Limiting the Manufacturer's Duty for Subsequent Product Alteration: Three Steps to a Rational Approach

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ARTICLES

LIMITING THE MANUFACTURER'S DUTY
FOR SUBSEQUENT PRODUCT ALTERATION:
THREE STEPS TO A RATIONAL APPROACH

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The risk reasonably to be perceived defines the duty to be obeyed, and risk imports relation; it is risk to another or to others within the range of apprehension.¹

Principles of foreseeability, however, are inapposite where a third party affirmatively abuses a product by consciously bypassing built-in safety features. While it may be foreseeable that an employer will abuse a product to meet its own self-imposed production needs, responsibility for that willful choice may not fall on the manufacturer.²

INTRODUCTION

One of the most difficult issues to arise in products liability litigation is the extent to which a manufacturer may be held liable for accidents arising out of the subsequent material alteration of its product by a third party.³ Cases involving the issue of product alteration typically involve a manufacturer who designs and distributes its product into the stream of commerce with certain safety features which are removed, bypassed, or otherwise altered by the subsequent act of a third party. The product, as altered, becomes qualitatively different, and the plaintiff that interacts with it suffers injuries that would not have been caused by the product in its original, unaltered condition.

In a strict products liability action against the manufacturer, the plaintiff must prove that the product was defective when it left the manufacturer's hands; i.e., in its condition as originally designed and sold.⁴ In subsequent alteration cases, the plaintiff will allege that the product was defective as originally designed in that (1) the design had the capability of being altered by a third party, which alter-

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4. See RESTATEMENT (SECOND) OF TORTS § 402A comment g (1965), stating that: 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 it left the hands of the particular seller is upon the injured plaintiff . . . . Id. (emphasis added); see also Voss v. Black & Decker Mfg. Co., 59 N.Y.2d 102, 107, 450 N.E.2d 204, 207, 463 N.Y.S.2d 398, 401-02 (1983); Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 479, 403 N.E.2d 440, 443, 426 N.Y.S.2d 717, 730 (1980).
ation should have been foreseen and prevented by the manufacturer, or (2) the design was otherwise defective and the intervening alteration should not sever that original design from being the proximate cause of the plaintiff's injuries. The manufacturer, on the other hand, will move for summary judgment or directed verdict on the ground that the subsequent material alteration of its product should fully absolve it of any liability for the plaintiff's injuries. In ruling on these motions, courts have been plagued with the question of whether the material alteration scenario can fit within traditional notions of duty, defect and proximate cause.

The advent of strict products liability has marked a shift in focus from the conduct of the manufacturer (negligence) to the condition of the product itself (defect). Courts have placed a duty upon manufacturers to design products that are reasonably safe not only for their intended uses, but for uses that are unintended, yet reasona-

5. See, e.g., Steinmetz v. Bradbury Co., 618 F.2d 21, 23 (8th Cir. 1980) (holding that a manufacturer may be held liable where it could have foreseen the likelihood of danger resulting from a subsequent alteration of its product); Merriweather v. E.W. Bliss Co., 636 F.2d 42, 45 (3d Cir. 1980) (declaring that “[t]he test in such a situation is whether the manufacturer could have reasonably expected or foreseen such an alteration”); see also Young v. E.W. Bliss Co., 130 Mich. App. 363, 343 N.W.2d 553, 557 (1983) (holding that the question of whether the modification to defendant's product was reasonably foreseeable is one for the jury). One of the leading cases involving a duty to prevent foreseeable product alteration is Brown v. United States Stove Co., 98 N.J. 155, 484 A.2d 1234 (1984), discussed infra text accompanying notes 149-84.


bly foreseeable. Even under this standard, however, it is fundamental that a manufacturer is not to be held as an insurer of its product against all injuries that may occur once the product leaves its control. In actions involving a materially altered product, plaintiffs strenuously attempt to avoid judgment as a matter of law by creating "factual issues" as to whether the manufacturer should have designed an "alter-proof" or "accident-proof" product. Juries are then instructed that the manufacturer may be strictly liable if it should somehow have foreseen that someone would materially alter its product. The jury is asked to evaluate the safety of the product's original design by analyzing its dangers as materially altered. With the "deep-pocket" manufacturer often the sole defendant, the outcome is almost inevitable. What should be a rational limitation on the manufacturer's duty has developed into absolute liability. It is in this context that one is most "fearfully reminded of Dean Prosser's military description of the fall of 'the citadel of privity' and the imagined bloody results of that victory: 'The rest is the story of sack and slaughter, of riot, rape and rapine . . . .'"

This problem intensifies when it arises in the context of a workplace accident. Such cases usually involve injuries sustained by a


11. See infra notes 59-223 and accompanying text.


worker while using a product which had been materially altered by his employer subsequent to the time that it left the manufacturer's control. The drafters of the Model Uniform Product Liability Act (MUPLA) noted that “[t]he largest number of . . . product modifications result from the conduct of employers.” It is ironic, however, that while the employer who materially alters a product is the primarily culpable party, workmen’s compensation laws afford it a shield of immunity against personal injury actions brought by employees. Thus, in actions arising out of workplace accidents, the manufacturer becomes the plaintiff’s sole source of recovery. As such, courts are extremely hesitant to adjudicate the questions of duty, defect and proximate cause as a matter of law, deciding instead to submit these issues to the jury as questions of fact.

Even in those few states that allow a manufacturer to implead an employer as a third party defendant, courts have been hesitant

14. Id.
15. See Model Uniform Product Liability Act, Analysis of § 112(D) (1979). Thirty-nine percent of product alterations result from the conduct of employers. Id.
18. See infra note 132 and accompanying text; see also Steinmetz v. Bradbury Co., 618 F.2d 21, 23 (8th Cir. 1980) (noting that Workmen’s Compensation barred plaintiff from recovery against his employer, and declining to absolve the manufacturer of liability for injuries arising out of a subsequent alteration since the “foreseeability” of the alteration created a jury issue); Young v. E.W. Bliss Co., 130 Mich. App. 363, 343 N.W.2d 553, 557 (1983) (“Whether the intervening negligence on the part of plaintiff’s employer in modifying the original design . . . acted to shield defendant from liability was a question for jury determination.”); cf. Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 481, 403 N.E.2d 440, 444, 426 N.Y.S.2d 717, 722 (1980) (“[T]hat an employee may have no remedy in tort against his employer gives the courts no license to thrust upon a . . . manufacturer a duty to insure that its product will not be abused or that its safety features will be callously altered.”).
to grant summary judgment or directed verdict in favor of the manufacturer. This occurs notwithstanding the fact that the plaintiff's injuries arose not out of the product as originally designed and sold, but out of the product as materially altered by the employer. Interestingly, cases in which a culpable employer is a third party defendant may present even greater problems to the manufacturer. In these cases, the liability of the immune employer, as third-party defendant, is contingent upon liability being assessed against the manufacturer as primary defendant. Courts, and especially juries, are extremely reluctant to absolve the manufacturer of liability under these circumstances, knowing that if the plaintiff recovers his damages from the manufacturer, the manufacturer can then, in turn, attempt to recoup the employer's proportionate share of the "fault" under rules of contribution and indemnity. Thus, in an attempt to ensure recovery, plaintiffs have focused upon the manufacturer as the primary target. This places the manufacturer in the position of having to defend the integrity of its design before a jury as the plaintiff's sole source of recovery, despite the fact that its product was materially altered by an immune party.

This Article critically analyzes the burden facing such a manufacturer and the existing approaches utilized by courts in an attempt to resolve it. An analysis of some statutes and leading judicial decisions will reveal the inadequacies of the existing approaches. Finally, this Article proposes a workable solution which can effectively allow courts to adjudicate more of these cases as a matter of law, without circumventing the policies underlying products liability law.

allow third-party claims against a culpable employer do, at the very least, allow manufacturers to deduct the plaintiff's workmen's compensation benefits from the total amount of a judgment. See, e.g., Witt v. Jackson, 57 Cal. 2d 57, 366 P.2d 641, 17 Cal. Rptr. 369 (1961); see also Conn. Gen. Stat. Ann. § 52-572r (West Supp. 1982).
21. See Uniform Contribution Among Tortfeasors Act § 1, 12 U.L.A. 63 (1975); see also W. Frasier & W. Keeton, supra note 8, § 50, at 336-41.
22. Id.
23. See Comment, The Expanding Scope of Products Liability: New Jersey Extends a Manufacturer's Responsibility to Include Injuries Caused After a Substantial Alteration of its Product, 16 Seton Hall L. Rev. 722, 741 (1981). The author asserts that it is unfair to hold manufacturers responsible for injuries arising out of an immune employer's material alteration. See id. "If liability should be imposed in accordance with fairness, then the employee should not be limited to suing the manufacturer of the product, nor should the employer be shielded from liability by statute." Id.
I. AN OVERVIEW OF THE DILEMMA

The American Law Institute's Restatement (Second) of Torts section 402A attempted to alleviate the material alteration problem by limiting the imposition of strict products liability to cases where the product "is expected to and does reach the user or consumer without substantial change in the condition in which it is sold." This language has had the practical effect of producing significant disagreement among courts as to the scope of a manufacturer's duty.

Some courts have construed the language of section 402A to limit a manufacturer's duty where the condition of its product at the time of the accident was substantially different from its condition at the time of sale. For example, in Bishop v. Firestone Tire & Rubber Co., the Seventh Circuit construed the language of section 402A to absolve a manufacturer of a duty where the plaintiff was unable to prove that, at the time the accident occurred, the product was in substantially the same condition as when it was originally manufactured and sold. The court, applying Indiana law, focused only upon the change in the condition itself, and not upon whether that change was caused by a third party's alteration. Under the Bishop rule, the plaintiff has the burden of proving that the condition of the product did not substantially change. Any substantial change in the condition of a product, such as normal wear and tear,
can absolve the manufacturer of a duty with respect to accidents causally related to the product in its “changed” condition.\textsuperscript{30}

Most courts, however, have construed the “without substantial change” language of section 402A to apply only in cases where the product had undergone a subsequent alteration at the hands of a third party.\textsuperscript{31} These courts differ in their approaches to the material alteration scenario.

The majority of courts that have adjudicated the material alteration question have done so on the basis of defect and proximate cause.\textsuperscript{32} This approach, referred to as “defect-proximate cause,” focuses on the product’s original design and whether or not the intervening alteration is so material that it should be deemed the sole proximate cause of the accident.\textsuperscript{33} These courts appear to bypass the threshold issue of “duty,” reasoning that under strict products liability, every manufacturer has a duty to design non-defective products.\textsuperscript{34} Thus, notwithstanding the materiality of the third party’s alteration, a duty on the part of the manufacturer always exists.\textsuperscript{35} It is

\begin{itemize}
\item \textsuperscript{30} 814 F.2d at 443; see also Insurance Co. of North America v. Atlas Constr. Co., 368 So. 2d 1247, 1249 (holding that “a manufacturer cannot be expected to design products whose parts do not wear out.”).
\item \textsuperscript{33} See cases cited supra note 32; infra text accompanying notes 59-184.
\item \textsuperscript{34} See cases cited supra note 32. But see supra note 30 and accompanying text (discussing the Bishop rule).
\item \textsuperscript{35} See cases cited supra note 32.
\end{itemize}
therefore the function of the jury to determine whether the manufacturer had, in any way, breached this open-ended duty to design non-defective products.\textsuperscript{36} If the jury finds that the product was somehow defective as originally designed and sold, it will then focus upon whether that defect was a proximate cause of the plaintiff’s injuries when taking into account the material alteration.\textsuperscript{37} In so doing, the jury is, in essence, adjudicating the “duty” question in a retrospective fashion.

The problem with the defect-proximate cause approach is that emphasis is placed on the product as originally designed despite the fact that the accident was caused by the product in its condition as materially altered.\textsuperscript{38} Furthermore, the questions of defect in original

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36. See cases cited supra note 32.

37. See cases cited supra note 32.

38. Banks v. Iron Hustler Corp., 59 Md. App. 408, 475 A.2d 1243 (1984), illustrates this problem with the defect-proximate cause approach. The product involved in Banks was a conveyor belt system, which was purchased by plaintiff’s employer 13 years prior to the accident date. See id. at 412, 475 A.2d at 1244. The conveyor was set up on an incline, and used to transport scrap from a low processing table up into railroad cars. Id. at 412, 475 A.2d at 1244-45. As originally designed, the 44-foot long conveyor was comprised of a three-foot wide rubber belt supported by four segments of metal. Id. at 412, 475 A.2d at 1245. When each of the metal parts met, they created a “nip” or “pinch” point; the conveyor had four such “nip” points. Id.

Subsequent to its sale, plaintiff’s employer altered the conveyor by removing the four flat metal supports and replacing them with 14 rollers. This alteration created 14 “nip” points, 10 more than existed in its condition as originally designed. Id. Plaintiff inadvertently caught his hand in one of the “nip” points made by the rollers and commenced an action against the manufacturer sounding in negligence and strict products liability. Id. at 414, 475 A.2d at 1246. At trial, plaintiff’s expert testified that the conveyor was defective as originally designed because it lacked a guard over the underside of the conveyor, thereby exposing the dangerous “nip” points. Id. Plaintiff’s expert asserted that because the conveyor was unguarded, whether there are four metal strips or 14 rollers (with 10 additional “nip” points) was immaterial. Id. at 414-15, 475 A.2d at 1247.

The manufacturer asserted that the employer materially altered the conveyor, increasing the risk of injury by approximately 250%. Id. at 429, 475 A.2d at 1253. Furthermore, plaintiff’s hand was caught in the roller “nip” point, which was not on the machine when it was sold to his employer. Id. Thus, the manufacturer argued that plaintiff would not have been injured “but-for” the employer’s material alteration. Id.

The court relied on plaintiff’s theory of defect, and evaluated the product by analyzing it in its materially altered condition. Id. at 433, 475 A.2d at 1255. In fact, the court even went so far as to state that the material alteration was “immaterial,” notwithstanding that the accident would not have occurred had the product remained in its condition as designed and sold. See id. Thus, the court concluded that a jury could properly find that the product was defective as originally designed, and that the employer’s alterations did not suffice as a superseding cause. Id. This decision was not only incorrect, but it was unduly oppressive to manufacturers. It is inconceivable that the employer’s removal of the product’s four metal plates, and their replacement by 14 rollers, creating ten additional “nip” points, did not absolve the manufacturer of liability. A manufacturer simply cannot owe a duty where a subsequent alteration renders its
design and proximate cause are given to the jury under a "foreseeability" standard. Juries can, therefore, find that the subsequent material alteration of the product was somehow "foreseeable," and that the manufacturer should have designed the product to be either "unalterable," or to be safe in any materially altered condition. When a court focuses upon the product as originally designed, while utilizing principles of foreseeability, it is extremely difficult for a manufacturer to obtain a summary judgment or directed verdict. Plaintiffs will argue that factual issues as to defect in original design and proximate cause always exist, irrespective of the extent to which the product may have been altered. The manufacturer is, in effect, deemed an insurer of its products as against all product-related injuries.

Some courts and state legislatures have recognized these problems, as well as the need to adjudicate the manufacturer's "duty" as a matter of law. These courts and statutes have declined to adopt the defect-proximate cause approach, opting instead to adjudicate the manufacturer's duty under the "foreseeability" standard. Their rationale has been that a manufacturer should have a duty to foresee some types of alterations to its product, but not others.

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39. See cases cited supra note 32.
40. See, e.g., Brown v United States Stove Co., 98 N.J. 155, 484 A.2d 1234 (1984), discussed infra text accompanying notes 149-84; see also Wheeler v. Andrew Jergens Co., 696 S.W.2d 326 (Ky. Ct. Appr. 1985), discussed infra text accompanying notes 212-23. The court in Wheeler went so far as to hold that a manufacturer can be responsible for a third party's intervening criminal alteration. Wheeler, 696 S.W.2d at 328.
41. See Wheeler, 696 S.W.2d at 328.
45. See sources cited supra note 44.
46. See sources cited supra note 44.
This "duty-foreseeability" approach is problematic as well. In essence, the only real question of law for the court to adjudicate is whether or not a particular alteration should be deemed "foreseeable."47 Courts that have adopted this approach are, therefore, merely adjudicating the principle of foreseeability, rather than duty. If the court determines that the manufacturer should have foreseen that its product may be subsequently altered in the manner by which it occurred, then it will have bridged the duty threshold.48 The case will then proceed to the jury on the issues of defect and proximate causation.49 As a practical matter, however, once the court adjudges that a manufacturer had the duty to foresee and prevent a particular alteration, a jury would be hardpressed to find that the breach of this duty, that is, the defect, was not a proximate cause of the accident. This approach is, therefore, only a slight variant of the defect-proximate cause approach.

The "defect-proximate cause" and "duty-foreseeability" approaches have failed to provide a workable solution whereby courts can rationally and consistently adjudicate material alteration cases as a matter of law. The realities of modern products liability litigation are such that manufacturers are, all too often, placed unnecessarily at the mercy of juries which retroactively redesign their product to conveniently fit the fact patterns of a particular case.50 This system of "negative standard setting"51 has brought forth the need to establish affirmative standards to guide manufacturers. Courts can set such standards by adjudicating more complex products liability cases as a matter of law.52 This is especially needed in alteration cases, where the manufacturer is simply not in a superior position to

47. See, e.g., Stevens v. Rex Chainbelt, Inc., 349 So. 2d 948, 949 (La. Ct. App. 1977) (finding employer's subsequent alteration unforeseeable as a matter of law, thereby absolving the manufacturer of liability); cf. Merriweather v. E.W. Bliss Co., 636 F.2d 42, 45 (3d Cir. 1980) (allowing the foreseeability question to proceed to the jury since the manufacturer should be liable for subsequent alterations found to be reasonably foreseeable).
48. See infra text accompanying notes 342-43.
49. See infra text accompanying notes 342-43.
52. See generally infra notes 263-333 and accompanying text (discussing the adjudication of the manufacturer's duty as a matter of law, Step One of the three-step approach).
eliminate the possibility that third parties will consciously and materially alter its product to fit their own subjective needs. By allowing these cases to proceed to the jury, courts have, in effect, reinforced the notion of the "accident-proof" product whereby manufacturers are held to the level of an insurer. This is contrary to the policies underlying strict products liability.\footnote{53}

The misplaced focus on the "foreseeability" concept has prevented courts utilizing either approach from properly adjudicating alteration cases. In applying foreseeability, these courts have incorrectly equated an "alteration" with a "misuse."\footnote{54} It may be rational to utilize a standard of reasonable foreseeability to define the parameters of a manufacturer's duty with respect to the way that its product may be used.\footnote{55} A manufacturer's duty is gauged as of the time the product, as designed, leaves its possession and control.\footnote{56} A foreseeable "misuse" may fall within the scope of that duty because it is but an improper use of the product in its condition as originally...
designed and sold. It is patently unfair, however, to apply this standard where the product has been altered. An alteration involves a qualitative change in the product itself, differentiating it in composition from the state in which it had been as originally designed and sold. A manufacturer should never have a duty to foresee material alterations in its products. The imposition of such a duty by both approaches yields unfair and irrational results.

II. THE DEFECT-PROXIMATE CAUSE APPROACH: AN ISSUE OF LAW BECOMES FOUR QUESTIONS OF FACT

A. Anatomy of the Approach

One of the leading alteration cases adopting the defect-proximate cause approach is Soler v. Castmaster, Div. of H.P.M. Corp. In Soler, the New Jersey Supreme Court bypassed the threshold question of duty, holding that a manufacturer's potential responsibility for injuries to a user of its product, which was altered after it left that manufacturer's control, is dependent upon a resolution of four questions of fact:

1. whether the product, as originally designed, was "defective;"
2. whether the subsequent alteration of the product was "material;"
3. whether the subsequent alteration was "foreseeable;" and
4. whether the original design defect was a proximate cause of the plaintiff's injuries when taking into account the subsequent alteration, or, in the alternative, whether the subsequent alteration should be deemed the sole proximate cause of the injury.

57. See infra notes 224-37 and accompanying text.
58. See infra notes 238-51 and accompanying text.
59. 98 N.J. 137, 484 A.2d 1225 (1984). For a discussion of Soler, see Fischer, An Analysis of the Effect of Subsequent Alteration Upon Manufacturers' Products Liability, 1987 S. METHODIST U. PRODS. LIAB. INST. §§ 8.01, 8.03; see also Comment, supra note 23, at 727-32.
60. 98 N.J. at 145-46, 484 A.2d at 1227, 1229.
61. Id. at 141, 484 A.2d at 1227. Almost all defect-proximate cause cases impliedly utilize these four questions of fact. See, e.g., Banks v. Iron Hustler Corp., 59 Md. App. 408, 475 A.2d 1243 (1984) (jury could rationally have found that the product was defective as originally designed and that the alterations were not substantial or did not supersede the defect as the sole proximate cause); Young v. E.W. Bliss Co., 130 Mich. App. 363, 343 N.W.2d 553 (1983) (jury must resolve the questions of whether the product was defective as designed, whether the alteration was material and reasonably foreseeable, and whether the subsequent intervening alteration was a superseding proximate cause); Thompson v. Motch & Merryweather Mach. Co., 358 Pa. Super. 146, 516 A.2d 1226 (1986) (finding that if the product was defective as originally designed, the jury is to evaluate whether the subsequent material alteration was "foreseeable" and whether it was a superseding cause of the accident). Since the Soler court systematically analyzes each of these questions, that decision represents the
Implicit in this approach is that in every strict products liability action, the manufacturer has a duty to design its product to be “suitably safe for its intended or anticipated purposes by foreseeable users under the risk-utility standard.” It is therefore the function of the jury to determine whether this duty has been breached under the unique facts of a particular case. In the alteration scenario, this is to be achieved by a consideration of the above questions of fact. A manufacturer may be held strictly liable, notwithstanding that the accident would not have occurred but for a third party’s material alteration, so long as the original design is found by a jury to be defective and a contributing proximate cause of the accident.

The plaintiff in Soler was seriously injured during the scope of his employment when the moving parts of a dye-casting machine closed on his hand. The machine, as manufactured by the defendant, included a mold that contained two parts — one metal piece remained stationary while the other piece moved until the two pieces met. This machine operated manually in two separate cycles. The first cycle commenced when the operator pressed an electrical push-button which caused the moving metal part to meet the stationary part, thereby creating the mold into which molten metal could be injected. Once the first cycle was complete, the machine would not continue to operate until the operator pressed another button, which would start the second cycle. This cycle permitted the molten metal to cool, after which the two parts of the mold would separate, freeing the completed cast and allowing it to drop.

As originally manufactured and sold, the machine was designed without a safety device that would prevent the operator’s hands from coming into contact with the machine’s point of operation. The machine was also designed without a safety interlock system that would cut off power to the machine while the operator’s hands were dislodging a jammed part from the point of operation.

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62. 98 N.J. at 153, 484 A.2d at 1233.
63. Id; see also cases cited supra note 32.
64. 98 N.J. at 149, 484 A.2d at 1231; see also cases cited supra note 32.
65. 98 N.J. at 142, 484 A.2d at 1227.
66. Id.
67. Id.
68. Id.
69. Id.
70. Id.
71. Id.
72. Id. at 143, 484 A.2d at 1228.
After the defendant relinquished control of the machine, however, the plaintiff's employer circumvented the manual dual-cycle starting mode by installing a "trip wire." This electrical trip wire allowed the cycles to operate continuously. As a result of the employer's alteration, the second cycle was completed when the cast separated from the mold, thereby striking the trip wire, which would automatically reactivate the first cycle. In addition to the trip wire, the plaintiff's employer installed a safety gate which, when opened, was designed to prevent the parts of the mold from opening and closing.

