupant from impact with the vehicle interior. *Chrysler Corp. v. Department of Trans.*, 472 F.2d 659, 664 (6th Cir. 1972).

judicial system can adequately handle this aspect of "crashworthiness" so long as it does not attempt to set design standards for occupant safety devices which are inconsistent with the function that the design for the particular device is intended to serve.

### A NEW DIMENSION

Although the term "crashworthiness" is generally used to connote the capability which an automobile has to protect its occupants during a collision,<sup>78</sup> the term is equally applicable to the protection of non-occupants colliding with an automobile, for example, pedestrians, motorcyclists, and bicyclists.<sup>79</sup> The feature involved is exterior design.

Of course, "crashworthiness" for non-occupants must take into account the fact that safety of the vehicle's occupants must be a prime design concern. Therefore, for example, a rigid outer shell would seem a requirement even though it would inevitably cause serious injury or even death to a non-occupant hit in a high-speed collision.<sup>80</sup> The Eighth Circuit in *Passwaters v. General Motors Corp.*<sup>81</sup> was again the court setting the trend to allow enhanced injury recovery by non-occupants.

78. See note 1 *supra*.

79. Also occupants of another vehicle may be an additional example. *But see* *Mieher v. Brown*, 54 Ill. 2d 539, 301 N.E.2d 307 (1973). In *Mieher*, the plaintiff's decedent's automobile collided with the rear end of a truck and the car's front passed underneath the truck's rear deck, resulting in the rear deck penetrating the car's windshield and causing fatal injuries to the plaintiff. The plaintiff's representative alleged that the truck's manufacturer negligently designed its product by failing to attach to the rear a bumper, fender or shield, thereby rendering the truck unsafe in the event that a vehicle colliding with the truck's rear could then proceed unimpeded under the truck's bed. However, the *Mieher* court held:

Although the injury complained of may have been, in a sense, foreseeable, we do not consider that the alleged defective design created an unreasonable danger or an unreasonable risk of injury. . . . Public policy and the social requirements do not require that a duty be placed upon the manufacturer of this truck to design his vehicle so as to prevent injuries from the extraordinary occurrences of this case. *Id.* at 545, 301 N.E.2d at 310.

80. One commentator indicates two beliefs as to improvements:

Two aspects of current exterior design can, however, be made safer without sacrificing other important interests. The first of these is the presence of force-concentrating structures—small, sharp surfaces, such as chrome trim or hood ornaments—on the exposed surfaces of the automobile. . . . In most cases there is no functional need for these structures; . . . The second aspect . . . is the geometry, or over-all shape, of the automobile's front end. The front-end geometry determines the direction in which the body of a pedestrian will be thrown after the initial impact. . . . No definitive information is now available regarding which geometry provides *maximum* protection for pedestrians, and more study of the question is needed. Note, *The Automobile Manufacturer's Liability to Pedestrians for Exterior Design: New Dimensions in "Crashworthiness,"* 71 MICH. L. REV. 1654, 1655-56 (1973).

81. 454 F.2d 1270 (8th Cir. 1972) cited in *Young*, 272 Md. at 214, 321 A.2d at 744. *Cf. Hatch v. Ford Motor Co.*, 163 Cal. App.2d 393, 329 P.2d 605 (1958) (where a pointed hood ornament over nine inches long pierced the eye of a six-year-old boy who ran into a parked car) and *Kahn v. Chrysler Corp.*, 221 F. Supp. 677 (S.D. Tex. 1963) (where a



In *Passwaters*, the plaintiff was a passenger on a motorcycle which collided with a Buick Skylark. Her leg was severely lacerated when it came into contact with a wheel cover of the car. The wheel cover consisted of unshielded metal flypers that spun when the wheel rotated. Plaintiff contended that the protruding blades moving at high speeds in an unshielded area constituted an unsafe design. The district court had directed a verdict for the manufacturer at the close of all the evidence.<sup>82</sup> The Eighth Circuit reversed and remanded for a new trial, holding:

We conclude that although the specific injury and the manner in which it occurred may have been difficult to foresee, nevertheless the unshielded operation of propeller-like blades on the four wheels of an automobile created a high risk of foreseeable harm to the general public. The use of the highways by pedestrians, the frequency of travel by unprotected persons riding on bicycles, motorbikes and motorcycles is a common occurrence. We think it now settled that a manufacturer does have the responsibility to avoid design in automobiles which can reasonably be foreseen as initially causing or aggravating serious injury to users of the highway when a collision occurs.<sup>83</sup>

The *Passwaters* court sidestepped its earlier post-*Larsen* decision of *Schneider v. Chrysler Corp.*<sup>84</sup> In *Schneider*, the plaintiff, while bending over, lacerated his eye on a sharp corner of the glass of the opened left front vent window of his automobile. The court found a lack of proximate causation, reasoning that the plaintiff's conduct was not a foreseeable action which the manufacturer could reasonably anticipate. In distinguishing *Schneider*, the *Passwaters* court stated:

[I]n *Schneider* the Court reasoned that the window vent was not being used for its intended purpose. Here the wheel cover was obviously used as it was intended.<sup>85</sup>

---

seven-year-old boy who rode his bicycle into the rear of a car was thrown upon an ornamental tail fin and incurred serious injuries). Both *Hatch* and *Kahn* held the manufacturer owed no duty—reflective of a court reluctance to extend the scope of the manufacturer's duty to include exterior design-caused injuries where the plaintiff collides with a stationary vehicle.

82. The district court had "found that the wheel cover had been engineered to that degree of safety which rendered unforeseeable an injury to a person riding on the rear of a motorcycle." 454 F.2d at 1274.
83. 454 F.2d at 1275-76. Interestingly, the trial after remand of *Passwaters* resulted in the jury returning a defendant's verdict.
84. 401 F.2d 549 (8th Cir. 1968).
85. 454 F.2d at 1275. The *Passwaters* court also noted *Schneider's* comparison of *Hatch v. Ford Motor Co.*, 163 Cal. App. 2d 393, 329 P.2d 605 (1958):

We think significant the court's comment in *Schneider* where it observed: "The accident in *Hatch* appears much more foreseeable than the one in the case at bar and raises a close question on the use of a needlessly protruding ornament as

*Passwaters* and *Schneider*, as Eighth Circuit post-*Larsen* decisions, appear inconsistent unless one distinguishes *Schneider* from *Larsen* and *Passwaters* for not being a "second collision" case, but rather a "simultaneous collision" situation, that is, one where the injury caused by the design happens simultaneously with the collision.<sup>86</sup> However, this distinction seems meaningless when one remembers that the duty being imposed upon the manufacturer is to use reasonable care in design to minimize the injurious effects of an accident.<sup>87</sup>

Federal regulation of exterior design is minimal to date,<sup>88</sup> but comprehensive safety standards are a likely response to the consumer awareness of causes of accident-producing injuries.<sup>89</sup> The promulgation of standards which would eliminate unreasonably dangerous exterior designs would be the most effective means of affording non-occupants protection in vehicle collisions. In the meantime, litigants must deal with the "unreasonable risk of injury in the event of a collision" standard.

#### A DEFENSE REVIVED

In reaching its indicated reliance on "traditional rules of negligence," the Maryland court in *Volkswagen of America, Inc. v. Young* firmly enunciated its belief that *Larsen*, and its progeny, are "... in accord with traditional negligence principles..."<sup>90</sup> On the extent of manufacturer liability in "crashworthiness" cases, the *Larsen* court stated:

[T]he 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.*<sup>91</sup>

---

distinguished from an essential protrusion of an opened vent window. (Emphasis ours) 401 F.2d at 558." 454 F.2d at 1275.