The accident allegedly occurred at the completion of the machine's second cycle when the plaintiff was attempting to dislodge a finished cast which had been jammed inside the mold. Plaintiff claimed that he opened the employer's safety gate and reached into the point of operation. After dislodging the cast, however, the machine began to repeat its first cycle and the plaintiff's hand was crushed between the moving parts of the mold. The plaintiff commenced an action against the defendant-manufacturer under theories of strict products liability, negligence and intentional tort. Specifically, the plaintiff argued that the machine was defective as originally designed in that it lacked (1) a safety guard, which would have prevented his hand from reaching the point of operation, and (2) a safety interlock that would have cut off all power to the machine while the guard was raised. The plaintiff's expert asserted that the defendant's failure to equip the machine with the safety interlock was crucial, due to the possibility that even a manual starting mechanism can malfunction. For example, an unexpected surge of electricity could override the system, causing the cycle to accidentally repeat while plaintiff's hands were in contact with the mold. The plaintiff's expert concluded that these safety features were feasible at the time the product was designed and could have been installed at a
modest cost without impairing the usefulness of the machine. 83

The defendant moved to dismiss on the ground that:

[T]he accidental injury occurred when the completed molded piece struck the trip wire, which was part of the automatic system installed by the employer, reactivating the machine and causing the mold to close on plaintiff's hand. Consequently . . . the trip wire alteration could be found by a factfinder to be the sole proximate cause of the accident, independent of the alleged design defect — the absence of a safety gate and interlock. 84

The trial court agreed, and at the close of the plaintiff's case, entered a judgment dismissing the action. 85 The court ruled that there was no dispute that the defendant's machine had been subsequently altered, and that, in its altered condition "was an entirely different functional machine." 86 The court further found that there was "no evidence from which a jury could find that the machine as designed and sold by the defendant had in it the elements which were the proximate cause of this accident." 87 The appellate court reversed, however, and remanded the case for trial, holding that the issues of defect, alteration, and proximate cause presented questions of fact for the jury. 88

The New Jersey Supreme Court affirmed, 89 and in a complex opinion, held that the evidence presented by plaintiff raised a jury question as to whether the original design defect was either the sole, independent cause of the accident, or a concurrent or contributing proximate cause. 90 The court's reasoning epitomizes the inequities of the defect-proximate cause approach.

The court abstained from deciding the duty question as a matter of law, reasoning that the scope of a manufacturer's duty, as well as the factors that constitute its breach, are determined by the factfinder. 91 The plaintiff must, therefore, make a prima facie showing that the product was defective when it left the manufacturer's control, and that the defect proximately caused the accident. 92 In

83. Id. at 144, 484 A.2d at 1228.
84. Id. at 150-51, 484 A.2d at 1232.
85. Id. at 141, 484 A.2d at 1227.
86. Id.
87. Id. at 142-43, 484 A.2d at 1227.
88. Id. at 143, 484 A.2d at 1227.
89. Id.
90. Id. at 152, 484 A.2d at 1233.
91. Id. at 153-54, 484 A.2d at 1233.
92. Id. at 146, 484 A.2d at 1230.
cases involving a subsequent alteration, the plaintiff’s prima facie case must focus upon the four questions of fact discussed above.93

The court systematically addressed these questions and found that a jury would be justified in finding that (1) the dye-casting machine was defective as originally designed and sold,94 (2) the employer’s subsequent alteration was material,95 (3) the material alteration was foreseeable,96 and (4) the original design defect was either a contributing, concurrent or the sole proximate cause of the accident when taking into account the intervening material alteration.97

The court stated that the question of whether the manufacturer's product was defective as originally designed is resolved through use of the risk-utility test.98 A product will not be deemed defective in design where its utility outweighs its inherent risks, and where the design minimizes these risks “to the greatest extent possible consistent with the product’s continued utility.”99 To establish

93. See id. at 153, 484 A.2d at 1233. The court reasoned that “each of the issues addressed in our opinion, upon a sufficient evidential showing ... is properly to be considered a jury question rather than a matter of law to be decided solely by the court.” Id. Under the defect-proximate cause approach as expressed in Soler, none of these issues “calls for the creation, recognition and imposition of a basic duty as a matter of public policy.” Id. at 154, 484 A.2d at 1234; cf. Germann v. F.L. Smithe Mach. Co., 395 N.W.2d 922, 924 (Minn. 1986) (en banc) (utilizing the “duty-foreseeability” approach and stating that a manufacturer’s duty with respect to subsequent product alteration is appropriately a question of law for the court), discussed infra notes 389-93 and accompanying text; Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 475, 403 N.E.2d 440, 441, 426 N.Y.S.2d 717, 718 (1980) (holding that a manufacturer has no duty to foresee subsequent material alterations of a third party), discussed infra notes 473-509 and accompanying text.

94. 98 N.J. at 146, 484 A.2d at 1230.

95. Id. at 148, 484 A.2d at 1231; see also Banks v. Iron Hustler Corp., 59 Md. App. 408, 432, 475 A.2d 1243, 1255 (1984) (noting that the “common thread” among alteration cases is that “in most cases, the substantiality of the change is a question of fact ... ”); cf. Lovelace v. Ametek, Inc., 111 A.D.2d 953, 955, 490 N.Y.S.2d 49, 51 (3d Dep't 1985) (rejecting plaintiff’s argument that defendant was jury bound to make a “fail-safe” machine), cert. denied, 476 U.S. 1170 (1986), discussed infra text accompanying notes 555-68. Interestingly, even courts utilizing the defect-proximate cause approach have, where appropriate, decided the “materiality” question as a matter of law. See infra note 135 and accompanying text.

96. 98 N.J. at 149-52, 484 A.2d at 1231-33.


98. 98 N.J. at 145, 484 A.2d at 1229.

99. Id. (quoting Freund v. Cellofilm Properties, Inc., 87 N.J. 229, 238 n.1, 432 A.2d
a prima facie case that a product's design is defective under risk-utility, the plaintiff has the burden of proving, by use of expert evidence, that an alternative design was feasible at the time of manufacture and that the alternative design would have minimized or prevented the risk of accident without impairing the product's utility as a whole. On the evidence presented, the court reasoned that a jury could find that the risk of harm in designing the dye-casting machine without a safety gate and interlock outweighed its utility. The court further found that these safety features could have been added at the time of manufacture “without appreciable cost and without impairing [the product’s] function” as a whole. The court therefore concluded that there was sufficient evidence to create an issue of fact such that the jury could find the machine to be defective at the time it left the defendant’s control.

Once the defect issue was addressed, the court then focused upon the second question, namely, the “materiality” of the employer’s alteration. The court stated that a material alteration connotes a material change in the design or function of the product itself, which affects the attendant risks of danger in its use. As designed and sold, the defendant’s dye-casting machine had to be manually operated, and functioned in two separate cycles. The employer’s subsequent installation of the trip wire, however, allowed the machine to be operated automatically rather than manually, and

925, 930 n.1 (1981); see also Cepeda v. Cumberland Eng’g Co., 76 N.J. 152, 172, 386 A.2d 816, 826 (1978) (finding that the question for the jury is “whether the magnitude of the risk created . . . was outweighed by the social utility attained . . . ”); Voss v. Black & Decker Mfg. Co., 59 N.Y.2d 102, 109, 450 N.E.2d 204, 208, 463 N.Y.S.2d 398, 402 (1983) (finding that the question for the jury “is whether after weighing the evidence and balancing the product’s risks against its utility and cost, it can be concluded that the product is not reasonably safe.”)

100. 98 N.J. at 145-46, 484 A.2d at 1229.
101. Id. at 146, 484 A.2d at 1230.
102. Id.
103. Id.
104. Id. at 148, 484 A.2d at 1230-31. The court reasoned that a manufacturer cannot be absolved of liability with respect to a subsequent alteration unless the alteration was “substantial in terms of the essential features of the product.” Id. at 147, 484 A.2d at 1230. Thus, “[s]ubstantial change has been characterized as ‘deal[ing] principally with material changes in the state of the product’ linked to the accident as opposed to “[c]hanges to other features [that] had no material effect upon [the machine’s] potential for dangers.”’ Id. (quoting Ortiz v. Farrell Co., 171 N.J. Super. 109, 117, 407 A.2d 1290, 1294 (Law Div. 1979)) (emphasis added); see also McDermott v. Tendun Constructors, 211 N.J. Super. 196, 210, 511 A.2d 690, 698 (App. Div. 1986) (concluding that “[w]hile a change in any product may be viewed as material or significant from a design or operational standpoint, it is not deemed to be ‘substantial’ for strict liability purposes unless the change is related to the safety of the product.”).
the machine thus functioned in continuous cycles. The court concluded that this alteration constituted a qualitative and material change in the machine itself, as well as in the risks attendant to its use. Consequently, the evidence was sufficient to justify a jury finding that the employer’s subsequent alteration was material.

With the initial two questions resolved, the court stated that “[t]he critical question then is whether the original defect in the design of the machine — the absence of a safety gate with interlock — constitutes a proximate cause of the accident, notwithstanding the subsequent substantial [material] alteration.” This approach is an amalgam of the remaining two questions of foreseeability and proximate causation. As stated earlier, the general issue of proximate cause is inextricably linked to the foreseeability concept and is, in all but the clearest of cases, a question of fact for the jury. Soler, however, was not the clearest of cases.

The court rejected the defendant’s argument that the employer’s installation of the trip wire should supersede the original design as the sole proximate cause, reasoning that this argument failed to properly utilize the foreseeability concept. In so reasoning, the court equated an “alteration” with a “misuse.” The court ruled that an intervening alteration, however material, shall not prevent the original design defect from being deemed a proximate cause so long as the material alteration was foreseeable and could have been prevented or minimized. On the basis of the evidence presented,

106. Id.
107. Id. The court reasoned that “[t]he operational risk of danger in using the machine as originally designed with manual buttons to start each cycle was qualitatively and materially different from the risks of danger in the automatic operation of the machine in its altered state.” Id. at 148-49, 484 A.2d at 1231 (emphasis added).
108. Id. at 149, 484 A.2d at 1231.
109. Id.
111. 98 N.J. at 151, 484 A.2d at 1232; see infra text accompanying note 138.
112. Id. The court stated that “[f]oreseeable misuse or abnormal use can be extended by analogy to foreseeable substantial change of the product from its original design.” Id.; see also Steinmetz v. Bradbury Co., 618 F.2d 21, 23 (8th Cir. 1980) (stating that appellants cannot escape liability “[b]ecause [they] could foresee the likelihood of unreasonable dangers resulting from the misuse or alteration of the machine . . . .”) (emphasis added); Young v. E.W. Bliss Co., 130 Mich. App. 363, 371-72, 343 N.W.2d 553, 557-58 (1983) (regarding product “alteration” as a category of “misuse”).
113. 98 N.J. at 151, 484 A.2d at 1231; see also Vanskike v. ACF Indus., 665 F.2d 188, 195 (8th Cir. 1981) (finding that “subsequent changes or alterations in the product do not relieve the manufacturer of strict liability if the changes were foreseeable and the changes did not unforeseeably render the product unsafe.”); Banks v. Iron Hustler Corp., 59 Md. App.
the court concluded that the jury could properly find that the employer's material alteration was foreseeable. Based on this conclusion, a jury could further find that the defect in the product's original design was either a contributing, concurrent or sole proximate cause of the accident, notwithstanding the material alteration.

B. A Critique of the Approach

Soler is a case that should proceed to the jury, albeit for one reason alone: the evidence of a causal connection between the material alteration (installation of the trip wire) and the accident was not sufficient for the court to adjudicate the causation issue as a matter of law. While the Soler court correctly allowed the case to proceed to the jury, its reasoning reveals the shortcomings of the defect-proximate cause approach. Rather than properly adjudicating the material alteration question as a matter of law, the court created four unwarranted questions of fact, much to the detriment of defendants in any products liability action. On the basis of the evidence presented in Soler, the court erred in allowing the first three questions of defect, materiality, and foreseeability to proceed to the jury. The court also erred in the manner by which it phrased the causation question. A careful dissection of the court’s analysis is therefore warranted.

Question No. 1: Was the Product “Defective” as Originally Designed?

A fatal flaw in the court’s reasoning arises out of a misplaced focus on the question of whether the product was defective as originally designed. Courts should never focus on the product as originally designed where the product has undergone a subsequent material alteration, and where the accident would not have occurred "but-for" that alteration.

In Soler, the defendant's dye-casting machine was designed without a safety guard and interlock system. Notwithstanding the absence of these features, the machine, as designed, required a man-

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408, 433-34, 475 A.2d 1243, 1255-56 (1984) (reversing the trial court's granting of a directed verdict in favor of the manufacturer on the grounds that the jury could have found the alteration foreseeable, and that the manufacturer could have designed its product in such a way as to prevent it).
114. 98 N.J. at 153-54, 484 A.2d at 1233-34.
115. Id. at 152, 484 A.2d at 1233.
116. See infra notes 144-49 and accompanying text.
117. See infra notes 253-62 and accompanying text.
118. 98 N.J. at 142-44, 484 A.2d at 1227-28.
usual operation and functioned in two separate cycles. The machine could not repeat cycles or progress from the first cycle to the second unless the operator pressed the appropriate start button. As altered, however, this manual mode was circumvented, and the machine operated continuously, allowing the first cycle to automatically repeat itself once the second cycle was completed. This alteration entailed an actual rewiring of the electrical system by installing the trip wire; it is clear that the employer consciously altered the machine to increase its productivity. It is also clear that the employer would have circumvented the manual starting mode regardless of whether the product was designed with a safety guard and interlock. In fact, the employer installed its own safety guard with what appeared to be an interlock system. These employer-installed safety features did not prevent the machine from functioning, however, as evidenced by the occurrence of the accident itself. Thus, even if the dye-casting machine was dangerous in its original condition, it was qualitatively different and far more dangerous in its altered condition. The court itself acknowledged that the employer’s alteration constituted a **qualitative and material change** in the machine, as well as in the risk of injury to the operator.

Based on the foregoing, it should have been unnecessary to consider the question of “defect” in the original design if the material alteration was causally related to the occurrence of the accident. Regardless of the absence of the safety features, the machine, as origi-
nally designed, could not have repeated its first cycle unless the operator, or someone else, manually pressed the button. Hence, had the product remained in its original unaltered condition, this accident would not have occurred. Whether the original design may be deemed "defective" is of no consequence with respect to the occurrence in Soler. If it could have been established with any degree of certainty that the accident occurred when the unjammed cast struck the trip wire, then it would have been clear that the material alteration transformed what would otherwise have been a dead machine into a live one. Furthermore, given the employer's rewiring of the machine's electrical system to circumvent its manual starting mode, it is unclear as to whether the alteration would have circumvented any guard or interlock that would have been installed by the manufacturer. This is true especially when considering that the accident occurred despite the fact that the employer had installed its own similar safety features. Thus, where a product is so materially al-

126. Professor Fischer notes that Soler involved "the situation in which the original defect is unrelated to the injury." Fischer, supra note 59, § 8.03[3][a], at 8-11. As Professor Fischer reasoned:

[T]he alteration [in Soler] greatly multiplied the risk of malfunction. The original defect created a risk of injury only if a large surge of electricity entered the line at the exact moment that the plaintiff's hand was between the two halves of the mold. The chances of this happening were obviously not very high. The altered product was much more dangerous. The altered product ran continuously. The gate was inadequate to keep the worker's hand out of the die area and the trip wire was dangerously exposed.

Id. § 8.03[3][a], at 8-12. It is, therefore, most likely that the accident would not have occurred had the product remained in its condition as originally designed, even if that design was somehow "defective."

A similar scenario was present in Coleman v. Verson Allsteel Press Co., 64 Ill. App. 3d 974, 382 N.E.2d 36 (1978). The plaintiff in Coleman was an operator of a press brake manufactured by the defendant. Id. at 976, 382 N.E.2d at 38. As originally designed and sold, the machine's starting mechanism consisted of six "shoulder-high" control buttons. While the first five buttons could be locked in a "run" position, the sixth button had to be held down for the press to operate. Id. If the operator discontinued his application of pressure on the button, the machine would immediately stop its descent, so long as it had not traveled more than one-third of the way through its cycle. Id. After purchasing the press, plaintiff's employer removed the control panel and replaced it with a two "palm-button" panel, mounted directly adjacent to the loading area. Id. One of these buttons was taped down while the other could activate a complete cycle upon one quick push, rather than constant pressure. Id. Plaintiff was seriously injured when he inadvertently brushed against the button, causing the press to descend on his hand. Id. The court granted summary judgment in favor of the manufacturer, reasoning that the employer's alteration constituted "a substantial change in the condition of the machine beyond the defendant's control." Id. at 979, 382 N.E.2d at 40. The plaintiff would not have been injured by the product in its condition as designed and sold, and the employer's alteration, in effect, transformed what would have been a dead product into a live one. See id.

127. See Fischer, supra note 59, § 8.03[3][a], at 8-11.
tered, it is patently unfair to allow a jury to engage in such a guessing game and to perform the risk-utility test by analyzing the original design in a vacuum. A subsequent material alteration that causally contributes to an accident must absolve the manufacturer of a duty with respect to that accident.

Once the court submits to the jury the question of whether the product was defective as originally designed, the jury is invited to view the entire accident from the standpoint of the original design, with little or no emphasis on the material alteration. With the aid of the foreseeability standard, the jury is further invited to evaluate the safety of the original design by analyzing the product in its materially altered condition. A plaintiff's verdict is therefore impliedly encouraged, especially when the employer is an immune party.

128. See, e.g., Stevens v. Rex Chainbelt, Inc., 349 So. 2d 948, 949 (La. Ct. App. 1977) (refusing to evaluate the safety of the product in its altered condition, deciding instead to evaluate its condition as of the time it left the manufacturer's hands); Lovelace v. Ametek, Inc., 111 A.D.2d 953, 490 N.Y.S.2d 49 (3d Dep't 1985), cert. denied, 476 U.S. 1170 (1986), discussed infra text accompanying notes 555-68. The court in Lovelace refused to evaluate the original design under risk-utility where three of its safety devices were subsequently removed. The court reasoned that "[e]ven if such tampering and defeat of the extractor's protective devices was foreseeable ... the responsibility for injuries therefrom would not fall on defendant." 111 A.D.2d at 954-55, 490 N.Y.S.2d at 51. Hence, a manufacturer should not be "duty bound" to make its product safe as altered. Id.


130. See, e.g., Merriweather v. E. W. Bliss Co., 636 F.2d 42, 45-46 (3d Cir. 1980) (applying Pennsylvania law). The Merriweather court actually went so far as to state that "[i]f the manufacturer is to effectively act as the guarantor of his product's safety, then he should be held responsible for all dangers which result from foreseeable modifications of that product." Id. at 46. New Jersey courts have traditionally taken the same approach. See, e.g., Michalko v. Cooke Color & Chem. Co., 91 N.J. 386, 400, 451 A.2d 179, 186 (1982) (stating that even the most "significant subsequent alteration" will not absolve a manufacturer of liability unless the alteration "itself creates the defect that constitutes the proximate cause of the injury"); see also Brown v. United States Stove Co., 98 N.J. 155, 484 A.2d 1237 (1984), discussed infra text accompanying note 176.

131. See, e.g., Germann v. F.L. Smithe Mach. Co., 395 N.W.2d 922, 925 (Minn. 1986) (en banc), discussed infra notes 370-93 and accompanying text. The Germann court held that a product could be defective due to a failure to warn of the dangers attendant to the product in a materially altered condition. 395 N.W.2d at 925.

132. One commentator has stated that:

Probably one of the unspoken reasons for allowing the imposition of liability in a case such as Soler is that the plaintiff is usually prohibited by state workers' compensation statutes from suing the real wrongdoer — the employer who has taken a relatively safe product and substantially altered it by removing its safety devices. Because the workers' compensation statutes provide limited awards, the only way that an injured worker can recover adequately in many cases is by suing
Question No. 2: Was the Subsequent Alteration Material?

The Soler court found that there was ample evidence to enable the jury to find that the dye-casting machine had been materially altered after it left the defendant's control. One becomes hard-pressed, therefore, to attempt to ascertain why the court allowed the materiality question to proceed to the jury. The evidence was more than sufficient to enable it to adjudicate the question as a matter of law. The defect-proximate cause approach all too often renders the "materiality" question an automatic jury issue.

Question No. 3: Was the Alteration Foreseeable?

The defect-proximate cause approach is also fatally flawed in its reliance on the foreseeability concept by allowing the jury to perform the risk-utility test on the original design. The Soler court mistakenly equated an alteration with a misuse, and reasoned that:

The defendant's argument that in this case third persons responsible for the subsequent alteration of the machine should properly be held liable for plaintiff's accidental injury does not fully take into account the appropriate applications of the principle of foreseeability. When it is foreseeable that a substantial change will create a risk of injury, the manufacturer can be held liable under strict liability principles for injuries proximately caused by such change.

the manufacturer — a remedy that the Soler court permits by its expansive approach to a manufacturer's liability. This, of course, is a classic "deep pocket" approach.

It is not the most equitable approach, however.

Comment, supra note 23, at 740-41 (footnotes omitted); accord Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 481, 403 N.E.2d 440, 444, 426 N.Y.S.2d 717, 721-22 (1980) (finding that the fact that plaintiff cannot recover directly from his employer, who is the real culpable party, does not justify the imposition of liability upon the manufacturer).

133. 98 N.J. at 148-49, 484 A.2d at 1231.


135. For a discussion of some of the factors affecting a court's finding of "foreseeability" in the alteration context, see Fischer, supra note 59, at § 8.03[2], at 8-8 to -10.

136. 98 N.J. at 151, 484 A.2d at 1232.
The court's reliance on foreseeability allows the jury to view the original design with clear hindsight as if the machine had not been materially altered. In addition to placing minimum emphasis on the alteration, the court allowed the jury to evaluate the original design by analyzing the dangers of the product in its altered condition. While it may be one thing to design a dye-casting machine without a safety guard and interlock where that machine is designed to be manually operated with a two-step process, it is quite another to do so where the machine functions automatically with continuous operation. One would be hard-pressed to fairly evaluate the original design in cases where the product has been materially altered and where the particular accident would not have occurred had the product remained in its original condition. Furthermore, while foreseeability may be relevant in defining the manufacturer's duty with respect to the use or misuse of the product as originally designed, it should not come into play where the product itself is materially altered from its original condition.

Question No. 4: Was the Defect in the Product's Original Design a Contributing, Concurrent, or Sole Proximate Cause When Taking into Account the Material Alteration?

As stated, this question answers itself. If the jury is instructed that the original design may be found to be defective, with the material alteration foreseeable, then it would be hard-pressed to find that the material alteration should supersede that design defect as the sole proximate cause of the accident. This is because under the defect-proximate cause approach, the duty to foresee alterations has been built into the tests for both design defect and proximate cause.

Rather than focusing upon the question of whether the product was defective as originally designed, a better approach would be to focus on the employer's alteration. Principles of foreseeability should play no role in cases where a manufacturer's product is materially altered.

137. By sustaining plaintiff's design defect claim, the court opened the door for the jury to hold the manufacturer responsible for the risks attendant to the machine as altered, that is, as operated automatically, rather than manually.
138. See infra notes 224-52 and accompanying text.
139. See Vanskike v. ACF Indus., 665 F.2d 188, 195 (8th Cir. 1981); Hales v. Green Colonial, Inc., 490 F.2d 1015, 1020-21 (8th Cir. 1974); DeArmond v. Hoover Ball & Bearing, 86 Ill. App. 3d 1066, 1070-71, 408 N.E.2d 771, 774 (1980); Smith v. Verson Allsteel Press Co., 74 Ill. App. 3d 818, 825-26, 393 N.E.2d 598, 604 (1979); see also infra text accompanying notes 549-52 (discussing this proposition).
altered. If the court finds the alteration to be material, then the defendant should be absolved of a duty so long as the material alteration is proven to be a proximate cause of the accident. Once this causal connection is established, the connection between the original design and the accident should be severed as a matter of law. If there is no longer a connection between the original design and the accident from a "duty" standpoint, there is no longer any reason to evaluate the original design under risk-utility.

This analysis is not the equivalent of concluding that the material alteration was the sole proximate cause of the accident. What it does conclude is that (1) the product had been materially altered from its condition as originally designed and sold, (2) the material alteration was a cause-in-fact and a proximate cause of the accident, and therefore (3) the manufacturer is not responsible for accidents arising out of the product in its materially altered condition.

The evidence presented in Soler was more than sufficient for the court to have established that the alteration was material as a matter of law. It was not sufficient, however, to establish that the material alteration was, in any way, causally connected to the occurrence of the accident. The plaintiff offered conflicting evidence as to whether the employer's trip wire was involved in the accident. At his deposition, the plaintiff testified that as he dislodged the jammed cast, the cast fell from the mold and struck the trip wire, thereby reactivating the machine cycle. At trial, however, "plaintiff did not offer an explanation as to how the machine recycled when he attempted to dislodge the part." Additionally, plaintiff's expert stated that it was possible that an unexpected surge of electricity may have caused the machine to recycle. Thus, a legitimate question of fact existed with respect to the causal connection between the

140. See infra notes 224-52, 463-67 and accompanying text.
141. See infra note 553 and accompanying text.
142. See, e.g., Kimbar v. Estis, 1 N.Y.2d 399, 405, 135 N.E.2d 708, 711, 153 N.Y.S.2d 197, 201 (1956) (holding that absent a duty owed by defendant, "there can be no breach of duty, and without breach of duty there can be no liability.") (citation omitted); Beasock v. Dioguardi Enters., 130 Misc. 2d 25, 31, 494 N.Y.S.2d 974, 979 (Sup. Ct. 1985), aff'd in part, rev'd in part, 117 A.D.2d 1015 (4th Dep't 1986) (concluding that "[a]bsent a duty, there can be no breach and, thus, no liability." (citing Kimbar v. Estis, 1 N.Y.2d at 405, 135 N.E.2d at 711)).
143. 98 N.J. at 148-51, 484 A.2d at 1231-32.
144. Id. at 143, 484 A.2d at 1228.
145. Id.
146. Id. at 143-44, 484 A.2d at 1228.
trip wire and the occurrence of the accident.\textsuperscript{147}

The \textit{Soler} court should have submitted to the jury only the question of whether the \textit{material alteration} (the employer's trip wire) was a proximate cause of the accident. Since the issues of "duty" and "materiality" should have been adjudicated by the court as questions of law, the jury should have been instructed to return a defense verdict if the trip wire was found to be a proximate cause of the accident. Such a finding would have severed any connection, by way of \textit{duty}, between the original design and the accident. The original design should not, as a matter of law, be connected to the accident if it was \textit{materially} altered and if the material alteration was a proximate cause of plaintiff's injury. Thus, because the manufacturer did not owe a duty with respect to this occurrence, there would no longer be any reason to even consider the original design under risk-utility.

If, however, the trip wire was \textit{not} found to be a proximate cause, then the manufacturer would not be absolved of a duty as a matter of law. Only under such circumstances would there exist a "legal" connection between the original design and the accident sufficient to justify submission of the defect and proximate cause questions to the jury.

C. The Misuse of Foreseeability: Should a Product be Deemed Defective Simply Because it was "Alterable"?

The product in \textit{Soler} was sold by the manufacturer without certain safety features, and the plaintiff utilized the absence of safety features as his theory of defect in the product's original design.\textsuperscript{148} Conversely, in \textit{Brown v. United States Stove Co.},\textsuperscript{149} a companion case to \textit{Soler}, the New Jersey Supreme Court was confronted with an original design that contained numerous safety features which were subsequently removed by the plaintiff's employer.\textsuperscript{150} In the absence of an independent theory of defect, the plaintiff in \textit{Brown} asked the court to go a step beyond \textit{Soler} and decide whether a product may be deemed defective as originally designed because it failed to prevent a material alteration that was "foreseeable."\textsuperscript{151}

\begin{itemize}
  \item[147.] See \textit{id.} at 148-152, 484 A.2d at 1231-33.
  \item[148.] \textit{Id.} at 137, 484 A.2d at 1225.
  \item[150.] 98 N.J. at 161, 484 A.2d at 1237.
  \item[151.] See \textit{id}.  
\end{itemize}
The plaintiff in Brown sustained severe burn injuries while standing near a "free standing, unvented space heater." The heater had been used to heat a garage at a salvage yard. The heater was originally designed and equipped with a pilot light tube, thermocouple valve, and a gas safety shut-off valve. These safety features were designed to monitor the pressure of gas flowing through the heater. If the pressure of gas was too high, for example, the safety features would automatically stop the inflow of gas into the heater and would stop the heater from operating. Approximately fifteen years before the accident occurred, however, the plaintiff's employer materially altered the heater by removing these safety features. This material alteration caused the flow of propane gas into the heater to become unregulated. The accident occurred when excess gas that had flowed into the heater ignited, causing a "sudden flare-up" that set the plaintiff's clothes on fire. The evidence presented indicated that, at the time the accident occurred, the gas pressure in the heater was approximately one hundred times greater than that for which it had been originally designed.

The plaintiff brought an action against the manufacturer grounded in negligence and strict products liability. Plaintiff alleged that the heater was defective as originally designed because the employer's removal of the safety features was foreseeable and, as such, the manufacturer should have either prevented the removal or designed the heater to be reasonably safe in the event that a removal occurred. In support of this theory of defect, the plaintiff introduced expert testimony to the effect that the manufacturer should have reasonably foreseen that (1) the safety devices on a certain percentage of its heaters would be circumvented in some manner and

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152. Id. at 162, 484 A.2d at 1237.
153. Id.
154. Id.
155. Id.
156. Id.
157. Id.
158. Id.
159. Id. at 162, 484 A.2d at 1237-38.
160. Id. at 162, 484 A.2d at 1237.
161. Id. at 161, 484 A.2d at 1237.
162. Id. at 162-63, 484 A.2d at 1238.
163. Id. Plaintiff's expert testified that "it [was] reasonably probable to assume that a percentage of stoves [i.e., heaters] of that type manufactured at any time will be substantially altered." Id. He further testified that "it was common knowledge within the gas industry that appliances of this type were badly misused and abused since they were often used as temporary heaters on construction sites." Id. at 163, 484 A.2d at 1238.
(2) without the safety devices, the flow of gas into the heater might become unregulated, thereby increasing the gas pressure to a level that was higher than that intended by its original design.164

The plaintiff’s expert stated that the removal of the heater’s safety features was common among users.165 Thus, although the heater was completely safe if operated as originally designed, “it was defective in that its design rendered it susceptible to the reasonably foreseeable alterations that were made.”166 This susceptibility was due primarily to the fact that the safety devices were affixed to the heater by commercial “right-handed threading” which could be easily removed.167 Plaintiff’s expert further testified that a possible alternative would have been to affix the safety devices to the heater by using noncommercial left-handed threading and inverted flange connectors.168 This alternative would have rendered the removal of the safety devices more difficult, without impairing the overall utility of the heater.169

To rebut the testimony of plaintiff’s expert, an employee of the manufacturer testified that (1) the manufacturer had no reason to foresee the type of alteration that occurred, (2) the plaintiff’s alternative design was not feasible at the time of manufacture, (3) the manufacturer had no notice of any alterations similar to those performed on the subject heater by plaintiff’s employer, and (4) the heater was not designed to be used on construction sites, as a different model heater was manufactured and sold for that purpose.170

The trial court dismissed the plaintiff’s strict products liability claim as a matter of law.171 The court reasoned that the manufacturer should not have a duty where, after the heater left its control, “there was ‘an absolute and total transformation of a good, safe product into a completely unsafe product,’ the subsequent alteration of which was not reasonably foreseeable.”172 The appellate court re-

164. Id.
165. See supra note 163.
166. Id.
167. Id.
168. Id.
169. Id. Plaintiff’s expert added that the cost of the alternative would have been only “a few pennies” more than the cost of right-handed threading.” Id. Defendant’s employee, however, offered contradictory testimony to the effect that plaintiff’s alternative design was not available at the time of manufacture, and, even if it was, it would significantly increase the cost, as well as the time, to repair the heater. Id. at 164, 484 A.2d at 1239.
170. Id. at 164, 484 A.2d at 1238-39.
171. Id. at 161, 484 A.2d at 1237.
172. Id. (quoting the trial court) (emphasis added).
versed and remanded, however, ruling that the foreseeability of the employer’s removal of the safety features presented a legitimate question of fact for the jury.\textsuperscript{179}

The New Jersey Supreme Court utilized the four-tier approach, which it had enunciated in \textit{Soler}, to determine whether the trial court erred in refusing to submit the issue of defect to the jury.\textsuperscript{174} The court proceeded to analyze the issues of defect and foreseeability together, presupposing that the employer’s removal of the heater’s safety features constituted a “material” alteration.\textsuperscript{176} In so doing, the court reasoned that:

The concept of a defect-free and properly-designed product extends to one that is suitably safe after it has been either foreseeably altered or foreseeably misused . . . . The foreseeable misuse of a product that proximately causes injury is analogous to a foreseeable subsequent alteration of the product, and generates the same legal consequence in terms of strict products liability.\textsuperscript{176}

According to the New Jersey Supreme Court, there is no differ-

\textsuperscript{173} Id. at 161-62, 484 A.2d at 1237.

\textsuperscript{174} The first tier of the \textit{Soler} approach concerned whether the product was defective as designed. \textit{See supra} note 117 and accompanying text. The \textit{Brown} court addressed the issue when it stated that “[t]he initial inquiry . . . must focus upon the evidence relating to whether the heater as originally designed was defective under the risk-utility standard.” \textit{Brown}, 98 N.J. at 165, 484 A.2d at 1239. Under the risk-utility test, “a product is defective as designed if, but only if, the magnitude of the danger outweighs the utility of the product.” W. PROSSER & W. KEETON, \textit{supra} note 8, § 99, at 699.

The second tier of the \textit{Soler} test concerned whether the subsequent alteration was material. \textit{See supra} notes 134, 136 and accompanying text. The \textit{Brown} court noted that “a design defect inherent in a safety feature of a product that foreseeably leads to a substantial alteration and an increased risk of danger can be a basis for strict products liability.” \textit{Brown}, 98 N.J. at 167, 484 A.2d at 1240.

The third level of the \textit{Soler} approach was to determine whether the alteration was foreseeable. \textit{See supra} notes 135-38 and accompanying text. The \textit{Brown} court also focused on this issue in stating that “[t]he critical factor in determining whether a subsequent substantial alteration of a product or its misuse can be attributed to a manufacturer as a proximate result of an original design defect under the risk-utility standard is ‘foreseeability.’ ” \textit{Brown}, 98 N.J. at 166, 484 A.2d at 1240.

\textit{Soler}’s final tier posed the question of whether the original design defect was a contributing, concurrent, or sole cause of injury. \textit{See supra} notes 139-47 and accompanying text. Again, the \textit{Brown} court announced that “[p]roximate cause includes the notion of concurrent cause when more than one act contributes to the accidental harm . . . . [I]f the original defect, although not the sole cause of the accident, constituted a contributing or concurrent proximate cause in conjunction with the subsequent alteration, the defendant manufacturer will remain liable.” \textit{Brown}, 98 N.J. at 171, 484 A.2d at 1242.

\textsuperscript{175} \textit{Brown}, 98 N.J. at 165-68, 484 A.2d at 1239-40.

\textsuperscript{176} Id. at 169, 484 A.2d at 1241 (emphasis added). This reasoning is utilized by other defect-proximate cause courts. \textit{See} cases cite \textit{supra} note 32.
ence between the *misuse* of a product in its condition as originally designed, and an *alteration* of the product from that condition. The foreseeability of a product's alteration is built into the test for defect in the product's original design.\textsuperscript{177} A materially altered product may, therefore, be deemed defective as *originally* designed merely because the alteration was foreseeable, and the manufacturer failed either to prevent such alteration or to design its product to be safe as altered.\textsuperscript{178} Thus, the plaintiff can present a factual question on the issue of defect simply by presenting evidence that the employer's removal of the safety features was somehow "foreseeable", and that the product was dangerous to operate without those features.\textsuperscript{179} Based on this evidence, the *Brown* court concluded that the combined issues of foreseeability and defect presented legitimate questions of fact for the jury.\textsuperscript{180}

This reasoning clearly designates the manufacturer as an insuror of its products. To design an "unalterable" product, or a product that is safe as materially altered, is to design an *accident-proof* product. The imposition of such a duty upon manufacturers violates the fundamentals underlying products liability law.\textsuperscript{181}

\textsuperscript{177} 98 N.J. at 166-69, 484 A.2d at 1240-41. In fact, the court stated that foreseeability is the "critical factor." *Id.* at 166, 484 A.2d at 1240. "[T]he principle of 'objective foreseeability' comports with a basic theme of strict products liability, namely, that the *condition* of the product, rather than the *conduct* of the manufacturer is determinative of ultimate responsibility for product failure causing accidental injuries." *Id.* at 168, 484 A.2d at 1241 (emphasis in original). This reasoning is incorrect, because the focus of "objective foreseeability" is upon what knowledge or information the manufacturer *knew or should have known*. Such knowledge, be it objective or subjective, impugns the "conduct" of the manufacturer, rather than the condition of the product itself. A focus on the conduct of the manufacturer, while appropriate in a negligence action, is inappropriate in an action under strict products liability.

Manufacturers have raised the point that a foreseeability standard is inconsistent with the policies underlying strict products liability, but have fallen victim to overzealous courts which designate them as indefinite guarantors of their products. See *Merriweather* v. E.W. Bliss Co., 636 F.2d 42, 46 (3d Cir. 1980) (finding that "[i]f the manufacturer is to effectively act as the ultimate guarantor of his product's safety, then he should be held responsible for all dangers which result from foreseeable modifications of that product."); *Eck* v. Powermatic Houdaille, Prod. Liab. Rep. (CCH) ¶ 11,440, at 32,147 (Pa. Super. June 1, 1987). For a discussion of *Merriweather* and *Eck*, see *infra* note 335. The concept of the manufacturer as "ultimate guarantor" of its product is repugnant to the theory of strict products liability. *See supra* note 10 and accompanying text.

\textsuperscript{178}  *See Brown*, 98 N.J. at 166-75, 484 A.2d at 1240-44.

\textsuperscript{179}  *Id.* at 169, 484 A.2d at 1241.

\textsuperscript{180}  *Id.* at 170-71, 484 A.2d at 1242.

\textsuperscript{181}  Professor Wade acknowledged that it was never the intent of strict products liability to impose a duty to design accident-proof products. *See Wade, A Conspectus of Manufacturers' Liability for Products*, 10 IND. L. REV. 755 (1977). In fact, Professor Wade argued that:
Interestingly, however, the Brown court dismissed plaintiff's claim on the proximate cause issue, thereby achieving the correct result for the wrong reasons. The court found that while the plaintiff's alternative design would have rendered the product more difficult to alter, "[n]o evidence was proffered to indicate that with a proper design the removal of the heater's safety features probably could not have been accomplished or even rendered so substantially difficult as to be unlikely." Thus, plaintiff was unable to raise a factual issue as to whether, but for the potential design defect, the alterations would not have occurred.

Although the court was correct in finding the lack of a causal connection between the original design and the accident, a determination on this issue was unnecessary. The material alteration was clearly a proximate cause of the accident, and should have severed the manufacturer's duty as a matter of law.

In addition to judicial decisions such as Soler and Brown, some state legislatures have codified the defect-proximate cause approach.

We are never going to reach the point where we say that there is true absolute liability, the insurer's type of liability. If we did, Ford Motor Company would be liable for every accident a Ford got into, Diamond Match Company would be liable for every fire that was started by a Diamond Match, Bayer Aspirin Company would be liable for every stomach hemorrhage or even stomach upset produced by its aspirin tablets, the dairy farmers would be liable for heart attacks produced by cholesterol and the Indianapolis Water Company would be liable if someone drank too much water and died. There is no product that is not dangerous to somebody if it is used in some particular fashion. Lines have to be drawn and distinctions made. Id. at 768 (emphasis added). Unfortunately, Professor Wade did not "foresee" such cases as Soler and Brown, where a manufacturer can be held liable for injuries arising out of its product in a materially altered condition. It is also interesting that Professor Wade's examples involve products in their original, unaltered condition. A subsequent material alteration of a product is even more compelling, however, and should further remove the manufacturer from liability for accidents arising out of the alteration. See, e.g., Stevens v. Rex Chainbelt, Inc., 349 So. 2d 948, 949 (La. App. 1977) (holding that manufacturer is not liable for injuries arising out of subsequent material alterations because "[f]or liability to attach ... it is essential that the defect complained of exist at the time the product left the possession of the manufacturer" (citing Frey v. Travelers Ins. Co., 271 So. 2d 56 (La. Ct. App. 1972)); Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 481, 403 N.E.2d 440, 444, 426 N.Y.S.2d 717, 721-22 (1980), discussed infra text accompanying note 505.

182. In so doing, the court concluded that "the asserted manufacturing design defect in this case was not a substantial factor in contributing to the accident and hence not a 'legal' or proximate cause thereof." 98 N.J. at 174, 484 A.2d at 1244.

183. Id. The court added that "the record discloses that the heater was deliberately altered for the specific purpose of operating it beyond its safe capacity . . . ." Id. While the Brown court acknowledged that no product is "unalterable," it would have allowed the material alteration question to proceed to the jury as a question of fact. Id.

184. Id.
Arizona's products liability statute, for example, provides that:

In any product liability action, a defendant shall not be liable if the defendant proves that any of the following apply:

2. The proximate cause of the incident giving rise to the action was an alteration or modification of the product which was not reasonably foreseeable, made by a person other than the defendant and subsequent to the time the product was first sold by the defendant.

Similarly, Indiana's products liability statute provides that:

It is a defense that a cause of the physical harm is a modification or alteration of the product made by any person after its delivery to the initial user or consumer if such modification or alteration is the proximate cause of physical harm [and] ... is not reasonably expectable to the seller.

D. Usurping the Powers of the Legislature: Judicial Substitutions of Defect-Proximate Cause Rules for Statutory "No-Duty" Rules

The preceding discussions have illustrated that the defect-proximate cause approach is patently unfair to manufacturers. What is

186. Id. § 12-683 (emphasis added). Arizona courts have construed this provision in such a way that once a manufacturer comes forward with sufficient evidence that its product was materially altered, the burden shifts to the plaintiff to show that the alteration was not the sole proximate cause of the accident. See, e.g., O.S. Stapley Co. v. Miller, 103 Ariz. 556, 560, 447 P.2d 248, 252 (1968); McGuire v. Caterpillar Tractor Co., 151 Ariz. 420, 422, 728 P.2d 290, 292 (Ariz. Ct. App. 1986); Kuhnke v. Textron, Inc., 140 Ariz. 587, 590, 684 P.2d 159, 162 (Ariz. Ct. App. 1984). Interestingly, however, the statute defines "reasonably foreseeable alteration" as "an alteration ... of the product which would be expected of an ordinary and prudent purchaser, user or consumer and which an ordinary and prudent manufacturer should have anticipated." ARIZ. REV. STAT. ANN. § 12-681(4) (1982) (emphasis added). This definition utilizes a "reasonableness" or "negligence" standard in analyzing both the alteration itself and the manufacturer's duty to foresee it. Most alterations, if foreseeable to some remote degree, are not the work of "ordinary and prudent" third parties. Quite the contrary, such alterations are performed solely for subjective economic or "convenience" purposes, without regard to safety considerations. If the statute is to be applied in accordance with its plain meaning, any alteration that renders the product more dangerous should absolve the manufacturer of a duty as a matter of law, if it is at all causally related to the accident. Hence, this author disagrees with the interpretations of McGuire and Kuhnke to the extent that the courts refuse to absolve the manufacturer of liability unless the material alteration is the "sole" proximate cause of the accident.
187. IND. CODE ANN. §§ 33-1-1.5-1 to -8 (West Supp. 1987-88).
188. Id. § 33-1-1.5-4(b)(3) (emphasis added).
189. One commentator has observed that:
particularly troubling is that some of these courts have flagrantly refused to apply state statutes limiting the duty of manufacturers with respect to product alteration. This is not only a usurpation of the powers of the legislature, but is proof positive that "defect-proximate cause" courts will go to limitless extremes to insure the liability of "deep pocket" manufacturers for virtually all product-related injuries.

1. A Constitutional Right to "Foreseeability"?— Through the use of a foreseeability standard, "defect-proximate cause" courts have imposed upon manufacturers the duty to design alter-proof and accident-proof products. One of the most outrageous results of the defect-proximate cause approach was achieved by the New Hampshire Supreme Court in *Heath v. Sears, Roebuck & Co.* The court in *Heath* actually went so far as to rule that it is unconstitutional for a state statute to limit the use of foreseeability in alteration cases.

The plaintiffs in *Heath* challenged the constitutionality of New Hampshire's products liability statute. Among the sections challenged was one which provided:

**Modification or Alteration of Products.** In any product liability action, the defendant may be held liable only for harm that would have occurred if the product had been used in its unaltered and unmodified condition and shall not be held liable for harm arising in any part from alteration or modification of the product by another.

This "no-duty" provision was an express statutory rejection of the defect-proximate cause approach as illustrated in *Soler* and *Brown*. The statute was enacted in response to the liability crisis whereby manufacturers were unable to obtain reasonable insurance coverage because of their exposure to open-ended liability. In fact,

"[w]hatever the merits of the particular holdings in *Soler* and *Brown*, the New Jersey Supreme Court, by allowing liability for manufacturers to turn on vague standards such as foreseeability and proximate cause, has missed an opportunity to set clear guidelines and has made the need for a legislative response more imperative."

Comment, *supra* note 23, at 744.

190. See *infra* notes 191-223 and accompanying text.


192. *Id.* at 528-29, 464 A.2d at 297-98.

193. *Id.* at 518, 464 A.2d at 291. The statute, N.H. REV. STAT. ANN. § 507-D (1983), was struck down in its entirety. For the purposes of this Article, however, only the "alteration" provision will be discussed.


195. The court observed that "in conjunction with the enactment of [section 507-D] ...
the New Hampshire Supreme Court itself had previously acknowledged that the provision was part of a statutory scheme designed "not to extinguish existing causes of action, but to set parameters on the risk of product liability actions by making that risk more ascertainable for insurance underwriting purposes."

In an unprecedented lack of judicial self-restraint, the Heath court completely disregarded the legislature's expression of public policy and struck down this provision as unconstitutional. The court held, inter alia, that the restriction on the use of foreseeability in alteration cases violated the equal protection provisions of the state constitution. The court reasoned that the statute impermissibly distinguished an "alteration" from a "misuse," thereby denying persons injured by altered products the same right of recovery (via the use of foreseeability) as those injured through misuse of the product as originally designed. The court thus concluded that the statute must fail because it impermissibly "bars recovery altogether by plaintiffs whose 'misconduct' takes the form of modification or alteration not in accordance with the manufacturer's specifications or instructions, irrespective of how foreseeable such a modification may have been."

If such reasoning was correct, then it would be unconstitutional


198. Id. at 528, 464 A.2d at 297.

199. Id. at 528, 464 A.2d at 297-98. The court further stated that:

The overall effect of [the statute] is both arbitrary and inequitable. For example, the statute would totally bar recovery by the plaintiff . . . who was injured when using a modified Sears tool, simply because a modification contributed to the injury. Yet if the same plaintiff had received the identical injury as a result of actually misusing an unmodified wrench, he would be entitled to sue the manufacturer and have the jury consider the foreseeability of such misuse in the balance of comparative responsibility . . . .