86. There are other cases that fall into this category. *E.g.*, *Kahn v. Chrysler Corp.*, 221 F Supp. 677 (S.D. Tex. 1963); *Hatch v. Ford Motor Co.*, 163 Cal. App. 2d 393, 329 P.2d 605 (1968). *See also* *Ford Motor Co. v. Zahn*, 265 F.2d 729 (8th Cir. 1959) (a passenger in a car that made a sudden stop lost vision in one eye as a result of the collision of his head with the sharp jagged edges of an ash tray).
87. *See* *Green v. Volkswagen of America, Inc.*, 485 F.2d 430 (6th Cir. 1973) (where an eleven-year-old girl's right ring finger was severed by a concealed piece of sharp metal when that finger became caught in a body vent of a parked bus-type vehicle—the court, after reviewing Michigan law and citing *Larsen*, remanded the case for a trial).
88. 49 C.F.R. § 571.211 (1974): "*Purpose and Scope.* This standard precludes the use of wheel nuts, wheel discs, and hub caps that constitute a hazard to pedestrians and cyclists." The standard was not applicable to *Passwaters* since it was not in effect until 1968—a 1964 Buick Skylark was the subject of *Passwaters*.
89. These exterior design requirements will no doubt be similar to the existing comprehensive safety regulation of interior design. *See* note 63 *supra*.
90. 272 Md. at 214-15, 321 A.2d at 744.
91. 391 F.2d at 503 (emphasis added).

It is therefore submitted that the counterpart of the manufacturer's enhanced liability—the plaintiff's mitigation duty vis-a-vis available safety restraint devices—has been revitalized.

In *Cierpisz v. Singleton*,<sup>92</sup> the Maryland Court of Appeals was first confronted with the "seat belt defense." After extensively quoting from a Wisconsin case,<sup>93</sup> the *Cierpisz* court stated:

We do not adopt, at this time, the Wisconsin court's statement that "an occupant of an automobile either knows or should know of the additional safety factor produced by the use of seatbelts."<sup>94</sup>

The *Cierpisz* court then indicates that it was persuaded "for the present at least"<sup>95</sup> by a commentator's statement to the effect that the social utility of using seat belts was not yet clear in the mind of the public and that such must occur before failure to use could be considered negligence.<sup>96</sup> Nevertheless, while clearly intimating that in any event the defense would not be of the negligence per se character or, standing alone, even amount to contributory negligence, the *Cierpisz* court inferred in dictum that it might be considered in assessing damages:

Some future case in which the availability of the belt will be known to the plaintiff and in which there will be evidence indicating the failure to use it was a substantial factor in producing or aggravating the plaintiff's injuries may require us to consider holding that the issue, with proper instructions, ought to be submitted to a jury.<sup>97</sup>

The federal government<sup>98</sup> and automobile industry emphasis on use of both lap belts and shoulder harnesses since 1967 makes it now reasonably certain that automobile passengers either know or should know that seat belts are available, and that their use produces an additional safety factor.

In *Spier v. Barker*,<sup>99</sup> the New York Court of Appeals held that where the plaintiff, who was not using an available seat belt, was ejected from her vehicle during the collision:

---

92. 247 Md. 215, 230 A.2d 629 (1967). See also 27 MD. L. REV. 437 (1967).

93. *Bentzler v. Braun*, 34 Wis. 2d 362, 149 N.W.2d 626 (1967).

94. 247 Md. at 226, 230 A.2d at 635.

95. *Id.*

96. Roethe, *Seat Belt Negligence in Automobile Accidents*, 1967 WISC. L. REV. 288, 290.

97. 247 Md. at 227, 230 A.2d at 635. But see *Rogers v. Frush*, 257 Md. 233, 262 A.2d 549 (1970), where the court rejected proposed evidence relating to how a motorcyclist's injuries in an accident were aggravated because he failed to wear a protective helmet. *Id.* at 240-42, 262 A.2d at 553.

98. See 49 C.F.R. § 571.208 (1974).

99. 35 N.Y.2d 444, 323 N.E.2d 164, 363 N.Y.S.2d 916 (1974).