Id. at 529, 464 A.2d at 298 (emphasis in original). Not only is this reasoning incorrect, but it evinces an intent to impose liability upon manufacturers on the basis of "identical injury," rather than upon the condition of the product. Products liability is predicated upon proof of a "defect," rather than mere proof of an injury. If a product is materially altered after it leaves the manufacturer's possession, and that alteration is a "but-for" cause of an injury, the manufacturer must be absolved of liability as a matter of law. It is inconceivable that "misuse" of an unmodified product could be equated with a third party's subsequent alteration of the product from its condition as designed and sold.
to deny persons injured by non-defective products the same right of recovery as those injured by product defects. The *Heath* court ignored the fact that plaintiff "misuse" and product "alteration" are completely different concepts. A manufacturer's duty under strict products liability is measured by analyzing the product in its condition as originally designed and sold. A subsequent alteration represents an actual change in the physical state of the product from that condition. From a "duty" standpoint, such an alteration transcends plaintiff "misuse," which is an incorrect use of the product in its original unchanged condition. The New Hampshire legislature recognized this, and rationally limited the duty of manufacturers in cases where their products have undergone a subsequent alteration at the hands of a third party.

200. For a comprehensive discussion of the qualitative and conceptual distinctions between product "alteration" and product "misuse," see infra notes 224-52 and accompanying text.

201. See supra note 56.

202. See infra notes 238-40 and accompanying text.

203. See infra notes 232-36, 241-45 and accompanying text.

204. See supra text accompanying note 194 (setting forth the relevant provision of the New Hampshire statute). By the express terms of the statute, a manufacturer does not owe a duty with respect to any accident causally related to a material alteration. The manufacturer would be responsible only for accidents that would have arisen out of the product in its "unaltered" condition as originally designed and sold. *Id.* see supra text accompanying note 194; see also *Ky. Rev. Stat. Ann.* § 411.320(2) (Michie Supp. 1986), discussed infra notes 206-11 and accompanying text; *N.D. Cent. Code* § 28-01.1-04 (Supp. 1987); *R.I. Gen. Laws* § 9-1-32 (1985). These "no-duty" statutes absolve the manufacturer of liability with respect to subsequent product alteration without regard to "foreseeability."

The Rhode Island statute is particularly interesting, as it provides:

*Effect of alteration of product after sale.*—(a) As used in this section:

1. "Product liability damages" means damages because of personal injury, death, or property damage sustained by reason of an alleged defect in a product, or an alleged failure to warn or protect against a danger or hazard in the use or misuse of such product, or an alleged failure to instruct properly in the use of a product.

2. "Subsequent alteration or modification" means an alteration or modification of a product made subsequent to the manufacture or sale by the manufacturer or seller which altered, modified, or changed the purpose, use, function, design, or manner of use of the product from that originally designed, tested or intended by the manufacturer, or the purpose, use, function, design, or manner of use or intended use for which such product was originally designed, tested or manufactured.

(b) No manufacturer or seller of a product shall be liable for product liability damages where a substantial cause of the injury, death, or damage was a subsequent alteration or modification.

*Id.* This appears to be a "no-duty" statute. Under subdivision (a)(1), the statute limits "products liability damages" to damages arising out of a product "defect" or a failure to warn or instruct of risks attendant to the "use" and/or "misuse" of "such product." *See id.* § 9-1-32(a)(1) (emphasis added). In subdivision (a)(2), the statute defines "subsequent alteration", impliedly differentiating it from the class of product "use or misuse" to which subdivision
By legislating judicially, the *Heath* court abolished the "no-duty" rule of the legislature and adopted in its place a defect-proximate cause rule akin to that of *Soler* and *Brown*. Interestingly, other state courts have struck down different products liability provisions, such as statutes of repose, as unconstitutional. No court has, however, even remotely approached what the *Heath* court has done in holding that the employment of a foreseeability test with respect to product alteration is constitutionally mandated. This approach illustrates the overzealousness of courts utilizing the defect-proximate cause approach as a means of imposing absolute liability on product manufacturers.

2. Kentucky’s “No-Duty” Statute Falls Victim.— In 1978, the Kentucky legislature enacted a products liability statute which rationally limited the liability of manufacturers in products liability cases. The statute contained a "no-duty" alteration provision stating:

In any product liability action, a manufacturer shall be liable only for the personal injury, death or property damage that would have occurred if the product had been used in its original, unaltered and unmodified condition . . . . This section shall apply to alterations or modifications made by any person or entity, except those made in accordance with specifications or instructions furnished by the manufacturer.

(a)(1) applies. See id. § 9-1-32(a)(2). Finally, the statute states that subsequent alterations that are a substantial (proximate) cause of the accident are outside the scope of a manufacturer’s responsibility. Id. § 9-1-32(b).

205. See Lankford v. Sullivan, Long & Hagerty, 416 So. 2d 996 (Ala. 1982) (holding an Alabama statute barring products liability claims involving products that had been used for more than 10 years violative of state constitution's guarantee of access to courts); Diamond v. E.R. Squibb & Sons, 397 So. 2d 671 (Fla. 1981) (holding 12-year statute of repose for products liability claims violated state constitution's guarantee of access to courts); Kennedy v. Cumberland Eng'g Co., 471 A.2d 195 (R.I. 1984) (holding 10-year statute of repose in products liability cases violative of state constitutional provision mandating access to courts since it completely denied access to courts for the class of plaintiffs injured by products purchased more than 10 years before the injury); Berry v. Beech Aircraft Corp., 717 P.2d 670 (Utah 1985) (holding 6-year statute of repose in products liability actions violative of the state constitution).


In any product liability action, if the plaintiff performed an unauthorized alteration or unauthorized modification, and such alteration or modification was a substantial
The statute was given a strict construction in cases not involving the “alteration” provision. For example, the Kentucky Supreme Court in *Reda Pump Co. v. Finck*\(^{208}\) upheld the constitutionality of the statute’s contributory negligence provision, despite the fact that the provision was in derogation of the court’s prior holdings.\(^{209}\) The *Reda Pump* court properly concluded that to strike down the statute “would constitute the ultimate arrogation of power unto ourselves.”\(^{210}\) The court, therefore, adhered “to the principle that the establishment of public policy is the prerogative of the [legislature].”\(^{211}\)

With respect to product alteration, however, the Kentucky Court of Appeals in *Wheeler v. Andrew Jergens Co.*\(^{212}\) did something radically different. The court completely ignored the legislature’s public policy mandate, and refused to apply the statutory “alteration” provision. The court instead substituted its own defect-proximate cause rule for the “no-duty” rule enacted by the legislature.\(^{213}\)

The plaintiff in *Wheeler* purchased a new bottle of shampoo from a drug store.\(^{214}\) While using the product, she experienced an immediate burning sensation, and subsequently lost 80% of her hair.

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\(^{208}\) 713 S.W.2d 818 (Ky. 1986).

\(^{209}\) Id. at 820-21. The court reasoned that the wording of the statute was not ambiguous, but was “plain and clear on its face.” Id. at 819. Thus, the court stated, “[w]e have long adhered to the rule in this jurisdiction that statutes will be construed according to the plain meaning of the words contained in the statute.” Id. at 819-20; cf. Heath v. Sears, Roebuck & Co., 123 N.H. 512, 464 A.2d 288 (1983), discussed supra notes 191-99 and accompanying text.

\(^{210}\) 713 S.W.2d at 821.

\(^{211}\) Id. Consequently, the court acknowledged that “[t]he entire tenor of the Products Liability Act is to restrict and limit actions concerning products liability.” Id. at 820; see also Anderson v. Black & Decker, Inc., 597 F. Supp. 1298, 1300 (E.D. Ky. 1984) (finding that “[t]he intent of the [Kentucky] legislature in enacting [the statute] is clear. Rightly or wrongly, wisely or unwisely, whether influenced by manufacturers’ and insurance lobbies or not, the clear intent of the legislature was to restrict liability in products cases.”).

\(^{212}\) 696 S.W.2d 326 (Ky. Ct. App. 1985). For a discussion of *Wheeler*, see Fischer, supra note 59, § 8.03[6], at 8-19 to -20.

\(^{213}\) The trial court found that the shampoo was “modified by a third person,” and in accordance with § 411.320(1), (2), imposed no liability on the manufacturer since the product was altered by another without instructions from the manufacturer. 696 S.W.2d at 327. The Court of Appeals, however, reversed the trial court’s holding. Id. at 328.

\(^{214}\) Id.
over her entire scalp. At the close of plaintiff’s case-in-chief, the trial court found that the shampoo had undergone a subsequent alteration at the hands of a third party. Accordingly, the trial court directed a verdict for the manufacturer, properly applying the statutory “alteration” provision which absolves the manufacturer of a duty where its product is altered or modified by a third party.

The Kentucky Court of Appeals reversed, holding that even if the shampoo was altered after it left the manufacturer’s hands, the manufacturer may nevertheless be liable under negligence or strict products liability for failing to design a “tamper-proof” bottle. This is a defect-proximate cause rule akin to that of Brown. The manufacturer was delegated the duty to foresee the criminal conduct of third parties, and to design its product to be alter-proof and, therefore, accident-proof.

In refusing to adhere to statutory mandates, the Wheeler court reasoned that the entire risk of product-related injuries should fall upon the manufacturer, rather than the consumer. Thus, the court stated, “Our expressed public policy will be furthered if we minimize the risk of personal injury or property damage by charging the cost of injuries against the manufacturer who can procure liability insurance and distribute its expense among the public as a cost of doing business[.]” Thus, the Wheeler court utilized the defect-proximate cause approach and designated the manufacturer an insurer of its product, in total contravention of Kentucky’s statute that

215.  Id.
216.  Id.
217.  Id.
218.  Id.
219.  Id. at 328. The Court of Appeals stated “[w]hether or not the product was subsequently modified by a third person is a question of fact for the jury.” 696 S.W. 2d at 328. Allowing the jury to resolve the issue subverts the “no-duty” rule enacted by the legislature.
220.  Id. The court reasoned that the alteration issue should have been allowed to proceed to the jury as a question of fact. Id. The court held, however, that even if plaintiff proved that a third party subsequently tampered with the shampoo, the manufacturer should nevertheless be held liable if a jury determines that a reasonable manufacturer would have made it tamper-proof. Id. Thus, plaintiff could establish a prima facie case of negligence, or design defect under Kentucky’s products liability statute. Id. This contravenes the express language of the statute. See supra note 207 and accompanying text (setting forth the Kentucky “no-duty” alteration provision).
221.  See 696 S.W.2d at 328.
222.  Id. (quoting Emb v. Pepsi Cola Bottling Co., 528 S.W.2d 703, 705 (Ky. 1975)).
sought to avoid such absolute liability.\textsuperscript{223}

III. THE DISTINCTION BETWEEN PRODUCT "ALTERATION" AND PRODUCT "MISUSE"

The defect-proximate cause approach, as exemplified by the decisions of Soler, Brown, Heath, and Wheeler, is fatally flawed in its reliance on foreseeability principles to govern alteration cases. Courts utilizing this approach have failed to recognize the qualitative distinction between a "misuse" and an "alteration." The distinction is founded upon sound and fundamental principles of products liability law.

In strict products liability, the focus is on the condition of the product itself, not on the conduct of the manufacturer.\textsuperscript{224} The duty of the manufacturer is gauged as of the time the product, as originally designed, leaves its possession and control.\textsuperscript{225} Courts have utilized the concept of reasonable foreseeability to shape a manufacturer's duty with respect to the manner in which its product may be used or misused.\textsuperscript{226} The underlying rationale is that in products liability law...

\begin{footnotes}
\textsuperscript{223} Cf. Morgan v. Biro Mfg. Co., 15 Ohio St. 3d 339, 474 N.E.2d 286 (1984), where the Ohio Supreme Court, applying Kentucky law, absolved a manufacturer of liability for an accident arising out of a subsequent material alteration. The court found that under the Kentucky products liability statute, the plaintiff was precluded from recovery. \textit{Id.} at 344, 474 N.E.2d at 290.

\textsuperscript{224} See supra note 8 and accompanying text; see also Gallub, \textit{Assessing Culpability in the Law of Torts: A Call for Judicial Scrutiny in Comparing "Culpable Conduct" Under New York's CPLR 1411, 37 SYRACUSE L. REV. 1079, 1102-03 (1987)} ("In a products liability action based upon negligence, the plaintiff must prove that the defendant failed to act reasonably in designing or manufacturing the product . . . With the doctrine of strict products liability, the culpability of the defendant shifts from culpable conduct to culpable product . . . and any seller who places a defective product into the stream of commerce is liable, because that seller has breached a duty to those who will ultimately use or interact with the product.") (footnotes omitted).

\textsuperscript{225} See supra note 56.

\textsuperscript{226} See, e.g., Kavanaugh v. Kavanaugh, 131 Ariz. 344, 348, 641 P.2d 258, 262 (1982) ("The defense of misuse is . . . defined as a use of a product 'for certain purposes or in a manner not reasonably foreseen by the manufacturer.' "(quoting O.S. Stapley Co. v. Miller, 103 Ariz. 556, 561, 447 P.2d 248, 253 (1968))); Uptain v. Huntington Lab, Inc., 723 P.2d 1322, 1325 (Colo. 1986) ("Regardless of the defective condition, if any, of a manufacturer's product, a manufacturer will not be liable if an unforeseeable misuse of the product caused the injuries."); Norrie v. Heil Co., 203 Conn. 594, 600, 525 A.2d 1332, 1335 (1987) ("Misuse occurs when a product is not used 'in a manner which should have been foreseen by the defendant.' "); see also Lancanster v. Jeffrey Galion, Inc., 77 Ill. App. 3d 819, 825, 396 N.E.2d 648, 653 (1979); American Optical Co. v. Weidenhamer, 404 N.E.2d 606, 625 (Ind. Ct. App. 1980); Simpson v. Standard Container Co., 72 Md. App. 199, 206, 527 A.2d 1337, 1341 (Ct. Spec. App. 1987) ("[If the product is not unreasonably dangerous when used for a purpose and in a manner that is reasonably foreseeable, it simply is not defective, and the seller will not be liable.' " (quoting Ellsworth v. Sherne Lingerie, Inc., 303 Md. 581, 596, 495 A.2d 348,
bility, the culpability of both the manufacturer's design choice and the plaintiff's use of that design are mutually dependent. 227 Indeed, a product is labeled "defective" only in relation to its reasonably foreseeable uses. Logically, the user's conduct is labeled "culpable" in light of its interaction with the product. 228

Built into the relationship between product and plaintiff is the fundamental notion that a manufacturer need not design a product that is accident-proof. 229 Thus, the concept of "reasonable foreseeability" focuses upon the potential uses of, or interactions with, the product as designed, rather than the potential for harm itself. 230 It is the foreseeability of certain uses that shapes the manufacturer's duty to design its product in such a way that those uses are safe. 231

A "misuse" is, by definition, an incorrect or careless use, or use for an improper purpose. 232 Thus, to misuse a product is to use that product incorrectly. A standard of reasonable foreseeability has been applied to misuses because a misuse is but a variation in the use of the product in its condition as originally designed and sold. 233

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227. See Gallub, supra note 224, at 1104 ("In products liability, the culpability underlying both the plaintiff's conduct and the defendant's product is not only qualitatively similar, but it is mutually dependent. Obviously, even the most dangerous product is completely neutral until it interacts with the conduct of the user."); see also Twerski, supra note 51, at 804-05 ("To be sure, there is some deterrence to be accomplished by penalizing plaintiff for his negligent conduct, but the better argument is that the plaintiff's reactions were, in a sense built into the product.").

228. See sources cited supra note 227.

229. See case cited supra note 10.


231. See supra notes 224-27 and accompanying text.


233. See, e.g., Kavanaugh v. Kavanaugh, 131 Ariz. 344, 348, 641 P.2d 258, 262 (1982) ("It is now well settled that one who manufactures or sells a product has a duty not only to warn of dangers inherent in its intended use but also to warn of dangers involved in a use which can be reasonably anticipated."); emphasis added); Uptain v. Huntington Lab, Inc., 723 P.2d 1322, 1325 (Colo. 1986) ("The defense of misuse ... is a particularized defense requiring that the plaintiff's use of the product be unforeseeable and unintended ... ") (emphasis added); Norrie v. Heil Co., 203 Conn. 594, 601, 525 A.2d 1332, 1335 (1987) (jury was instructed that "[m]isuse of a product has been defined as 'use in a manner not reasonably foreseen by the manufacturer. A manufacturer or seller is entitled to expect a normal use of his product.' ")(emphasis added); Nesselrode v. Executive Beechcraft, Inc., 707 S.W.2d 371, 375 n.4 (Mo. 1986) (noting that "foreseeability is a determinant of use ... "); Fields v. Volkswagen of America, Inc., 555 P.2d 48, 56 (Okla. 1976) ("Generally, when we speak of misuse or abnormal use of a product we are referring to cases where the method of using a
In most jurisdictions, a plaintiff's misuse of a product is a defense to a strict products liability claim where it is unforeseeable. The defense of product "misuse" focuses upon the manufacturer's duty to foresee certain variations in the manner by which its product may be used. Thus, from a "duty" standpoint:

Misuse has been defined as: a use not reasonably foreseeable ... a use of the product in a manner which defendant could not reasonably foresee ... a use of a product where it is handled in a way which the manufacturer could not have reasonably foreseen or expected in the normal and intended use of the product and the plaintiff could foresee an injury as the result of the unintended use ... a use or handling so unusual that the average consumer could not reasonably expect the product to be designed and manufactured to withstand it — a use which the seller, therefore, need not anticipate and provide for ... use of the product which constitutes wilful or reckless misconduct or an invitation of injury.

It has been said that the use of foreseeability principles with respect to product misuse "strikes an appropriate balance between the policy that in strict liability cases the product, not the manufacturer, is on trial and the recognition that abuse of a product should not be encouraged."

A third party's alteration of the product, however, is qualitatively different from a misuse. Unlike product misuse, which involves the method of using a product in its condition as designed and sold, an alteration is an actual change in the composition and form of the product itself. It is, by definition, a qualitative change in an ob-

product is not that which the maker intended or is a use that could not reasonably be anticipated by a manufacturer." (emphasis added).

234. See cases cited supra note 233.
235. See supra note 56.
238. The Connecticut products liability statute, for example, provides that "alteration or modification includes changes in the design, formula, function or use of the product from that originally designed, tested or intended by the product seller." CONN. GEN. STAT. ANN. §§ 52-572p(b) (West Supp. 1988); see also N.C. GEN. STAT. § 99B-3(b) (1985) (adding that such alteration or modification "includes failure to observe routine care and maintenance, but does not include ordinary wear and tear").

Similarly, the Illinois products liability statute defines "alteration" to include "an alteration, modification or change that was made in the original makeup characteristics, function or design of a product or in the original recommendations, instructions and warnings given with
ject's form, thereby rendering it in a condition that is different from that in which it had been originally.239 One court defined it as a change in the "configuration or operational characteristics of the product."240

A third party's alteration of a product seriously interferes with and undermines the "duty" relationship between product and user.241 Products are designed and sold to be used, not altered. While a manufacturer must contemplate variations in the use of its product as designed, it should not be responsible for accidents arising out of an alteration of the product from that design.242 The alteration of a product completely undermines the manufacturer's design choice. It in effect creates a new product which places the manufacturer at the

respect to a product including the failure properly to maintain and care for a product." ILL. REV. STAT. § 13-213(a)(l) (Smith-Hurd 1984).

The Rhode Island products liability statute defines product alteration as "an alteration or modification of a product made subsequent to the manufacture or sale by the manufacturer or seller which altered, modified, or changed the purpose, use, function, design or manner of use of the product from that originally designed, tested or intended by the manufacturer." R.I. GEN. LAWS § 9-1-32(a)(2) (1985).

239. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 63 (1986).
242. See infra notes 253-62, 463-674 and accompanying text. One commentator has stated that "[t]he foreseeability approach to substantial change is vital in the determination of design defects that render a product unsafe in normal use." See Comment, supra note 3, at 255 (emphasis added). Under such reasoning, "A manufacturer must design a product so that foreseeable modifications will not cause product failure." Id. The author's predicate for using a foreseeability standard in alteration case was, however, premised upon the principle that the "foreseeability of a product's uses establishes the parameters of its manufacturer's responsibility." Id. at 254 (emphasis added). Like the defect-proximate cause and duty-foreseeability courts, this author makes a quantum leap from "use/misuse" to "alteration" without regard to their conceptual and qualitative distinctions.

In addition, while acknowledging that this reasoning designates the manufacturer as an "insurer" of its product, the author states that such unfairness is mitigated by a proximate cause test that would absolve a manufacturer of liability for accidents caused solely by an unforeseeable alteration. Id. at 255-56. This reasoning is flawed, however, for two reasons. First, if a manufacturer's duty is gauged as of the time of manufacture and sale, then a manufacturer should not be responsible for any accident that would not have occurred in absence of a post-sale alteration, whether foreseeable or not. Second, even if a foreseeability standard were to be appropriate, an unforeseeable alteration that is, in any way, causally related to an accident should sever a manufacturer's duty as a matter of law. See DeArmond v. Hoover Ball & Bearing, 86 Ill. App. 3d 1066, 408 N.E.2d 771 (1980). The author's proposal is even more oppressive than the defect-proximate cause approach because it asserts that the manufacturer should be liable, even if the accident would not have occurred "but-for" an unforeseeable alteration, so long as the alteration was not the sole proximate cause. See Comment, supra note 3, at 254-55.
mercy of the subjective engineering and safety decisions of a third party. A manufacturer should never have a duty to foresee subsequent alterations of its product, lest it be deemed an insurer against all product-related injuries.

Some state legislatures, such as North Carolina\textsuperscript{243} and North Dakota,\textsuperscript{244} have recognized this qualitative “duty” distinction between an alteration and a misuse. The distinction was also recognized by the Kentucky and New Hampshire state legislatures, but fell victim to the judicial legislation of defect-proximate cause courts.\textsuperscript{245} Other statutes and decisions, while incorrectly utilizing “foreseeability,” recognize at least the conceptual distinction between product alteration and product misuse.\textsuperscript{246} Idaho’s products liability statute,\textsuperscript{247} for example, which is fashioned after the Model Uniform Product Liability Act, differentiates these terms as follows:

(3) Misuse of a product.

(a) “Misuse” occurs when the product user does not act in a manner that would be expected of an ordinary reasonably prudent person who is likely to use the product in the same or similar circumstances.\textsuperscript{248}

. . . .

(4) Alteration or modification of a product.

(a) “Alteration or modification” occurs when a person or entity other than the product seller changes the design, construction, or formula of the product, or changes or removes warnings or instructions that accompanied or were displayed on the product.

\textsuperscript{243} The North Carolina statute provides:

(a) No manufacturer or seller of a product shall be held liable in any product liability action where a proximate cause of the personal injury, death or damage to property was either an alteration or modification of the product by a party other than the manufacturer or seller, which alteration or modification occurred after the product left the control of such manufacturer or such seller unless:

(1) the alteration or modification was in accordance with the instructions or specifications of such manufacturer or such seller, or

(2) the alteration or modification was made with the express consent of such manufacturer or such seller . . . .


\textsuperscript{244} See N.D. CENT. CODE § 28-01.1-04 (Supp. 1987) (providing that alteration or modification is a defense to a strict products liability action, in a manner similar to the North Carolina statute).

\textsuperscript{245} See supra notes 191-223 and accompanying text (discussing the challenges to the Kentucky and New Hampshire statutes).

\textsuperscript{246} See, e.g., CONN. GEN. STAT. § 52-572p(b) (West Supp. 1988), set forth supra note 238.

\textsuperscript{247} IDAHO CODE § 6-1405 (Supp. 1987).

\textsuperscript{248} Id. § 6-1405 (3)(a) (emphasis added).
“Alteration or modification” of a product includes the failure to observe routine care and maintenance, but does not include ordinary wear and tear.249

Similarly, the South Dakota Supreme Court has recently stated that a “[m]isuse may involve using a product for an unintended function or using the product for its intended purpose but in an improper manner.”250 Conversely, a consumer “alters” a product “by changing the product from its original form, not by using it improperly.”251

Even in the context of product misuse, courts have acknowledged that extreme care must be used in applying foreseeability principles because, “with the benefit of hindsight, any accident could be foreseeable.”252 By applying foreseeability to product alterations, courts utilizing the defect-proximate cause approach have completely failed to exercise such care. These courts have not only failed to recognize the fundamental distinctions between product misuse and product alteration, but have also engrossed the concept of “the product as chameleon.” The product must be designed either to prevent itself from being altered, or to adapt its safety level to meet any alterations in its own physical structure and composition. In fact, while the chameleon internally adapts to changes in its external surroundings, the product must go one step further and contain safety features that adapt to changes in its own internal structure. From a safety standpoint, the product must automatically be adaptable to internal alterations as water adapts to the configuration of the container in which it is poured.

When foreseeability is given such a role in alteration cases, one begins to question why a manufacturer has a duty to incorporate safety features into its design when the product must be made “suitably safe” without these features. One also questions how a product can be made safe without such safety features when the features are needed to make the product safe. If it may be foreseeable that a product may be altered by a removal of its safety features, is it not foreseeable that it may be further altered by obviating its “back-up” safety features? To even suggest that back-up safety features are

249. Id. § 6-1405(4)(a) (emphasis added).
251. Id. at 914.
required is to concede that the manufacturer must design its product to be accident-proof.

There is something inherently unfair and theoretically wrong with the use of the foreseeability standard to define a manufacturer's duty once its product has been materially altered. The defect-proximate cause approach allows juries to retroactively re-design products on the basis of the particular alteration at issue in a particular case. The manufacturer is ultimately held to the level of an insurer, and must anticipate every conceivable way that its product may be altered. This places the manufacturer at the mercy of third parties who, with conscious disregard for safety, materially alter the product to suit their own subjective needs. The manufacturer must ultimately design an alter-proof product, or one that insures its own safety in any altered condition.

IV. THREE STEPS TOWARD A RATIONAL APPROACH

Courts can rationally limit the liability of manufacturers in alteration cases without contravening any of the policies underlying products liability law. A manufacturer should not be held responsible for accidents arising out of its product in a materially altered condition. Any causal relationship between a material alteration and the accident should, as a matter of law, sever the legal relationship between the manufacturer's original design choice and the accident. The manufacturer should be absolved of a duty under these circumstances because the accident would clearly not have occurred "but-for" a material alteration which it should have no duty to foresee.

In material alteration cases, a legal relationship between the manufacturer's original design and the accident exists only through the use of a "foreseeability" standard. Such a standard, while ap-

253. See infra notes 463-674 and accompanying text.
254. See supra notes 127-29 and accompanying text; see also supra note 204 (discussing R.I. GEN. LAWS § 9-1-32 (1985)).
255. Absent a duty to foresee the alteration, a manufacturer could not be responsible for the condition of its product after the alteration occurs. As Dean Green has noted, "[t]he scope of a defendant's duty depends upon how far the law's protection will be extended." Green, Duties, Risks, Causation Doctrines, 41 Tex. L. Rev. 42, 45 (1962). Thus, "[i]t is frequently said that if the defendant as an ordinarily prudent person foresaw or should have foreseen some harm to the victim or other person so situated, defendant was under a duty to exercise reasonable care to avoid such harm." Id. (emphasis added); see supra notes 224-37 and accompanying text. This reasoning has been applied by defect-proximate cause courts in the context of subsequent product alteration. See supra notes 137-40, 175-80 and accompanying text (discussing Soler and Brown); see also cases cited supra notes 32, 130.
propriate with respect to product "misuse," is completely inappropriate with respect to product "alteration."256 Courts adhering to the defect-proximate cause approach have refused to recognize this, and have allowed the legal question of "duty" to proceed to the jury under a foreseeability standard.257

A rational solution to the material alteration dilemma exists, and can be accomplished in three steps. First, courts must utilize their policy making functions by adjudicating, as a matter of law, the manufacturer’s duty with respect to product alteration. Second, courts must set reasonable parameters on that duty by departing from the use of foreseeability as the standard for imposing liability in alteration cases. Once these first two steps are taken, a manufacturer cannot owe a duty with respect to any accident causally related to the material alteration of its product. Thus, courts must take the third and final step, severing the legal relationship between the manufacturer’s original design and the accident, i.e. absolving the manufacturer of liability as a matter of law.

The succeeding sections of this Article discuss these three steps, and illustrate that each step is essential to the formulation of a rational approach to product alteration. Section V examines the process by which courts can set parameters on the manufacturer’s duty in products liability cases (Step One).258 Section VI critically analyzes another approach, referred to as “duty-foreseeability,” wherein courts have adjudicated the “duty” concept (Step One), yet failed to take the next step and depart from using a foreseeability standard (Step Two).259 Section VII then examines the New York “Robinson” approach, which takes the first two steps (adjudicating the manufacturer’s “duty” without the use of foreseeability), yet fails to take the third step, severing the legal relationship between the original design and the accident (Step Three).260 This section also discusses why the third step is essential to the proper adjudication of alteration cases.261 Finally, this Article concludes by summarizing the three-step solution and its applicability to future alteration cases.262

256. See supra notes 224-52 and accompanying text.
257. See cases cited supra note 32.
258. See infra notes 263-333 and accompanying text.
259. See infra notes 334-462 and accompanying text.
260. See infra notes 463-522 and accompanying text.
261. See infra notes 510-674 and accompanying text.
262. See infra notes 675-83 and accompanying text.
V. STEP ONE: ADJUDICATING THE MANUFACTURER’S “DUTY” AS A MATTER OF LAW

The defect-proximate cause approach has failed to rationally limit the liability of a manufacturer where its product has undergone a subsequent alteration. Courts have transformed what should be a question of law into four questions of fact. \(263^{203}\) This, in effect, delegates to the jury important social policy questions that are the hallmark of a court’s lawmaking functions. \(264^{204}\) Material alteration cases involve questions of social policy that transcend the facts of a particular case. \(266^{206}\) These questions should be adjudicated by courts as a matter of law. Defect-proximate cause courts have declined to do so. They have allowed juries, at the time of trial, to evaluate the product in its materially altered condition and to retroactively determine what the duty of the manufacturer was at the time the product was originally designed and sold.

As Dean Green noted some time ago, “Many judges seem hesitant to come to grips with the duty issue. But the able advocate should never permit the issue to be slurred over. In most of the erroneous decisions made by courts, the duty issue has either gone by default or has been misconceived.” \(268^{208}\) If strict liability is to be fairly imposed upon manufacturers, without subjecting them to the “absolute” liability of an insurer, courts must take a more active role in limiting the manufacturer’s duty as a matter of law. \(267^{207}\) It is here where the alteration problem originates, and where the solutions begin.

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263. See supra note 61 and accompanying text (discussing the four questions of fact laid out in Soler).
264. See Green, supra note 255, at 45. Dean Green had stated that “[t]he determination of the issue of duty and whether it includes the particular risk imposed on the victim ultimately rests upon broad policies which underlie the law.” Id. These policies define the scope of a defendant’s duty and “can only be resolved by the learning, experience, good sense and judgment of the judge — the molding of law in response to the needs of the environment.” Id.; see also Twerski, supra note 50, at 527-35.
265. The New York Court of Appeals recognized this in Robinson v. Reed-Prentice Div. of Package Mach. Co., 49 N.Y.2d 471, 403 N.E.2d 440, 426 N.Y.S.2d 717 (1980), and adjudicated the manufacturer’s duty as a matter of law. See infra notes 501-06 and accompanying text (discussing the Robinson approach). The court’s monumental reasoning illustrated the important social policy issues in material alteration cases that warrant judicial resolution. See infra notes 501-06 and accompanying text (discussing Robinson).
266. Green, supra note 255, at 45.
267. See Twerski, supra note 50, at 527-35.
A. **Is the “Duty” Concept Nothing More Than a Question of Fact?**

Many courts encounter difficulties in adjudicating alteration cases as a matter of law. These difficulties stem from traditional notions of the roles of the judge and the jury in establishing the duty of the manufacturer under products liability law. As one court has observed, “[d]uty is essentially a question of whether the relationship between the actor and the injured person gives rise to any legal obligation on the actor’s part for the benefit of the injured person.”

Theoretically, the duty concept should present a threshold question of law for the trial judge, since there must exist a legal duty before strict products liability, or negligence, can be assessed against a defendant. Once the existence of a legal duty has been established, the questions of whether a defendant breached that duty and whether the breach proximately caused the plaintiff’s injuries, are most often resolved by the factfinder. As a practical matter, however, it is extremely difficult for a court to establish a comprehensive list of specific duties that a manufacturer must follow when design-

268. See supra note 32-37 and accompanying text (discussing cases that have adjudicated the material alteration question).


270. Twerski, supra note 50, at 528 (“This initial ‘duty’ question has traditionally been within the province of the judge, and thus there existed a neat division of labor between court and jury.”). Chief Judge Cardozo recognized this in the seminal case Palsgraf v. Long Island R.R., 248 N.Y. 339, 162 N.E. 99 (1928), in which he stated that “[t]he question of liability is always anterior to the question of the measure of the consequences that go with liability.” Id at 346, 162 N.E.2d at 101; see also Green, supra note 255, at 45 (stating that it is fundamental that “[a]t the base of every tort case in which liability is imposed on a defendant, there must be a duty.”) (emphasis in original). Dean Green was one of the first commentators to carefully analyze the concept of “duty” and its role in defining the policies underlying tort law. As Dean Green succinctly noted:

Duty may be explicitly stated or assumed. In most cases the defendant’s duty is assumed — some undisclosed major premise. This is only saying that the liability of a defendant must rest upon some rule or principle of law which comprehends defendant’s conduct and protection of the victim against the risk of injury created by defendant’s conduct . . . . If it is once stated with clarity, the solution of a case is not far afield.

Id.

271. See Green, supra note 255, at 45; see also Note, No Duty At Any Speed?: Determining the Responsibility of the Automobile Manufacturer in Speed-Related Accidents, 14 Hofstra L. Rev. 403, 405 n.11 (1986).
ing and selling its products. This stems from the fundamental notion of products liability that the societal acceptability of a design can be evaluated only by analyzing the relationship between the product and its users. Indeed, it is the relationship between manufacturer and plaintiff that defines the duties to be imposed upon each.

This concept, when taken at face value, appears to be a simple one. In reality, however, the types of interactions between product and plaintiff vary innumerably from case to case, and are dependent upon each jury's findings of the facts. Since the manufacturer's duties are so dependent upon the fact patterns of each specific case, courts have been unable to affirmatively define the myriad of duties of a manufacturer as a matter of law. Courts have instead opted to impose upon manufacturers the general duty to design "non-defective" products and have delegated to the jury the role of determining whether this general duty has been breached, i.e., whether the product was "defective," under the facts of a particular case.

272. See supra notes 224-28 and accompanying text.

273. Id.; see also Nesselrode v. Executive Beechcraft, Inc., 707 S.W.2d 371, 391 (Mo. 1986) (Donnelly, J., dissenting) ("The foreseeable use, if present, raises the duty to make the use safe.").

274. Professor Twerski has observed that "[t]he creation of a general formula governing the question whether to impose such a duty of care is highly unlikely, according to Dean Prosser, because 'considerations of social policy vary depending on the precise issue before the court and social policy questions always underlie the duty issue.'" Twerski, supra note 50, at 528 (quoting W. Prosser, J. Wade & V. Schwartz, Cases and Materials on Torts 405 (6th ed. 1976)).


1. The usefulness and desirability of the product — its utility to the user and to the public as a whole.
2. The safety aspects of the product — the likelihood that it will cause injury, and the probable seriousness of the injury.
3. The availability of a substitute product which would meet the same need and not be as unsafe.
4. The manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility.
5. The user's ability to avoid danger by the exercise of care in the use of the product.
If the jury concludes that a design is "defective" or "unreasonably dangerous" under the applicable test, it is, in effect, concluding that the manufacturer had a duty to design its product in such a way as to avoid the specific accident that occurred. Juries are, at the time of trial, redesigning the product in a negative/hindsight fashion and tailoring the defect to the specific facts of the case.276 In so doing,

(6) The user's anticipated awareness of the dangers inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.

(7) The feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying liability insurance.


276. See, e.g., Dawson v. Chrysler Corp., 630 F.2d 950 (3d Cir. 1980), cert. denied, 450 U.S. 959 (1981). The Dawson court held, inter alia, that an automobile manufacturer has a duty to design "crashworthy" vehicles, the scope of that duty being defined by the jury under a risk-utility analysis. 630 F.2d at 956-59. The court further held that evidence of a manufacturer's compliance with federal safety standards promulgated under the National Traffic and Motor Vehicle Safety Act is merely a factor to be considered by the jury in determining "defect." Id. at 957-58.

The court expressed uneasiness, however, "regarding the consequences of [its] decision and of the decisions of other courts throughout the country in cases of this kind." Id. at 962. The court reasoned that the "open-ended" duty requirement under New Jersey law fully delegates to the jury the role of determining whether the manufacturer satisfied its duty. Id. As the court perceptively observed:

The result of such arrangement is that while the jury found [the manufacturer] 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 . . . . 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.

Id. This ad hoc and retrospective system of establishing the manufacturer's duty "implicates broad national concerns." Id. at 963. While the court was bound to apply the substantive law
the jury is establishing the manufacturer's duties in a retrospective fashion. The manufacturer's specific duties at the time of manufacture and sale are not ascertained until the jury concludes that these "duties" have been breached. One may conclude, therefore, that the concept of "duty as a question of law for the court" is a myth. Rather, the duty is often established by the jury as a finding of fact.

B. The Emergence of the "No-Duty" Rule

This system of retrospective and factual standard-setting can produce unduly harsh results for manufacturers. This is especially true in alteration cases, where juries are asked to evaluate a product's original design in the context of an accident arising out of the product in its condition as materially altered by a third party. Despite the fact that courts may be unable to affirmatively set the specific duties of a manufacturer, courts do possess the judicial capacity to ascertain when a manufacturer should not owe a duty to the plaintiff. It is here that the theoretical notion of the duty concept as a question of law survives. By granting summary judgments or directed verdicts, courts can intervene in the jury's factual standard-setting process by determining, as a matter of law, that the manufacturer should not owe a duty to the plaintiff. Thus, in the context of a particular case, the focus of a court's inquiry should be whether "the defendant's duty, whatever it may be, extend[s] to the specific injury which the victim has received?"

In a noteworthy article, Professor Twerski explained that "[i]n making a determination of no duty . . . the court performs a distinctive role, grounded in its ability to respond judicially to important social policy considerations by making law accordingly." Professor Twerski characterized this judicial screening as "high level lawmak-

277. Id.; see supra notes 50-51 and accompanying text (discussing "negative standard-setting" by the jury).

278. In addition to some of the outrageous duty requirements of defect-proximate cause courts such as Soler, Brown, Heath and Wheeler, other courts have imposed upon manufacturers the duty to design accident-proof products in the non-alteration context. See, e.g., Bigbee v. Pacific Tel. & Tel. Co., 34 Cal. 3d 49, 665 P.2d 947, 192 Cal. Rptr. 857 (1983); Barker v. Lull Eng'g Co., 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978).

279. See Twerski, supra note 50, at 527-35.

280. Green, supra note 255, at 45-46.

281. Twerski, supra note 50, at 528.
ing” because the no-duty rules are premised upon important policies that transcend the facts of a particular case.\textsuperscript{282} As such, they may have significant precedential value.\textsuperscript{283} Unlike the factfinding role of a jury, when a court formulates a no-duty rule, it is exercising specific functions that are the hallmark of its lawmaking power.\textsuperscript{284} These functions include:

(1) the \textit{identification} of important policy concerns that transcend the resolution of a particular case;

(2) the \textit{categorization} of certain “suspect cases” which require a heightened degree of judicial scrutiny before they can proceed to the jury;

(3) the \textit{screening} of cases, either at the pleadings stage, where the issue is removed from litigation entirely, or at the directed verdict state, where the case is removed from the jury’s “reasonableness” or risk-utility determination;

(4) the process of \textit{rulemaking}, where the court considers the precedential value of a decision and adjudicates the issue as a matter of law; and

(5) the \textit{balancing} of important social policies.\textsuperscript{285}

It is these five functions that distinguish judicial decision-making from jury factfinding.\textsuperscript{286} When a jury adjudicates the issues of duty and defect, it is exercising sensitive factfinding functions which may “distract[] the court from its more valuable function of identifying the specific policy considerations that should determine the outcome of the case.”\textsuperscript{287} Courts are more than able to exercise their lawmaking power by formulating no-duty rules where such rules are appropriate.

C. \textit{Application of the “No-Duty” Rule}

Courts have utilized the no-duty rule in cases involving automobile speed, failure to warn or inadequate warnings, alcohol-related injuries, and “how to” books. These cases illustrate the important policy considerations that underlie a court’s decision to screen certain issues from the jury.

1. Automobile “Speed” Cases.— In the celebrated case of

\textsuperscript{282} Id. at 529.
\textsuperscript{283} Id.
\textsuperscript{284} Id. at 530-32.
\textsuperscript{285} Id. at 531 (emphasis added).
\textsuperscript{286} Id. at 531-32.
\textsuperscript{287} Id.
Schemel v. General Motors Corp., \textsuperscript{288} the Seventh Circuit exercised its judicial functions by screening an important design issue from a jury's consideration. The issue in Schemel was whether an automobile manufacturer may be deemed negligent for designing its vehicles with the capabilities of attaining excessive speeds.\textsuperscript{289} The court balanced the underlying policies and answered this question in the negative.\textsuperscript{290}

The plaintiff in Schemel was a passenger in an automobile which had been struck by another automobile traveling at 115 miles per hour.\textsuperscript{291} The plaintiff settled his claim against the driver of the speeding vehicle, and commenced an action against the manufacturer, alleging that it had acted negligently in designing the automobile with the capabilities of being driven at such dangerous speeds.\textsuperscript{292} Specifically, the plaintiff alleged that under risk-utility, the foreseeability of such a speed-related accident, when multiplied by the attendant risks to the public and to innocent bystanders, clearly outweighed any potential utility in the design.\textsuperscript{293} In fact, the plaintiff claimed that designing an automobile that could be driven at such speeds served no useful purpose whatsoever.\textsuperscript{294} The defendant moved to dismiss on the ground that plaintiff failed to state a claim upon which relief may be granted.\textsuperscript{295}

The district court granted defendant's motion to dismiss.\textsuperscript{296} On appeal, however, plaintiff asserted that the defendant, as manufacturer of the automobile, owed a general duty of reasonable care, the breach of which must be determined not by the court, but by the jury.\textsuperscript{297} Plaintiff contended that "once the Court determines that a relationship exists between the parties giving rise to some duty, the determination of the nature and extent of that duty becomes a question of fact for the jury."\textsuperscript{298} The Seventh Circuit disagreed, and held that a manufacturer is under no duty to foresee and guard against

\textsuperscript{288} 384 F.2d 802 (7th Cir. 1967), \textit{cert. denied}, 390 U.S. 945 (1968). For a detailed discussion of Schemel, see Note, supra note 271, at 407-20.
\textsuperscript{289} 384 F.2d at 804-05.
\textsuperscript{290} \textit{Id.}
\textsuperscript{291} \textit{Id.} at 803.
\textsuperscript{292} \textit{Id.} at 804.
\textsuperscript{293} \textit{Id.}
\textsuperscript{294} \textit{Id.}
\textsuperscript{295} \textit{Id.}
\textsuperscript{296} \textit{Id.}
\textsuperscript{297} \textit{Id.}
\textsuperscript{298} \textit{Id.}
the wanton and gross misuse of its product by users. The court reasoned that to impose such a duty in this case would be the equivalent of designating the manufacturer an insurer of its automobiles.

Schemel was screened from the jury for two principal reasons. First, the manufacturer is simply not the proper cost-bearer for this accident. The driver in Schemel consciously, and with a reckless disregard for the safety of others, drove his automobile at a speed of 115 miles per hour. To allow this case to proceed to the jury on risk-utility would have been to allow the jury to impose upon manufacturers a duty to design accident-proof products. One can, indeed, detect a striking parallel between the conduct of the driver in Schemel and that of the employers in Soler and Brown. The driver in Schemel grossly misused a vehicle which had the capabilities of being so misused. The Schemel court recognized, however, that the costs of such a gross misuse should be borne not by the manufacturer, but by the driver, whose conduct transformed what would have been a reasonably safe vehicle into an instrument of destruction. The conduct of the employers in Soler and Brown was even more egregious than that of the driver in Schemel. The employers in those cases consciously and materially altered the products, rendering them in a condition that was qualitatively different, and significantly more dangerous, than the condition in which they were originally designed and sold. It is the actual “alteration” of the product which even further removes the manufacturer from responsibility for accidents causally related to the alteration itself.

299. Id. at 804-05.
300. Id. at 805. Interestingly, much of the reasoning in Schemel involved the court’s application of the “patent danger” and “intended purpose” rules. See Note, supra note 271, at 415-17. These rules have been subsequently discarded by a majority of courts. See id. at 417-19. The Seventh Circuit itself rejected the intended purpose rule and overruled that part of the Schemel opinion that relied on the rule. Id. at 417-18; see Huff v. White Motor Corp., 565 F.2d 104 (7th Cir. 1977). On this basis, it has been asserted that the precedential value of Schemel has diminished. See Note, supra note 271, at 418-19. This assertion is incorrect, however, as the Schemel court utilized these concepts, which existed at the time, merely to justify a decision grounded upon sound public policy considerations. See infra text accompanying notes 302-05.
301. Schemel, 384 F.2d at 805.
302. Id.
303. Id. at 804-05. The court stated that “[t]he automobile in question was not dangerous for the use for which it was manufactured by its lawful use in the manner and for the purpose for which it was supplied.” Id. (emphasis added). Thus, the manufacturer had no duty, by way of design or warning, where an accident is caused by “a wantonly negligent driver.” Id. at 805.
Second, a jury is not the proper decision-making body to establish design criteria relative to an automobile’s speed capabilities. With millions of automobiles possessing similar speed capabilities already on the market, a jury’s retroactive imposition of a duty to design these vehicles differently would be frightening. The court, therefore, deferred on the issue to the appropriate legislative bodies, which can properly establish affirmative standards for the design of speed capabilities of automobiles.

The fundamental rationale of the Schemel opinion has survived the demise of the patent danger and intended purpose rules. To date, there is no published opinion in which a duty was imposed upon an automobile manufacturer to design its automobiles with limited speed capabilities. In Slatkavitz v. General Motors Corp., the court utilized the Schemel rationale and held that “it divorces social policy from practical reality to measure a manufacturer’s reasonableness by speed capacity alone.”

2. Warnings Cases.— The Restatement (Second) of Torts section 402A sets forth the general rule that “[i]n order to prevent the product from being unreasonably dangerous, the seller may be required to give directions or warning, on the container, as to its use.” In McKee v. Moore, the Oklahoma Supreme Court found that “[u]nder this principle, even if a product is faultlessly designed . . . it may be considered unreasonably unsafe or defective if it is placed in the hands of the ultimate consumer without adequate warnings of the dangers involved in its use.” The rule’s counterpart in negligence dictates that a manufacturer or seller may be liable when it “fails to exercise reasonable care to inform [potential users] of [the product’s] dangerous condition or of the facts which make it likely to be dangerous.” As in design defect cases, the question of whether a manufacturer breached its duty to warn in the context of a particular case is typically a question for the jury.