[N]on-use of an available seat belt, and expert testimony in regard thereto, is a factor which the jury may consider, . . . in arriving at its determination as to whether the plaintiff has exercised due care, not only to avoid injury to himself, but to mitigate any injury he would likely sustain.<sup>100</sup>

The *Spier* court then made clear its directive, which coincides with the dictum in *Cierpisz*:

[T]he plaintiff's non-use of an available seat belt should be strictly limited to the jury's determination of the plaintiff's damages and should not be considered by the triers of fact in resolving the issue of liability.<sup>101</sup>

Moreover, for purposes of the "two sides of the coin" thesis for "crashworthiness" cases, the viability of the seat belt defense with respect to mitigation of damages should be considered implicit in *Young*, which recognized that:

While *the intended purpose of an automobile* may not be to participate in collisions, the intended purpose *includes providing a reasonable measure of safety when, inevitably, collisions do occur*. For many years automobiles have been equipped with safety glass, bumpers, windshield wipers, etc. More recently, . . . automobiles are equipped with additional safety devices such as seat belts, shoulder harnesses, padded dashboards, padded visors, non-protruding knobs, etc. Frequent collisions are foreseeable, *and the intended purpose of all these parts of the vehicle is to afford reasonable safety when those collisions occur*.<sup>102</sup>

Also, as one annotator observed:

*[A] seat belt is designed to protect against injury from the "second collision" resulting when the body of the occupant suddenly accelerated or decelerated by the impact of the first collision, comes in contact with the interior of the vehicle in which he is riding*.<sup>103</sup>

It would, therefore, seem illogical to cast liability upon an automobile manufacturer for an occupant's collisions with its product's interior

100. *Id.* at 449-50, 323 N.E.2d at 167, 363 N.Y.S.2d at 920.

101. *Id.* at 450, 323 N.E.2d at 167, 363 N.Y.S.2d at 920.

102. 272 Md. at 217, 321 A.2d at 745 (emphasis added). *Cf. Ellithorpe v. Ford Motor Co.*, 503 S.W.2d 516 (Tenn. 1973), which applied a Tennessee statute foreclosing the use of the seat belt defense.

103. Annot., 15 A.L.R.3d 1428, 1430-31 (1966) (emphasis added).

when an available safety device—for example, a seat belt—could prevent or minimize the resulting injuries.<sup>104</sup> Thus, if the manufacturer is to be held liable for aggravated injuries to a plaintiff caused by the failure of the manufacturer to make the automobile in which the plaintiff is an occupant reasonably safe in a collision, it seems only logical and fair that the failure of a plaintiff to utilize safety devices made available by the manufacturer should dictate mitigation of damages.

#### ANOTHER CONTEXT

“Crashworthiness” as a concept has arisen within the context of automobile manufacturer liability, but it should not be considered *sui generis* to the automobile industry. Potential liability for “enhanced injury” should attach to any manufacturer that markets a product containing a defect which is a substantial factor in injury aggravation in an accident not caused by the defect.

*Young’s* breadth of scope, derived from *Larsen* and its followers, may be overlooked by those who feel its holding is limited to automobile design cases. The duty extends to all manufacturers and a limitless myriad of products—trains, boats, motorcycles, go-carts, bicycles, elevators, toys, and others. After all, the point is that a manufacturer must design his product to avoid subjecting the user to an unreasonable risk of injury in the event of an accident, regardless of the latter’s cause, or face potential liability.