304. Id.
308. RESTATEMENT (SECOND) OF TORTS § 402A comment j (1965).
309. 648 P.2d 21 (Okla. 1982).
310. Id. at 23.
311. RESTATEMENT (SECOND) OF TORTS § 388(c) (1965).
In fairness to manufacturers, however, courts have prevented the imposition of open-ended liability by recognizing two no-duty exceptions to the general rule. The first exception provides that a manufacturer has no duty to warn of open or obvious dangers in the product.\textsuperscript{318} Despite the demise of the "patent danger" rule in design defect cases,\textsuperscript{314} courts continue to recognize that a manufacturer should not owe a duty to warn of dangers that are readily ascertainable upon ordinary inspection.\textsuperscript{318} Similarly, the second exception provides that a manufacturer does not owe a duty to warn of dangers already known to the product's user.\textsuperscript{318} Thus, "[t]here is no duty to warn of dangers actually known to the user of a product, regardless of whether the duty rests in negligence . . . or on strict liability."\textsuperscript{317}

3. Alcohol Manufacturing Cases.—A similar no-duty approach was utilized in \textit{Pemberton v. American Distilled Spirits Co.}\textsuperscript{318} \textit{Pemberton} involved a wrongful death action brought against the manufacturer and sellers of "Everclear Grain Alcohol," seeking damages for the decedent's alcohol overdose.\textsuperscript{319} The court screened from the jury the question of whether alcohol may be unreasonably dangerous under the risk-utility test.\textsuperscript{320} The court recognized that significant policy considerations transcended the facts of the case. The court reasoned, for example, that "[a]lcohol has been present and used in society during all recorded history and its characteristics and qualities have been fully explored and developed and are a part of the body of common knowledge."\textsuperscript{321} Thus, in light of the nature, effect and popularity of alcohol, manufacturers and sellers are en-
tled to rely upon the common sense and good judgment of the user.322

4. "How To" Books.— In *Lewin v. McCreight*,323 the question before the court was whether the publisher of a "How To" book would be held liable to an injured plaintiff for failing to warn of "defective ideas" in the book.324 The plaintiff sustained injuries while mixing a mordant in accordance with the instructions in a book entitled "The Complete Metalsmith". Plaintiff sued, inter alia, the publisher of the book under a negligent failure to warn theory.325 The publisher had printed, bound and sold the book, which was written by a third party author.326

Rather than allowing the case to proceed to the jury on risk-utility, the court focused on the threshold question of whether the publisher owed a duty to ensure the scientific accuracy of books written by experts.327 The court carefully evaluated the important policy issues, and answered this question in the negative, stating that "given the tremendous burden such a duty would place upon . . . publishers, the weighty societal interest in free access to ideas, and potentially unlimited liability, it would be unwise to impose a duty to warn of 'defective ideas' upon publishers of information supplied by third party authors."328 Thus, the court exercised its lawmaking functions, and created a "no duty" exception to the general duty to warn.329

These decisions illustrate the ability of the trial judge to carefully screen cases from the jury's "defect" analysis where the manufacturer should not owe a duty as a matter of law. By utilizing no-duty rules when appropriate, courts can make products liability law by creating exceptions to the manufacturers' "open-ended" duty requirement. This can reverse the trend of negative standard-setting that is inherent in the unrestrained submission of the "defect" issue.


324. *Id.* at 283.
325. *Id.*
326. *Id.*
327. *Id.* at 283-84. The court stated that to recover on a failure to warn theory, the plaintiff must first prove that the defendant owed him a duty, which is "a question of law to be determined by the court." *Id.* at 283.
328. *Id.* at 284.
329. *Id.*
to juries.\textsuperscript{330} It also provides manufacturers with the necessary guidance when making a design choice.

The subsequent alteration scenario literally "cries out" for a no-duty rule.\textsuperscript{331} It is contrary to the policies underlying products liability law to impose liability upon manufacturers for accidents arising out of material alterations in their products.\textsuperscript{332} Courts should, therefore, actively adjudicate the "duty" concept and absolve the manufacturer of liability in cases where (1) its product was materially altered by the subsequent act of a third-party and (2) the accident would not have occurred but-for the material alteration.

It is important to note, however, that the adjudication of the "duty" concept (Step One) cannot, in and of itself, solve the material alteration dilemma. Courts must take the next step and abandon the use of a foreseeability standard. The departure from foreseeability principles is essential to the formulation of a rational no-duty rule in alteration cases. It is this "duty to foresee" alone that links the manufacturer, by virtue of its original design choice, to an accident arising out of its product in a materially altered condition.\textsuperscript{333} As illustrated in the following section of this Article, the adjudication of the "duty" concept by courts is virtually rendered a nullity if that adjudication is based on a foreseeability standard.

VI. ADJUDICATING THE MANUFACTURER'S DUTY UNDER A FORESEEABILITY STANDARD: THE "DUTY-FORESEEABILITY" APPROACH

Some courts and legislatures have declined to adopt the defect-
proximate cause approach, recognizing the need to adjudicate, as a matter of law, the manufacturer's duty with respect to product alteration.\(^3\) Unfortunately, these jurisdictions have failed to take the necessary Step Two and depart from using a foreseeability standard in adjudicating that duty.\(^3\) As a result, only certain cases are screened from the jury under the rationale that a manufacturer has a duty to foresee some types of alterations but not others.\(^3\) This "duty-foreseeability" approach is, therefore, only a \textit{limited} duty rule, the limitations being dependent upon which types of alterations the court deems "unforeseeable."

\(^3\) See, e.g., sources cited \textit{supra} note 44.\(^3\) For example, in Merriweather v. E.W. Bliss Co., 636 F.2d 42 (3d Cir. 1980), the plaintiff was seriously injured when the jaws of a 45-ton press he was operating descended on his hands. \textit{Id.} at 43. As originally designed and sold, the press lacked point-of-operation guards, but was operated by means of a mechanical foot treadle. \textit{Id.} Plaintiff's employer subsequently removed the mechanical foot treadle and replaced it with an electrically operated control. As altered, the press could be activated merely by simultaneously pressing two palm buttons or by pressing an electric foot switch. \textit{Id.} Plaintiff was injured while attempting to remove some fabric from the bottom die of the press when his foot inadvertently touched the electric foot switch, causing the press to descend on his hands. \textit{Id.}

In a strict products liability action against the manufacturer, the district court judge declined to instruct the jury that the manufacturer had a duty to foresee material alterations. \textit{Id.} The jury returned a defense verdict and the Third Circuit reversed and remanded, holding that the jury charge was inconsistent with Pennsylvania law under the \textit{Restatement (Second) of Torts} § 402A. \textit{Id.} at 43-45. In utilizing the duty-foreseeability approach, the court reasoned that "the notion of reasonable foreseeability has been incorporated into the concept of substantial change . . . ." \textit{Id.} at 45. Thus, "[w]e test . . . is whether the manufacturer could have reasonably expected or foreseen such an alteration; such determination is for the fact-finder unless the inferences are so clear that a court can say as a matter of law that a reasonable manufacturer could not have foreseen the change." \textit{Id.} (quoting D'Antona v. Hampton Grinding Wheel Co., 225 Pa. Super. 120, 125, 310 A.2d 307, 310 (1973)). The court concluded that on the record presented, the issue of foreseeability was properly a jury question. \textit{Id.} at 46; see also Eck v. Powermatic Houdaille, 1986-7 Prod. Liab. Rep. (CCH) \# 11,440 (Pa. Super. Ct. June 1, 1987).

The court's reasoning was incorrect, however, because a "reasonable manufacturer" test is clearly inconsistent with § 402A, which shifts the focus in a strict products liability action from culpable "conduct" to culpable "product." \textit{See supra} note 8 and accompanying text. In fact, the manufacturers in \textit{Merriweather} and \textit{Eck} made this very argument, but fell victim to the Pennsylvania Supreme Court's notion of the manufacturer as indefinite guarantor of its products. \textit{See Merriweather,} 636 F.2d at 46; \textit{Eck,} 1986-7 Prod. Liab. Rep. (CCH) \# 11,440. This willingness to impose absolute liability on manufacturers is underscored by a recent Third Circuit decision which, applying Pennsylvania law, actually allowed an alcohol defect case to proceed to the jury. \textit{See} Hon v. Stroh Brewery Co., 835 F.2d 510 (3d Cir. 1987).

\(^3\) Compare Merriweather v. E.W. Bliss Co., 636 F.2d 42, discussed \textit{supra} note 335, with Rooney v. Federal Press Co., 751 F.2d 140, 143 (3d Cir. 1984) (holding that employer's material alterations were unforeseeable as a matter of law); \textit{see also infra} notes 347-93 and accompanying text (discussing two inconsistent Minnesota Supreme Court decisions decided under a foreseeability standard).
The Connecticut,\(^{337}\) South Dakota,\(^{338}\) and Tennessee\(^{339}\) legislatures have enacted this "duty-foreseeability" approach. The Connecticut statute, for example, provides that:

(a) A product seller shall not be liable for harm that would not have occurred \textit{but for} the fact that his product was altered or modified by a third party unless: . . . (3) \textit{The alteration or modification was the result of conduct that reasonably should have been anticipated by the product seller}.\(^{340}\)

The South Dakota statute similarly provides:

No manufacturer, assembler or seller of a product may be held liable for damages for personal injury, death or property damage sustained by reason of the doctrine of strict liability in tort based on a defect in a product, or failure to warn or protect against a danger or hazard in the use or misuse of such product, where a proximate cause of the injury, death or damage was an alteration or modification of such product made under \textit{all} of the following circumstances:

(1) The alteration or modification was made subsequent to the manufacture, assembly or sale of the product;

(2) The alteration or modification altered or modified the purpose, use, function, design or manner of use of the product from that originally designed, tested or intended by the manufacturer, assembler or seller; and

(3) \textit{It was not foreseeable by the manufacturer assembler or seller of the product that the alteration or modification would be made, and, if made, that it would render the product unsafe}.\(^{341}\)

\(^{337}\) CONN. GEN. STAT. ANN. § 52-572h-r (West Supp. 1988).


\(^{339}\) TENN. CODE ANN. § 29-28-101 to -108 (1980). The "Tennessee Products Liability Act of 1978" provides that "[i]f a product is not unreasonably dangerous at the time it leaves the control of the manufacturer or seller but was made unreasonably dangerous by subsequent unforeseeable alteration, change, improper maintenance or abnormal use, the manufacturer or seller is not liable." \textit{Id.} § 29-28-108 (emphasis added). This statute appears to absolve manufacturers of liability only in cases where they sold a non-defective product which was made defective by a "subsequent unforeseeable alteration." It does not, however, account for the situation where a product may have been sold with a defect, yet the accident would not have occurred but for the "unforeseeable" alteration. Even the defect-proximate cause approach allows the manufacturer to be absolved of liability under such circumstances where the alteration supersedes the defect as the sole proximate cause of the accident.

\(^{340}\) CONN. GEN. STAT. ANN. § 52-572p(a) (West Supp. 1988) (emphasis added).

\(^{341}\) S.D. CODIFIED LAWS ANN. § 20-9-10 (1987) (emphasis added). This statute appears to have modified pre-existing South Dakota common law, which utilized the defect-proximate cause approach. See, e.g., Zacher v. Budd Co., 396 N.W.2d 122, 134-40 (S.D. 1986) (applying South Dakota common law since plaintiff's cause of action arose prior to the effective date of the statute).
Under these statutes, a court will absolve a manufacturer of a duty, as a matter of law, only where its product undergoes an unforeseeable material alteration that is causally related to the accident. The manufacturer would not be absolved of a duty, however, where the subsequent alteration was somehow “foreseeable.”

While this approach appears to allow courts to adjudicate the duty issue, it is, in reality, allowing only an adjudication of the foreseeability issue. If, for example, the court determines that the manufacturer should have foreseen the type of alteration that occurred, then the case will proceed to the jury on the issues of defect (in original design) and proximate cause. The court may, at its option, allow the foreseeability issue to proceed to the jury as well.

One should always bear in mind that “foreseeability” is a relative concept that is factually based. Courts are generally reluctant to adjudicate foreseeability as a matter of law, and will do so only where there is no room for a difference of opinion.

The duty-foreseeability approach is, therefore, merely a slight variant of the defect-proximate cause approach. It allows courts to impose upon manufacturers a duty to foresee subsequent material alterations in their products. The only difference between the two approaches is that courts utilizing the duty-foreseeability approach will take “first crack” at adjudicating the foreseeability issue before allowing it to proceed to the jury as a question of fact. In contrast, courts that adhere to the defect-proximate cause approach will almost always decline to adjudicate “foreseeability” as a matter of law. Thus, while courts utilizing this approach tend to resolve more alteration cases as a matter of law than their defect-proximate cause

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343. See supra note 335 (discussing Merriweather and Eck).
344. See supra note 335 (discussing Merriweather and Eck). In Bigbee v. Pacific Tel. & Tel. Co., 34 Cal. 3d 49, 665 P.2d 947, 192 Cal. Rptr. 857 (1983), the court actually went so far as to hold that a telephone company could be deemed negligent or strictly liable for constructing a telephone booth and placing it on a street corner, in light of the “foreseeability” that a speeding intoxicated driver would careen off the road and injure persons inside the booth. Id. at 58-59, 665 P.2d at 952, 192 Cal. Rptr. at 862. The Bigbee decision is a favorite among tort reform advocates, as it presents a prime illustration of the extremes to which some courts will go to designate the manufacturer as an insurer of its product.
345. In fact, one court has stated that the broadening of the material alteration defense by the elimination of foreseeability “is inconsistent with the concept of the manufacturer as the guarantor of his product . . . .” See Merriweather v. E.W. Bliss Co., 636 F.2d 42, 46 (3d Cir. 1980).
counterparts, this approach is similarly flawed because foreseeability should play no role in the adjudication of alteration cases. The use of a foreseeability standard in defining the manufacturer's duty in such cases is not only unfair, but produces unpredictable results.

A. An Illustration of the Approach

A comparison of two cases decided by the Minnesota Supreme Court illustrates the shortcomings of the duty-foreseeability approach.

1. Westerberg v. School District No. 792:347 The "Unforeseeable" Alteration.— The defendant in Westerberg manufactured a laundry extractor which was purchased for use in the laundry room of a high school.348 The extractor consisted of a rotating basket balanced on a weighted bottom.349 Its function was to extract water by centrifugal force from clothes placed in the basket.350 At top speed, the basket spun at a rate of 1,725 revolutions per minute.351

As originally designed and sold, the extractor had two separate safety features.352 The first safety feature consisted of an electrical interlock which prevented the operator from moving the starting lever into the "on" position (allowing the basket to spin) when the top cover of the machine was open.353 Once the cycle had begun, however, a second "mechanical" safety feature prevented the operator from lifting the cover while the basket was spinning.354 This mechanical feature consisted of a cable attached to a ball joint on the hinge of the cover and to a safety lever on the inside of the machine.355 This feature prevented the operator from opening the cover more than three-fourths of an inch to one inch, even after the power was cut off to the machine, until the basket had completely stopped spinning.356

The extractor was also sold with maintenance instructions, and it was the purchaser's responsibility to maintain the product in its

347. 276 Minn. 1, 148 N.W.2d 312 (1967).
348. Id. at 2-3, 148 N.W.2d at 313.
349. Id. at 3, 148 N.W.2d at 313.
350. Id.
351. Id.
352. Id.
353. Id. at 3, 148 N.W.2d at 313-14.
354. Id. at 3, 148 N.W.2d at 314.
355. Id. at 3-4, 148 N.W.2d at 314.
356. Id. at 4, 148 N.W.2d at 314.
condition as designed. One to two years after sale, however, a custodian of the school discovered that the ball joint connecting the safety lever cable to the cover had broken. This permitted the cover to be opened while the basket was spinning. The custodian proceeded to weld the ball joint, and subsequently installed a new one. Four years later, the new ball joint broke, resulting in serious injury to a student when he raised the cover of the extractor and caught his arm in the spinning basket.

The plaintiff's claim against the manufacturer was predicated upon theories of negligent design and negligent failure to warn. Specifically, plaintiff argued that given the foreseeability that the ball joint would be broken through improper maintenance by the school, the manufacturer had a duty to warn of the dangers that would be attendant to using the extractor without the ball joint safety feature. The jury found that while the extractor was not negligently designed, the manufacturer had breached its duty to warn of the dangers of the machine as altered. The manufacturer was denied a judgment notwithstanding the verdict, and appealed.

The Minnesota Supreme Court reversed, holding that the manufacturer should have been absolved of a duty to warn as a matter of law. The court reasoned that the extractor was properly designed with safety features, and that the school district was responsible for

357. Id. at 11, 148 N.W.2d at 318.
358. Id. at 4, 148 N.W.2d at 314.
359. Id.
360. Id.
361. Id. at 5, 148 N.W.2d at 314.
362. Id. at 5, 148 N.W.2d at 315.
363. Id. at 5-11, 148 N.W.2d at 315-18. Plaintiff's expert opined, inter alia, that the manufacturer should have warned of the dangers that would exist if its maintenance instructions were not followed. Id. at 6, 148 N.W.2d at 315. The court noted that "[w]hile we seriously doubt that this was a matter for expert opinion, even if it was, we think it goes too far." Id.

364. Id. at 5, 148 N.W.2d at 315.
365. Id. at 2, 148 N.W.2d at 313.
366. Id. at 11, 148 N.W.2d at 318. The court utilized the duty-foreseeability approach, and reasoned that the manufacturer's duty to warn in this case "rests on foreseeability." Id. at 9, 148 N.W.2d at 317. The court reasoned, however, that:

[i]f the chattel is safe when sold, a manufacturer is not required to anticipate or foresee that a user will alter its condition so as to make it dangerous, or that he will continue to use it after it becomes dangerous due to alteration in safety devices intended to protect the user from harm.

Id. at 10, 148 N.W.2d at 317. Thus, the court imposed a rational limitation on the intent to which foreseeability should apply.
maintaining them in that condition. The court further reasoned that the school district's improper maintenance of the ball joint safety feature, and its negligence in permitting the use of the extractor after the ball joint had broken, altered the extractor from its condition as designed and sold. The court concluded that the school district's alteration was not foreseeable to the manufacturer and hence, the manufacturer had no duty to warn of the unforeseeable risk that the product would be used without its safety feature.

While this decision is correct in its result, it is fatally flawed in its use of a foreseeability standard in evaluating the manufacturer's duty with respect to product alteration. The fact that the alteration was found to be unforeseeable was fortuitous. Under a foreseeability standard, the court could just as easily have found the school district's material alteration to be "foreseeable", thereby imposing a duty to design the extractor to be "alter-proof" and "accident-proof".

2. *Germann v. F.L. Smithe Machine Co.*: The "Foreseeable" Alteration.—The more recent *Germann* case presents a prime example of the dangers of using a "foreseeability" standard. Under facts strikingly similar to those of *Westerberg*, the Minnesota Supreme Court in *Germann* opted to impose upon the manufacturer a duty to warn of the dangers attendant to using the product in an altered condition.

The manufacturer in *Germann* designed a programmable hydraulic press with a "removable" safety bar. When properly attached to the press, the safety bar would protect the operator from coming in contact with the "pinch point" between the moving and stationary parts of the press. Because the safety bar was designed to be placed between the moving and stationary parts, it had to be removable so as to permit access to the press for maintenance and repair. There was no evidence that the safety bar was designed for

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367. Id. at 11, 148 N.W.2d at 318.
368. Id.
369. Id. The court stated that while "[i]t is difficult to know where to draw the line on a manufacturer's liability ... [w]e think this case lies outside the area where liability exists." Id. Thus, the court declined to adjudic peace the alteration question from a defect-proximate cause standpoint, and concluded that "[h]ere we are convinced there was no duty to warn of a use[alteration] that could not be foreseen by the manufacturer . . . ." Id.
370. 395 N.W.2d 922 (Minn. 1986) (en banc).
371. Id. at 925.
372. Id. at 923.
373. Id.
374. Id.
the purpose of being removed for any reason other than to effect servicing and maintenance of the press.

More than six years prior to the accident, the manufacturer sold the press, unassembled, to the plaintiff's employer.376 Included with the parts were instructions for assembly and maintenance.376 The employer properly assembled the press with the safety bar attached, and had temporarily removed it, for maintenance purposes, on only one or two occasions.377 There was undisputed evidence, however, that at some later point the safety bar had been permanently removed from the press by the employer, and was not in place at the time of the accident.376 As a result, the plaintiff sustained severe injuries while operating the press when his left leg became caught in the pinch point of the press.379

The plaintiff commenced a strict products liability action against the manufacturer of the press, alleging that the press was defective in design and that the manufacturer failed to adequately warn of the dangers of operating the press without the safety bar attached.380 In fact, plaintiff testified that he had never even seen the safety bar and did not learn of its existence until after the accident occurred.381 The manufacturer impleaded the employer in a third-party action for contribution and indemnity.382

The case went to trial, and the jury returned a verdict for the plaintiff.383 The jury found that while the press was not defective in design, it was defective because of the manufacturer's failure "to provide adequate warnings for the safe use of the product."384 The manufacturer unsuccessfully moved for a judgment notwithstanding the verdict and appealed,385 relying on the court's decision in Westerberg. The manufacturer asserted that it had no duty to warn of an unsafe condition attendant to the use of the press as altered when it

375. Id.
376. Id.
377. Id.
378. Id. at 923-24. In fact, the usual operator of the machine testified that the safety bar had not been attached for months prior to the date of the accident. Id. at 924 n.2.
379. Id. at 923.
380. Id. at 924.
381. Id. at 924 n.2.
382. Id. at 924.
383. Id. The jury entered judgment for plaintiff in the sum of $100,000, and apportioned liability equally between the defendant manufacturer and the third-party defendant employer. Id. at 924 n.3.
384. Id. at 924.
385. Id.
did, in fact, equip the press with a safety bar which, if properly maintained, would clearly have prevented the accident.\textsuperscript{386} Conversely, the plaintiff asserted that because the press was designed with a removable safety feature, the risk that a third-party might permanently remove it was foreseeable to the manufacturer.\textsuperscript{387} Thus, the manufacturer should "have warned operators, by the attachment of a warning decal or by other appropriate means, that for the safe operation of the machine, the safety bar should be properly installed and functional."\textsuperscript{388}

The Minnesota Supreme Court, utilizing the duty-foreseeability approach, stated that the threshold question of whether a duty to warn should exist in this case "is a question of law for the court — not one for jury resolution."\textsuperscript{389} The court resolved this question by use of a foreseeability standard. On the basis of the facts presented, the court upheld the jury's verdict, reasoning that because the safety bar had to be attached by the purchaser, and was designed to be removed for maintenance purposes, the employer's failure to reattach it was foreseeable.\textsuperscript{390} The court declined to follow Westerberg, and concluded that the foreseeability of the employer's conduct gave rise to a duty, on the part of the manufacturer, to warn operators of the risks of using the press with the bar unattached.\textsuperscript{391}

The court distinguished its decision in Westerberg solely on foreseeability grounds. Its comparison of the facts of Germann to those of Westerberg strike at the core of the duty-foreseeability approach. The court stated, for example, that:

In some respects the facts in Westerberg are indistinguishable from those in the case at bar. Each case involves injury arising from the use of a machine approximately six years old. Each machine was heavily used. Both accidents occurred as a result of faulty maintenance by the purchaser-owner-employer which caused designed safety mechanisms in each machine to fail. However, in our opinion, a distinguishing fact of significance exists. The safety lid device... in Westerberg was installed by the manufacturer in such a
manner [that] it was only remotely foreseeable that the safety feature would be altered . . . . To the contrary, in the case at bar, the safety bar was designed to be attached by the purchaser ... [and] was detachable as the result of the machine's design. In fact, it had to be detached in order that the press might be serviced. Knowing that, [the manufacturer] could have reasonably foreseen that on a machine designed for extended and heavy use, it was almost inevitable that for maintenance purposes the safety bar would be removed, and that there was a risk it might not be properly reattached.392

The court imposed a duty in *Germann* because the employer's permanent removal of the safety feature was "more foreseeable" than the alteration in *Westerberg*. In fact, the *Germann* court found the employer's conduct so foreseeable that it did not even characterize it as an alteration.393

The decisions in *Westerberg* and *Germann* illustrate both the shortcomings and the unpredictability of the "duty-foreseeability" approach. In both cases, it is clear that the employer's conduct altered the products from their condition as designed and sold. It is also clear that the accidents would not have occurred had the products not been altered. While the Minnesota Supreme Court set out to adjudicate the manufacturer's duty (Step One), it failed to depart from a foreseeability standard (Step Two). As a result, these cases were decided on the basis of the degree of the alteration's foreseeability, when they should have been decided under the rationale that a manufacturer should owe no duty to foresee subsequent alterations.

B. The *Germann* Characterization Question: Is the Permanent Removal of a Safety Feature Designed to be Temporarily Removed a "Misuse" or an "Alteration"?

The *Germann* decision is of particular significance because it illustrates another serious problem with the duty-foreseeability approach. Courts utilizing a foreseeability standard have lost sight of the "duty" distinctions between product "alteration" and product "misuse."394 These courts, while recognizing at least the conceptual distinctions, incorrectly apply foreseeability to both types of con-

392. *Id.*
393. See infra notes 394-405 and accompanying text.
394. See supra notes 54-58, 224-52 and accompanying text (discussing cases that demonstrate the foreseeability approach).
duct. It is particularly troubling that the use of foreseeability has impaired the ability of some courts to even recognize the conceptual distinctions. This is precisely what occurred in Germann. The Germann court failed to recognize that the employer's permanent removal of the safety bar altered the product from its condition as designed. Instead, the court focused on the foreseeability of the safety bar's permanent removal and mischaracterized it as a “misuse.” The potential for such mischaracterization is inherent in the use of the duty-foreseeability approach, and warrants careful analysis.

Germann was not a typical removability case. Most removability cases involve safety features that can physically be removed, yet were not designed to be removed. These types of cases clearly involve alterations, where the issue becomes one of degree; that is, whether or not the removal of the safety feature that was easy to remove should constitute a “material” alteration. In contrast, Germann involved a safety feature that was not merely easy to remove, but was purposefully designed to be removed, albeit temporarily, to effectuate maintenance and servicing of the machine. The court was, therefore, confronted with the “characterization” question of whether the employer’s permanent removal of the safety bar, which was designed for the purpose of being temporarily removed, should be deemed an “alteration” or a “misuse.” What clouded the court’s resolution of this question was the fact that the “foreseeability” element in the case was greater than in the typical “removabil-

395. See supra notes 50-53, 216-242 and accompanying text (discussing cases that incorrectly apply the foreseeability standard to both product alteration and product misuse).


397. 395 N.W.2d at 925.

398. See, e.g., Augenstine v. Dico Co., 135 Ill. App. 3d 273, 481 N.E.2d 1225 (1985) (plaintiff's employer replaced a non-conductive remote control on a boom-type crane with a conductive remote control, causing plaintiff to be electrocuted); DeArmond v. Hoover Ball & Bearing, 86 Ill. App. 3d 1066, 408 N.E.2d 771 (1980) (plaintiff's employer removed a safety guard with interlocks on a bottle molding and trimming machine, which was designed to remain in place to prevent the operator's hands from entering its "point of operation"); Lovelace v. Ametek, Inc., 111 A.D.2d 953, 490 N.Y.S.2d 49 (3d Dep't 1985) (third party removed safety devices that were designed to prevent the operator from coming into contact with the machine during operation), cert. denied, 476 U.S. 1170 (1986); cf. Lopez v. Precision Papers, Inc., 67 N.Y.2d 871, 492 N.E.2d 1214, 501 N.Y.S.2d 798 (1986) (finding that the product was purposefully designed to permit removal of the guard for the product's operation), discussed infra notes 573-609 and accompanying text.

399. See cases cited supra note 398.

400. 395 N.W.2d at 923, 925.
ity" case. It may be moderately foreseeable that a third party may consciously remove a safety feature that is somehow "removable," yet was not designed to be removed. It is far more foreseeable, however, that once a third party properly removes a temporarily removable safety feature to effectuate maintenance, the safety feature may not be reattached as intended for the machine's safe operation.

By utilizing the duty-foreseeability approach, the Germain court imposed upon the manufacturer a duty to warn press operators, based on the foreseeability that the safety bar would be removed. The court went further, however, and actually mischaracterized the employer's conduct as a "misuse." Interestingly, the court never even discussed the characterization question because it decided the case solely on the basis of foreseeability. The characterization of the employer's conduct as a "misuse" served only as a vehicle for achieving the desired result.

The court's reasoning is characteristic of the duty-foreseeability approach. By using foreseeability, the court isolated one aspect of a multi-faceted design in a vacuum, focusing only upon the removability aspect of the safety bar's design. On that basis alone, it impliedly concluded that if the bar was designed to be removed to effectuate maintenance, and was so removed, the failure of the employer to reattach it did not effectuate a change in the product as designed. The product cannot, therefore, be said to have been altered from its original condition. This reasoning completely disregarded a crucial aspect of the design — that the press was to be operated only with the safety bar attached.

401. Even those courts that utilize a foreseeability standard in "removability" cases have required that plaintiff prove that the removal of the safety features was more than "moderately" foreseeable, but was "reasonably foreseeable." See cases cited supra note 398. These courts have granted summary judgments or directed verdicts in favor of the manufacturer where the foreseeability of removal was too remote as a matter of law. See cases cited supra note 398.

402. See 395 N.W.2d at 925.

403. Id.

404. Id. The court stated that the employer's permanent removal of the safety bar constituted a "misuse [that] was foreseeable; it was not remote; and the danger of injury to a user because of the misuse was likewise foreseeable." Id.

405. See id.

406. Id. at 923. The record indicated that "[a]s part of the assembly, a safety bar needed to be attached to the machine . . . [but] it had to be removed in order to permit access to the machine for maintenance and repair." Id. (emphasis added). The record was devoid of evidence that the press was purposefully designed to permit removal of the safety bar during its operation. Indeed, plaintiff had to proceed on a limited theory that the manufacturer in-
It is significant that the court itself acknowledged that the press was not defective in design, despite the temporary removability of the safety bar and the foreseeability that it may be permanently removed.\textsuperscript{407} Indeed, the court stated “[t]he manufacturer properly designed an industrial hydraulic press by equipping it with safety devices. Had those devices as designed been properly attached to the hydraulic press, an operator of the machine would not have sustained an injury.”\textsuperscript{408}

The court further acknowledged that the permanent removal of the safety bar exposed the operator to an “increased danger of injury of the type the safety bar had been designed to prevent.”\textsuperscript{409} Thus, one becomes hard-pressed to ascertain why the court concluded that the permanent removal of the bar did not alter it from its condition as designed. If a product is designed to be operated with a safety feature, then the fact that the feature is “temporarily” removable for an unrelated purpose does not render its permanent removal any less an alteration than the removal of a so-called “permanent” feature. In both instances, an integral aspect of the product’s design is that the product is to be operated only with the safety feature attached. There exists no qualitative difference between the removal of a “permanent” guard and the permanent removal of a temporarily removable guard. Both should be characterized as alterations. The only difference may lie in the degree, or “materiality,” of the alteration.

The permanent removal of the safety bar in \textit{Germann} materially altered the press from its condition as designed. Even under \textit{Soler} standards, the employer’s conduct effectuated “not only a material change in the design or function of the product, but also affect[ed] the risk of danger in its use.”\textsuperscript{410} Furthermore, the plaintiff was injured while operating the press and not while servicing it.\textsuperscript{411} The accented removal of the bar during maintenance, and should have foreseen its permanent removal during operation. \textit{Id.} at 924.

\textsuperscript{407} \textit{Id.} at 923. This finding was also made by the jury at the conclusion of the trial. \textit{Id.} at 924.

\textsuperscript{408} \textit{Id.} at 923 (emphasis added).

\textsuperscript{409} \textit{Id.} at 925 (emphasis added).

\textsuperscript{410} \textit{Soler v. Castmaster, Div. of H.P.M. Corp.,} 98 N.J. 137, 148, 484 A.2d 1225, 1230-31 (1984), discussed \textit{supra} note 104 and accompanying text.

\textsuperscript{411} If the accident had occurred while plaintiff was performing \textit{maintenance} of the press, rather than operating it, the manufacturer would have been hard-pressed, under a “foreseeability” standard, to assert an alteration defense. See \textit{Steinmetz v. Bradbury Co.,} 618 F.2d 21, 22-24 (8th Cir. 1980). This results from the fact that the bar, which was designed to be removed during maintenance, would have been removed as \textit{intended} by its design even if the employer had properly maintained it in place during operation. Hence, the employer’s perman...
cident would not have occurred had the press remained in its condition as designed.\footnote{412}

It is also important to note that like the press in \textit{Westerberg}, the press in \textit{Germann} was sold unassembled, with adequate instructions for its assembly.\footnote{413} The purchaser was therefore delegated the responsibility of assembling the product in conformity with its design.\footnote{414} The safety bar, while “removable,” was a component of the press, and the employer had a duty to attach it during assembly.\footnote{415} The court acknowledged that neither the “removability” of the safety bar, nor the unassembled condition of the press as sold, rendered the product defective in design.\footnote{416} Given the employer’s duty to properly assemble the press, its conscious failure to attach the bar during initial assembly would clearly have been deemed an alteration. This is because the press was designed with a safety feature to be attached and maintained during its operation. The absence of the bar would alter the design of the press and profoundly effect its safe operation. If the employer’s initial failure to attach the bar would constitute an alteration, why then should a different conclusion be reached where the employer initially attaches it, yet later decides to permanently remove it knowing full well that it is crucial to the safe operation of the press? Such a distinction would defy logic.

The reasoning of \textit{Germann} illustrates the inability of courts

\textit{nent} removal (alteration) would not be causally related to the accident. \textit{See, e.g.}, Briney \textit{v. Sears, Roebuck & Co.}, 782 F.2d 585 (6th Cir. 1986); Lopez \textit{v. Precision Papers, Inc}, 67 N.Y.2d 871, 492 N.E.2d 1214, 501 N.Y.S.2d 798 (1986), discussed \textit{infra} notes 573-609 and accompanying text. The court in \textit{Briney} held that since the manufacturer of a power saw designed its safety guard to be removable for the purpose of performing some cuts, then a user that removed it to perform an unusual cut (with which the guard interfered) cannot be said to have “altered” the saw. 782 F.2d at 588-90. Similarly, the \textit{Lopez} court found that since the forklift manufacturer designed its safety features to be removable for “operational” or “use” purposes, then its subsequent removal for that purpose cannot constitute an alteration. 67 N.Y.2d 871, 492 N.E.2d 1214, 501 N.Y.S.2d 798. In both \textit{Briney} and \textit{Lopez}, the manufacturers were found to have designed the safety features to be removed during \textit{operation} of the products, and the plaintiffs were injured while operating them. The facts of \textit{Germann}, however, do not fall within the scope of \textit{Briney} and \textit{Lopez} because (1) the manufacturer designed its safety bar for removal only during \textit{maintenance}, (2) the employer permanently removed it and allowed the operation of the press without the bar (which was outside the scope of the manufacturer’s design), and (3) the plaintiff was injured as a result of operating the press without the bar. For a comparison of \textit{Lopez} and \textit{Germann}, see \textit{infra} notes of 606-09 and accompanying text.

\footnote{412}{See \textit{supra} note 398 and accompanying text.}

\footnote{413}{395 N.W.2d 922, 923 (Minn. 1986) (en banc).}

\footnote{414}{Id.}

\footnote{415}{Id.}

\footnote{416}{See \textit{supra} notes 407-08 and accompanying text.}
utilizing the duty-foreseeability approach not only to recognize the qualitative “duty” distinctions between product misuse and product alteration, but to even recognize the conceptual distinctions between the two. The ease of disabling a safety feature, and the foreseeability of it occurring, are not relevant in ascertaining whether a product has been altered. These factors may be relevant only in determining whether the alteration was “material.” The use of a foreseeability standard makes it all too easy for duty-foreseeability courts to confuse the question of “materiality” with the initial question of whether the product was “altered” from its condition as designed and sold.

C. The Role of Warnings Under the “Duty-Foreseeability” Approach

The preceding discussions have shown that in the alteration context, plaintiffs will often assert alternative theories of design defect and failure to warn. The plaintiff will contend that even if the product is not defective in design under a “foreseeability” standard, the ease of altering the product and the foreseeability of the alteration should give rise to a duty to warn of the risks attendant to the product as materially altered. Courts should be wary of such claims. The Restatement (Second) of Torts section 402A recognizes that the imposition of strict products liability should be limited to cases where the product “is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.”

This limitation applies to design and warning cases alike.

It is fundamental that a manufacturer does not have the duty to warn with respect to a product that is not dangerous as designed and sold. In many alteration cases, the product is not dangerous as

417. See Restatement (Second) of Torts § 402A(1)(b) (1965).
originally designed and becomes dangerous only through the material alteration of a third party. While most courts impose a duty to warn with respect to risks attendant to foreseeable misuses of the product, this rule cannot be applied rationally in cases where the product is altered. For reasons previously discussed, an alteration differs qualitatively from a misuse. Foreseeability principles should not apply in alteration cases, regardless of the theory pronounced by the plaintiff. When the product as altered contained risks that did not inhere in the product as originally designed and sold, the proper approach is to hold that such risks are not within the ambit of a manufacturer's responsibility.

As illustrated by Germann, however, "duty-foreseeability" courts have improperly imposed upon manufacturers the duty to warn of the dangers of using a product in a materially altered form. In fact, even some courts and statutes that adopt a "no-duty" approach to alterations under a design defect theory, have adopted a "duty-foreseeability" approach with respect to a warning case. The courts appear to distinguish a warning case from a design case, reasoning that while "foreseeability" should not be used as a design criteria, it should be used as a standard giving rise to a duty to warn.

The case of Miller v. Anetsberger Bros. is illustrative. The plaintiff in Miller was injured when her finger became caught between the rollers of a pizza dough rolling machine. As manufactured and sold by the defendant, the machine contained three protective panels. These panels were designed to be removable in order to permit access to the rollers during cleaning. Each panel was designed with a safety interlock switch that would cause a break in the electrical current to the machine when the panel was removed. Thus, as originally designed, the machine's safety interlock pre-

420. See cases cited supra note 226.
421. See supra notes 224-52 and accompanying text (discussing the distinction between product alteration and product misuse).
422. See supra notes 370-93 and accompanying text (using Germann to illustrate the shortcomings of the foreseeability standard).
425. Id. at 1058, 508 N.Y.S.2d at 955.
426. Id.
427. Id.
428. Id.
vented the rollers from operating during the cleaning process.\textsuperscript{429}

Some time after the machine had left the manufacturer’s hands, the safety switch was disabled, probably by an employee of the purchaser.\textsuperscript{430} This was effectuated by depressing the pin and moving it laterally so that it was held in a depressed position.\textsuperscript{431} At the time of the incident, the plaintiff had been cleaning the rollers by reaching her hand through the front panel.\textsuperscript{432} The plaintiff then activated the machine, and her finger became caught between the moving rollers.\textsuperscript{433}

Plaintiff brought a strict products liability action against the manufacturer on theories of design defect and failure to warn.\textsuperscript{434} The trial judge instructed the jury that if it were to find that the employee intentionally disabled the safety switch, then it would have to find that the machine was not defectively designed.\textsuperscript{435} On the failure to warn theory, however, the judge instructed the jury that it may consider, in imposing a duty to warn “[1] the convenience afforded by cleaning the machine while it was operating, [2] [the] knowledge [that] the manufacturer may have had that users of the machine had cleaned it while it was operating, and [3] the ‘ease of disabling the safety switch.’”\textsuperscript{436} The court, therefore, invited the jury to impose upon the manufacturer the duty to warn because of the foreseeability that the safety feature would be intentionally disabled. The jury accepted this invitation and returned a verdict for the plaintiff.\textsuperscript{437} The jury found that while the machine was not defective in design, the manufacturer failed to warn users of the dangers of cleaning the machine while it was operating.\textsuperscript{438}

On appeal, the manufacturer asserted that it should be absolved of a duty under the Robinson rule because the employee’s deliberate disabling of the safety switch materially altered the machine.\textsuperscript{439} The court held, however, that:

\begin{itemize}
  \item \textsuperscript{429} Id.
  \item \textsuperscript{430} Id.
  \item \textsuperscript{431} Id.
  \item \textsuperscript{432} Id.
  \item \textsuperscript{433} Id.
  \item \textsuperscript{434} Id.
  \item \textsuperscript{435} Id.
  \item \textsuperscript{436} Id. (quoting the trial judge’s charge to the jury).
  \item \textsuperscript{437} Id.
  \item \textsuperscript{438} Id.
  \item \textsuperscript{439} Id. at 1058-59, 508 N.Y.S.2d at 955-56. For a comprehensive discussion of the Robinson rule, see infra notes 466-674 and accompanying text.
\end{itemize}
Although any modification that affects a safety device and is the proximate cause of the injury is a “material” alteration, here the machine had not been modified or altered. There was no change made by cutting a hole in the safety gate, by cutting bolts which held a safety guard over the feeding mechanism, or even by forcibly bending a safety pin out of shape. Here the safety interlock was simply avoided by a slight change in its position.

Moreover, unlike in Robinson, the issue involved is not whether the product was defectively designed, but whether the manufacturer had a duty to warn. Although a manufacturer is under no duty to design a product so that its safety devices may not be disabled, it may, under certain circumstances, be liable for failing to warn of the consequences of using the machine when the safety devices are inoperative.\textsuperscript{440}

Thus, given the ease of avoiding the safety interlock, the manufacturer’s knowledge that users were cleaning the machine while it was operating, and the convenience of doing so, the jury was entitled to find that the manufacturer had a duty to warn users “of dangers inherent in its use or foreseeable misuse.”\textsuperscript{441} The jury was also entitled to find that it breached this duty by failing to “attach appropriate warnings.”\textsuperscript{442}

The Miller court’s reasoning in imposing a duty to warn is flawed in two regards. First, like the court in Germann, the Miller court did not distinguish between product misuse and product alteration. The court mischaracterized the disabling of the interlock as a “misuse” when it was clearly an alteration.\textsuperscript{443} To reach this conclusion, the court distinguished the Robinson, Garcia, and Kinter cases,


\textsuperscript{441} Id. The court relied upon §§ 388 and 394 of the Restatement (Second) of Torts, see 124 A.D.2d at 1059, 508 N.Y.S.2d at 956, which sets forth the duty to warn under a negligence standard. Such a standard of that which the manufacturer “knew or should have known” is inappropriate in a strict products liability action in which the court focuses on the product itself, rather than the manufacturer’s conduct. See Gallub, supra note 224, at 1102-08.

\textsuperscript{442} 124 A.D.2d at 1059, 508 N.Y.S.2d at 956. It should be noted that Miller is not a “continuing duty to warn” case. Such cases involve a post-sale duty to warn, based upon knowledge acquired by the manufacturer subsequent to the design and sale of the product. See Cover v. Cohen, 61 N.Y.2d 261, 275, 461 N.E.2d 864, 871, 473 N.Y.S.2d 378, 385 (1984). The Miller court, on the other hand, imposed a “pre-sale” duty to “attach appropriate warnings,” based on the foreseeability that a safety device would be disabled.

\textsuperscript{443} See supra note 441 and accompanying text.
which involved "material" alterations wherein the safety features were difficult to obviate.\textsuperscript{444} The distinguishing characteristic in \textit{Miller} was the fact that the safety interlock was "simply avoided by a slight change in its position."\textsuperscript{445} In so doing, the court mistakenly equated the question of "materiality" with the threshold question of what constitutes an "alteration." The fact that the safety feature in \textit{Miller} was easier to disable than those in other cases does not justify a conclusion that the product was not altered. The critical fact in all of these cases is that the products were designed and sold with safety features that would have prevented the accident, and that third parties subsequently disabled or removed the safety features. The disabling of the safety features qualitatively \textit{altered} the products from their condition as designed. Thus, the disabling of the safety switch in \textit{Miller} was clearly an alteration. The \textit{Miller} court's mischaracterization is similar to that of the \textit{Germann} court, and is typical of the use of the "duty-foreseeability" approach under any theory. The ease by which safety features could be disabled should reflect only on the degree, or "materiality", of the alteration.\textsuperscript{446}

The second problem, and one which transcends the characterization question, is the court's imposition of a duty to warn. The court held that although the manufacturer does not have a duty to design a product that cannot be altered, it may have a duty to warn users of the dangers attendant to the product \textit{in its altered condition}.\textsuperscript{447} In so doing, the court created an illogical exception to the no-duty approach utilized by New York courts in adjudicating material alteration cases based on design defect.\textsuperscript{448} Under the court's reasoning, foreseeability principles which would be inapplicable in design cases should apply in warning cases where the product was altered.\textsuperscript{449}

The products liability statutes of Idaho and Oregon, as well as MUPLA,\textsuperscript{460} utilize a similar "duty-foreseeability" rule with respect

\textsuperscript{444} See supra text accompanying note 440.
\textsuperscript{445} See supra text accompanying note 440.
\textsuperscript{446} See supra notes 394-416 and accompanying text.
\textsuperscript{447} 124 A.D.2d at 1059, 508 N.Y.S.2d at 956 (emphasis added).
\textsuperscript{448} See infra notes 463-674 and accompanying text (discussing the New York Robinson approach).
\textsuperscript{449} See supra notes 434-36 and accompanying text. The court upheld the trial judge's jury instructions which would absolve the manufacturer of a duty with respect to the design defect claim, but would allow the jury to impose liability with respect to the failure to warn claim. 124 A.D.2d at 1059, 508 N.Y.S.2d at 956.
\textsuperscript{450} See supra note 423.
to warning cases. For example, the Oregon statute provides:

**Defenses.** It shall be a defense to a product liability civil action that an alteration or modification of a product occurred under the following circumstances:

1. The alteration or modification was made without the consent of or was made not in accordance with the instructions or specifications of the manufacturer, distributor, seller or lessor;
2. The alteration or modification was a substantial contributing factor to the personal injury, death or property damage; and
3. If the alteration or modification was reasonably foreseeable, the manufacturer, distributor, seller or lessor gave adequate warning.\(^{461}\)

By its terms, the Oregon statute precludes the use of foreseeability principles in design cases, yet allows their use in warning cases.\(^{452}\)

Like the conclusion of the *Miller* court, the statute imposes upon manufacturers a duty to warn with respect to "reasonably foresee-
The Oregon approach is not the proper approach in material alteration cases based on a failure to warn, or inadequate warning theory. A manufacturer should not have a duty to foresee the myriad of ways that a third party may consciously and materially alter its product. This holds true regardless of whether the plaintiff's action sounds in design defect or failure to warn.

In the design defect context, the imposition of a duty to foresee material alterations would designate the manufacturer as an insurer of its products. This is evident when analyzing such cases as Soler and Brown, which require manufacturers to design their products to be either (1) alter-proof or (2) accident-proof by providing back-up safety features that would ensure the product’s safety in any altered condition. The duty imposed by the Miller court and by the Oregon state legislature is similar to the duty imposed in Soler and Brown. The warning, in effect, becomes the written equivalent of a back-up safety feature.