The recent case of *Harrison v. McDonough Power Equip., Inc.*,<sup>105</sup> is an example. There the plaintiff, who lost his foot when a young girl ran over his leg with a riding mower, claimed the manufacturer had been negligent in failing to design a safety shield or guard to be placed beneath the mower.<sup>106</sup> The federal court, noting that the issue of aggravation or enhancement of injury had not been squarely resolved

---

104. See *Horn v. General Motors Corp.*, 34 Cal. App.3d 773, 110 Cal. Rptr. 410, *appeal docketed*. In *Horn*, a horn cap dislodged from the steering column center when the plaintiff made a sharp left turn, thus exposing three sharp prongs designed to keep the cap in place. In a subsequent collision, the plaintiff’s face struck the prongs, resulting in severe injuries. The plaintiff had not been wearing an available seat belt and the California Court of Appeals indicated that failure to wear seat belts could be a complete defense if such was the sole proximate cause of the injuries sustained; the court also indicated that if the wearing of seat belts would have reduced the injuries resulting from the allegedly defective condition, a jury could take this into consideration in deciding upon a recovery amount.

105. 381 F. Supp. 926 (S.D. Fla. 1974).

Another example: An independent force causes a train to derail, an event that is certainly foreseeable. Is there a “second collision” duty on the part of a manufacturer to occupants? Cf. *Turner v. Big Four Automotive Equipment Corp.*, 511 F.2d 133 (5th Cir. 1975) (plaintiff struck in face by tire which exploded off a tire changer while being inflated by plaintiff).

106. The plaintiffs (minor plaintiff and father) had settled a separate suit against the mower’s owner (the minor plaintiff’s grandfather) and the young girl.

by a Florida court at the time,<sup>107</sup> reviewed the trend of Florida products cases and *Larsen* and then held:

In light of the testimony introduced at the trial concerning the frequency of lawnmower-related accidents and the consequent number of injuries which result in the victim's loss of limbs, *the imposition on the manufacturer of the duty of reasonable care in design to minimize or lessen the injurious effects of an accident is not unduly burdensome and is in line with the expansive trend of Florida negligence law.*<sup>108</sup>

### CONCLUSION

Many products, like the automobile, at one time or another may be involved in either foreseeable impacts to their structures or other forms of foreseeable misuse, which may result in enhanced injury to a user or bystander. Thus, *Larsen* and its followers have reasoned that the manufacturer's duty of reasonable care in design should be viewed in light of such foreseeable risks.<sup>109</sup>

But as to duty the *Dreisonstok* court explained:

Foreseeability . . . 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.<sup>110</sup>

*Dreisonstok* also notes:

The key phrase in the statement of the *Larsen* rule is "unreasonable risk of injury in the event of a collision," not foreseeability of collision. The latter circumstance is assumed in collision cases under the *Larsen* principle; it is the element of "unreasonable risk" that is uncertain in such cases and on which the determination of liability or no liability will rest.<sup>111</sup>

107. See *Evancho v. Thiel*, 297 So.2d 40 (Fla. App. 1974).

108. 381 F. Supp. at 930 (emphasis added). Cf. *Myers v. Montgomery Ward & Co.*, 253 Md. 282, 252 A.2d 855 (1969).

109. One noted commentator has stated:

But however valuable the foreseeability formula may be in aiding a jury or judge to reach a decision on the negligence issue, it is altogether inadequate for use by the judge as a basis of determining the duty issue and its scope. The duty issue, being one of law, is broad in its implications; the negligence issue is confined to the particular case and has no implications for other cases. There are many factors other than foreseeability that may condition a judge's imposing or not imposing a duty in a particular case, but the only factors for the jury to consider in determining the negligence issue are expressed in the foreseeability formula. Green, *Foreseeability in Negligence Law*, 61 COLUM. L. REV. 1401, 1417-18 (1961).

110. 489 F.2d at 1066, 1070.

111. *Id.* at 1071.

Determination of "unreasonable risk" involves the "balancing" described and applied in *Dreisonstok* and adopted in *Young*.

The criteria for this delicate balancing, if applied intelligently in the complex field of product design, should eliminate the possibility that a jury will make a manufacturer an insurer of its product, that is, imposing a duty upon the manufacturer to design a product that protects persons from the physical effects of its misuse. However, even though economic restrictions are considered, this criteria should allow recovery by a person who sustains enhanced injury due to a product that is not reasonably safe within the existing state of the art.