The use of foreseeability principles in warning cases would produce the same irrational results as it produces in design cases. It would also undermine the important rationales for refusing to apply such principles in design cases. Juries would be invited to evaluate the safety of products as originally designed by evaluating their risks as materially altered. The manufacturer must ultimately design its products with sufficient warnings to ensure their safety not only as designed, but as materially altered as well. This clearly contravenes the policies underlying products liability law.

In Hansen v. Honda Motor Co. another New York appellate court recognized this and refused to apply foreseeability principles. The plaintiff in Hansen was severely injured when he fell from his motorcycle, which was manufactured by the defendant. The plaintiff alleged that defects in the rear wheel caused him to lose control of the motorcycle. It was undisputed, however, that subsequent to his purchase of the motorcycle, plaintiff customized it by removing the original rear wheel and replacing it with a wheel

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453. See supra notes 59-184 and accompanying text (examining the defect-proximate cause approach of Soler and Brown).
454. 104 A.D.2d 850, 480 N.Y.S.2d 244 (2d Dep't 1984).
455. Id. at 851, 480 N.Y.S.2d at 246.
456. Id. at 850, 480 N.Y.S.2d at 245.
457. Id.
manufactured by a different company for aesthetic reasons. Plaintiff commenced a strict products liability action alleging that the manufacturer had a duty to warn motorcycle purchasers of the risks attendant to its alteration. The court disagreed, and granted summary judgment in favor of the manufacturer. The court held that:

Although a manufacturer is under a duty to design and manufacture a product which is safe at the time of sale, it is not responsible for injuries caused by subsequent modifications by another however foreseeable such modifications may have been to the manufacturer. Thus, we perceive no duty on the part of the manufacturer . . . to have warned plaintiff purchaser of the dangers attendant upon alteration or modification of the motorcycle.

The reasoning of the Hansen court represents a fair and rational limitation on a manufacturer’s duty with regard to subsequent material alterations. The no-duty rule should apply regardless of whether the theory of liability is design defect or failure to warn.

VII. THE DEMISE OF FORESEEABILITY UNDER NEW YORK’S ROBINSON RULE: THE INTERPLAY OF STEPS TWO AND THREE

The adjudication of the “duty” concept (Step One) and the abandonment of “foreseeability” (Step Two) are essential to the formulation of a rational approach to product alterations. The defect-proximate cause approach fails to take either step and, in effect, allows juries to retroactively impose absolute liability on manufacturers. The duty-foreseeability approach takes the first step, and allows courts to adjudicate the manufacturer’s duty as a matter of law. It fails, however, to take the second step and depart from the use of “foreseeability” as the standard for adjudicating that duty in alteration cases. Cases like Germann and Miller illustrate that the

458. Id. at 850-51, 480 N.Y.S.2d at 245.
459. Id. at 850, 480 N.Y.S.2d at 245.
460. Id. at 851, 480 N.Y.S.2d at 245.
461. Id. at 851, 480 N.Y.S.2d at 246 (citation omitted) (emphasis added).
463. See supra notes 59-223 and accompanying text (discussing the defect-proximate cause approach and its ability to take the first step of the three-step approach).
464. See supra notes 334-461 and accompanying text (discussing the duty-foreseeability approach and its ability to take Step One of the three-step approach).
465. See supra notes 334-461 and accompanying text (discussing the duty-foreseeability approach and its failure to take Step Two of the three-step approach).
use of a foreseeability standard virtually renders the court's adjudication of the "duty" concept a nullity.

In the landmark case of *Robinson v. Reed-Prentice Division of Package Machine Co.*, the New York Court of Appeals recognized this difficulty and abolished the use of foreseeability in material alteration cases, reasoning that:

Principles of foreseeability . . . are inapposite where a third party affirmatively abuses a product by consciously bypassing built-in safety features. While it may be foreseeable that an employer will abuse a product to meet its own self-imposed production needs, responsibility for that willful choice may not fall on the manufacturer.

The *Robinson* court has been one of the few to recognize the qualitative distinctions between product "alteration" and product "misuse." It absolved the manufacturer of a duty to foresee the potential for material alterations when making a design choice. The court did not recognize, however, that absent a duty to foresee material alterations, a manufacturer cannot owe a duty with respect to any accident causally related to a material alteration. While the *Robinson* court took the first two steps, it did not take the third step and sever the legal relationship between the original design and the accident. This was inconsistent with the rationale the court used in abolishing foreseeability, and has also caused some confusion among lower courts as to whether *Robinson* was a "no-duty" rule or merely

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467. 49 N.Y.2d at 480, 403 N.E.2d at 443, 426 N.Y.S.2d at 721 (emphasis added).


469. *See infra* notes 506-20 and accompanying text.

470. *See infra* notes 506-20 and accompanying text.
a "modified" version of the "defect-proximate cause" approach. A careful analysis of the Robinson decision and its progeny will illustrate that even when a court declines to use foreseeability, the third step is essential to a rational approach in alteration cases.

A. The Robinson Decision Analyzed

The plaintiff in Robinson sustained severe injuries when his hand was caught between the molds of a plastic molding machine. The machine was designed to melt pelletized plastic in a heating chamber and to mold the liquified plastic into various shapes to be sold as products. Its mold area was comprised of two rectangular platens upon which the actual molds were attached. One of the platens remained stationary while the other moved horizontally back and forth, thereby closing and opening the mold. Thus, when the operator commenced the cycle, hydraulic pressure would cause the movable platen to meet the stationary platen, which created the mold. The liquified plastic would then be injected into the mold, and when the plastic was cured, the movable platen would open the mold. Once opened, the operator could manually remove the finished product.

As originally designed and sold, the machine was equipped with safety features that would prevent the operator from entering the mold area while the machine was operating. These features consisted of a safety gate mounted on rollers, with connecting interlocks. The safety gate consisted of a plexiglass window which completely covered the mold area while allowing the operator to monitor the molding process. The interlocks consisted of electrical circuits that connected the safety gate to electrical switches which activate the machine. When the gate was closed, the interlocks completed

471. See infra notes 523-70 and accompanying text.
473. Id.
474. Id.
475. Id.
476. Id.
477. Id.
478. Id.
479. Id. at 476, 403 N.E.2d at 441, 426 N.Y.S.2d at 718-19. According to the court, the safety features met the requirements of the State Industrial Code. Id. at 476, 426 N.Y.S.2d at 718.
480. Id. at 476, 403 N.E.2d at 441, 426 N.Y.S.2d at 718.
481. Id.
482. Id. at 477, 403 N.E.2d at 441, 426 N.Y.S.2d at 719.
an electrical circuit that allowed the machine to operate. The machine could not be operated when the gate was open because the interlocks would not be connected and, hence, the circuit would not be complete. Thus, only when the molding process was completed could the operator roll open the safety gate and reach into the mold area to remove the finished product.

The plaintiff’s employer had purchased the machine six and one-half years prior to the accident for the purpose of molding plastic beads directly onto a nylon cord. The cord was stored in spools and fed through the machine, where the beads were molded onto it. When each molding cycle was complete, the operator would open the safety gate, pull the beaded cord out of the mold and reset a new cord in the mold for the next cycle. The employer, however, wanted to speed up the production process by molding the beads on a continuous line. Since the machine, as designed, did not allow this, the employer cut a six inch by fourteen-inch hole in the plexiglass safety gate. This allowed access to the mold area without opening the gate and disconnecting the interlocks. As altered, the string of beads could be pulled through the opening in the gate without interrupting the production process and without breaking the continuous line of beads. Unfortunately, the operator’s arm could be pulled through as well. Thus, “[w]hile modification of the safety gate served [the employer’s] production needs, it also destroyed the practical utility of the safety features incorporated into the design of the machine for it permitted access into the molding area while the interlocking circuits were completed.” The plaintiff was injured in precisely this manner, and brought suit against the manufacturer under theories of negligence and strict products liability.

483. Id. at 477, 403 N.E.2d at 441-42, 426 N.Y.S.2d at 719.
484. Id. at 477, 403 N.E.2d at 442, 426 N.Y.S.2d at 719.
485. Id. at 476-77, 403 N.E.2d at 441, 426 N.Y.S.2d at 719.
486. Id. at 476-77, 403 N.E.2d at 441-42, 426 N.Y.S.2d at 718-19.
487. Id. at 477, 403 N.E.2d at 442, 426 N.Y.S.2d at 719.
488. Id.
489. Id.
490. Id.
491. Id.
492. Id.
493. Id.
494. Id.
495. Id.
496. Id. at 476, 403 N.E.2d at 441, 426 N.Y.S.2d at 718. The court noted that while
defendant, and the jury returned a verdict in favor of the plaintiff, apportioning forty percent of the liability to the manufacturer.

On appeal, the manufacturer asserted that it could not be responsible since plaintiff's injuries arose not out of its product as originally designed, but out of the employer's subsequent material alteration. Conversely, the plaintiff asserted that the foreseeability of the employer's alteration should give rise to a duty to design the machine to be alter-proof, or to be safe in its altered condition.

The New York Court of Appeals strongly disagreed, stating that such a foreseeability standard "would expand the scope of a manufacturer's duty beyond all reasonable bounds and would be tantamount to imposing absolute liability on manufacturers for all product-related injuries." The court ruled that foreseeability principles do not apply in cases where a third party materially alters a product to suit his own subjective needs. The court, therefore, undertook the first two steps of the three-step approach, and adjudicated the

the record was unclear, "plaintiff's hand somehow went through the opening cut into the safety gate and was drawn into the molding area while the interlocks were engaged." *Id.* at 477, 403 N.E.2d at 442, 426 N.Y.S.2d at 719.

497. New York is one of the few states that permit the defendant in a personal injury action to implead a culpable employer as a third-party defendant. See Dole v. Dow Chem. Co., 30 N.Y.2d 143, 282 N.E.2d 288, 331 N.Y.S.2d 382 (1972); see also supra note 19 (discussing the states that permit a defendant in a personal injury action to implead a culpable employer).

498. *Id.* at 476, 403 N.E.2d at 441, 426 N.Y.S.2d at 718.

499. *Id.* at 478, 403 N.E.2d at 442, 426 N.Y.S.2d at 719.

500. *Id.* at 478, 403 N.E.2d at 442, 426 N.Y.S.2d at 720. Apparently, there was evidence in the record indicating that the manufacturer not only could have foreseen this type of alteration, but had actual notice that the identical alteration was performed by the employer on two of its other machines. *Id.* at 477-78, 403 N.E.2d at 442, 445 N.Y.S.2d at 719. The manufacturer promptly notified the employer that these alterations did not comport with the product's design. *Id.* at 478, 403 N.E.2d at 442, 426 N.Y.S.2d at 719. It was plaintiff's contention that:

[II]f a manufacturer knows or has reason to know that its product would be used in an unreasonably dangerous manner, for example by cutting a hole in a legally required safety guard, it may not evade responsibility by simply maintaining that the product was safe at the time of sale.

*Id.* at 478, 403 N.E.2d at 442, 426 N.Y.S.2d at 720 (emphasis added). The plaintiff was therefore in effect requesting that the court categorize the employer's material alteration as a form of product "misuse," thereby requiring foreseeability principles to apply. See *Id.* This contention, however, was rejected by the Court of Appeals. *Id.* at 479, 403 N.E.2d at 443, 426 N.Y.S.2d at 720.

501. *Id.* at 481, 403 N.E.2d at 444, 426 N.Y.S.2d at 721 (emphasis added). The Court of Appeals recently reaffirmed this view in Sage v. Fairchild-Swearingen Corp., 70 N.Y.2d 579, 517 N.E.2d 1304, 523 N.Y.S.2d 418 (1987), discussed infra notes 653-54 and accompanying text.

502. *Id.* at 481, 403 N.E.2d at 444, 426 N.Y.S.2d at 721; see supra note 467 and accompanying text.
The court utilized significant "no duty" language, acknowledging that while the manufacturer has a general duty to design "non-defective" products, that duty

does not extend to designing a product that is impossible to abuse or one whose safety features may not be circumvented. A manufacturer need not incorporate safety features into its product so as to guarantee that no harm will come to every user no matter how careless or even reckless. Nor must he trace his product through every link in the chain of distribution to insure that users will not adapt the product to suit their own unique purposes. The duty of a manufacturer, therefore, is not an open-ended one. It extends to the design and manufacture of a finished product which is safe at the time of sale. Material alterations at the hands of a third party which work a substantial change in the condition in which the product was sold by destroying the functional utility of a key safety feature, however foreseeable that modification may have been, are not within the ambit of a manufacturer's responsibility.

The court even went so far as to add:

Unfortunately, as this case bears out, it may often be that an in-

503. See supra notes 263-462 and accompanying text (discussing the three-step approach).

504. 49 N.Y.2d at 480-81, 403 N.E.2d at 444, 426 N.Y.S.2d at 721 (citations omitted) (emphasis added). This reasoning was monumental in that it absolved the manufacturer of a duty to foresee subsequent material alterations even under a negligence standard, where foreseeability principles have traditionally been applied. See id.; see also Micallef v. Miehle Co., 39 N.Y.2d 376, 348 N.E.2d 571, 384 N.Y.S.2d 115 (1976). One commentator asserted that this was "a retreat to the patent danger rule" and was inconsistent with the court's prior decision in Micallef. See Note, supra note 3, at 436. Such an assertion is incorrect, as the court in Micallef held that under a negligence theory, the manufacturer has a duty with respect to dangers incurred "when the product is used in the manner for which the product was intended as well as unintended yet reasonably foreseeable use . . . ." 39 N.Y.2d at 385-86, 348 N.E.2d at 577, 384 N.Y.S.2d at 121 (footnotes omitted) (emphasis added). The Micallef court noted, however, that "[t]his does not compel a manufacturer to clothe himself in the garb of an insurer . . . nor to supply merchandise which is accident proof." 39 N.Y.2d at 386, 348 N.E.2d at 578, 384 N.Y.S.2d at 121-22 (citations omitted). By abolishing foreseeability principles in alteration cases under a negligence theory, the Robinson court impliedly acknowledged that while a manufacturer may have a duty to foresee variations in the use of its product, it should not have a duty to foresee the alteration of its product. See supra notes 224-52 and accompanying text (discussing the distinction between product alteration and product misuse). The Robinson court recognized the qualitative distinctions between product misuse and product alteration. See supra notes 224-52 and accompanying text. Thus, as noted by the commentator himself, the Robinson court merely limited the scope of Micallef insofar as material alterations are concerned. See Note, supra note 3, at 437 n.32. Under the Robinson rule, "[u]ntended, though foreseeable uses do not include product modifications as a matter of law." Id. (emphasis added).
jured party, because of the exclusivity of workers' compensation, is barred from commencing an action against the one who exposes him to unreasonable peril by affirmatively rendering a safe product dangerous. *However, that an employee may have no remedy in tort against his employer gives the courts no license to thrust upon a third-party manufacturer a duty to insure that its product will not be abused or that its safety features will [not] callously be altered by a purchaser.*

The significant rule emanating from the *Robinson* decision is that a manufacturer does not owe a duty to foresee subsequent material alterations in its product. Since the accident in *Robinson* would not have occurred in absence of the employer's material alteration, the court should have absolved the manufacturer of a duty as a matter of law. Instead, since the record was devoid of evidence indicating that the product's original design was "defective," the court found that the manufacturer satisfied its general duty to design products that are safe at the time of sale. Thus, the employer's removal of the guards rendered the "safe" product "defective." Accordingly, the court concluded that "[a]bsent any showing that there was some defect in the design of the safety gate at the time the machine left the practical control of Reed-Prentice (and there has been none here), Reed-Prentice may not be cast in damages for strict products liability."  

B. *The Robinson Decision Criticized*

While *Robinson* was decided correctly, the court's focus on the product's original design was unnecessary, and inconsistent with its abolition of "foreseeability" and its excellent "no-duty" reasoning. The court stated, for example, that the manufacturer's duty is gauged as of the time the product leaves its possession and control. Liability must be predicated upon the manufacturer's design choice,

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505. 49 N.Y.2d at 481, 403 N.E.2d at 444, 426 N.Y.S.2d at 721-22 (citation omitted) (emphasis added).

506. See supra note 468. As the court in Nelson v. Garcia, 129 Misc. 2d 909, 494 N.Y.S.2d 276 (Sup. Ct. 1985), succinctly stated, a manufacturer "is not responsible for injuries caused by subsequent modifications by another however foreseeable such modifications may have been . . . ." Id. at 911, 494 N.Y.S.2d at 278 (citation omitted) (emphasis added).

507. 49 N.Y.2d at 479-80, 403 N.E.2d at 443-44, 426 N.Y.S.2d at 720-21.

508. Id.

509. 49 N.Y.2d at 480, 403 N.E.2d at 443-44, 426 N.Y.S.2d at 721.

510. 49 N.Y.2d at 479, 403 N.E.2d at 443, 426 N.Y.S.2d at 720; see also supra note 56 (setting forth the approach of the Restatement (Second) of Torts).
or the product in its condition as originally designed and sold.\textsuperscript{511} A third party’s subsequent material alteration of the product from that condition exceeds the scope of the manufacturer’s duty.\textsuperscript{512} Accordingly, the court ruled that a manufacturer has no duty to foresee the potential for subsequent material alterations when making a design choice.\textsuperscript{512} If a manufacturer does not owe a duty to foresee material alterations, then it cannot owe a duty with respect to any accident arising out of such an alteration. This “no-duty” proposition applies irrespective of whether some defect in the original design exists.

Fundamental notions of causation-in-fact tell us that if an accident would not have occurred “but-for” a subsequent material alteration, that accident would not have occurred had the product remained in its condition as designed and sold.\textsuperscript{514} The manufacturer’s “unaltered” design choice should bear no legal relationship with respect to an accident which it would not have caused.\textsuperscript{516} Only through the improper imposition of a duty to foresee the alteration can a manufacturer be responsible for the safety of its product after it is materially altered.\textsuperscript{516} Without foreseeability, a court cannot link the original design to an accident arising out of a material alteration in the product.

The Robinson court’s refusal to adopt such a foreseeability standard should have severed any legal relationship between the product’s original design and the accident, which arose out of the employer’s material alteration. Absent this legal relationship (a duty owed), there is no justification for evaluating the original design under the risk-utility test.\textsuperscript{517} The reason is that a defect in the product’s original design, while significant in cases not involving alterations, is of no consequence with respect to any accident causally related to a material alteration, which the manufacturer has no duty to foresee. Courts taking the first two steps must, logically, take the third. A manufacturer cannot be held liable in cases where (1) its product undergoes a subsequent material alteration at the hands of a third party and (2) the accident was causally related to that altera-

\textsuperscript{511} 49 N.Y.2d at 479, 403 N.E.2d at 443, 426 N.Y.S.2d at 720.  
\textsuperscript{512} See supra note 504 and accompanying text.  
\textsuperscript{513} See supra notes 467-504 and accompanying text.  
\textsuperscript{514} For a comprehensive discussion of the causation-in-fact concept, see generally 1A L. FRUMER & M. FRIEDMAN, PRODUCTS LIABILITY § 2.25[1], at 2-1234 (1987); W. PROSSER & W. KEETON, supra note 8, § 41, at 263-72 (5th ed. 1984).  
\textsuperscript{515} See sources cited supra note 514.  
\textsuperscript{516} See infra notes 548-53 and accompanying text.  
\textsuperscript{517} See cases cited supra note 142.
tion. Thus, there was no need for the Robinson court to focus on the product's original design because the manufacturer established that the accident would not have occurred "but-for" the employer's material alteration. The fact that the manufacturer's product was not defectively designed need not have been the decisive factor in Robinson.

By not taking this essential third step, the court created an inconsistency in the Robinson opinion. On the one hand, the court absolved the manufacturer of a duty to foresee material alterations when making a design choice. On the other hand, the court absolved the manufacturer of liability not because the accident arose out of the material alteration, but because the product was not defective in its original "unaltered" condition. While the "non-defectiveness" of a product should always preclude the imposition of strict products liability, such a finding is unnecessary when a material alteration is found to be a proximate cause of the accident. By focusing on the original design, the Robinson court unnecessarily opened the door for lower courts to create jury questions anytime there is a question as to whether the original design is defective.

The court created an additional problem in the manner in which it phrased its holding. In the very first paragraph of the opinion, the court held that a manufacturer cannot be held liable where "there is a subsequent modification which substantially alters the product and is the proximate cause of plaintiff's injuries." It is unclear whether the use of the phrase "the proximate cause" was intended by the court to limit the application of Robinson to material alterations that are the sole proximate cause of an accident. It is doubtful that the court intended Robinson to be so construed, as it would be inconsistent with the court's abolition of foreseeability. Absent a duty to foresee subsequent material alterations, a manufacturer should be absolved of liability whenever such an alteration is caus-

518. See supra notes 507-09 and accompanying text.
519. It is fundamental that in any strict products liability case, the plaintiff bears the burden of proving, inter alia, that the product in question was "defective" when it left the defendant's hands. See RESTATEMENT (SECOND) OF TORTS § 402A (1965); W. PROSSER & W. KEETON, supra note 8, § 99, at 695 (5th ed. 1984).
520. See infra notes 523-47 and accompanying text (discussing lower court interpretations of Robinson); see also supra notes 424-49 and accompanying text (discussing a related view).
521. See Robinson, 49 N.Y.2d at 475, 403 N.E.2d at 441, 426 N.Y.S.2d at 718 (emphasis added).
522. See cases cited infra note 524.
ally related to the accident, let alone the sole proximate cause.

C. Lower Court Interpretations

The inconsistencies in the Robinson opinion have caused much confusion among lower courts. This is especially true in cases where there may exist a defect in the product's original design, yet the accident would not have occurred "but-for" a subsequent material alteration. Some courts, faced with such a fact pattern, have relied on the Robinson court's use of the phrase "the proximate cause", and its focus on the design in its original "unaltered" condition, to construe Robinson as a "modified" version of the defect-proximate cause approach. These courts have held that the manufacturer can be absolved of liability under the Robinson rule only where either (1) the product was not "defective" as originally designed and sold or (2) the product was defective, but the material alteration supersedes the defect as the sole proximate cause of the accident. This approach varies from the "defect-proximate cause" approach in that under New York law, the foreseeability of the alteration is not attributed to the manufacturer. This difference, however, renders any defect-proximate cause interpretation of Robinson theoretically unsound.

The cases of Bingham v. Godfrey and Powles v. Wean United


525. See cases cited supra note 157; see also infra notes 533-53 and accompanying text (illustrating this interpretation of Robinson).

526. 114 A.D.2d 987, 495 N.Y.S.2d 428 (2d Dep't 1985), appeal dismissed, 67 N.Y.2d...
are illustrative. In each case, the manufacturer moved for summary judgment upon expert proof that (1) the product underwent a subsequent material alteration at the hands of a third party and (2) the material alteration was a proximate cause of the accident. The Appellate Division, Second Department held, however, that such evidence, while establishing a prima facie defense, does not alone absolve the manufacturer of liability. Rather, it merely shifts the burden onto the plaintiff to establish a question of fact as to whether the product was somehow defective in its condition as originally designed. If plaintiff meets this burden, then summary judgment will be denied unless the manufacturer proves that the material alteration superseded the defect as the sole proximate cause of the accident. Fortuitously, summary judgment was granted in both cases because plaintiffs failed to meet their burden.

A similar approach was utilized by the Appellate Division, Fourth Department in Magee v. E.W. Bliss Co. The plaintiff in Magee was injured while operating a punch press manufactured in 1941, but later modified by plaintiff's employer. As originally designed and sold, the press was activated by a mechanical foot treadle that required forty pounds of downward pressure to disengage the clutch and allow the press to make a complete cycle. Plaintiff's employer subsequently "radically changed" this activation system by replacing it with a dual set of pneumatic controls. These controls allowed the press to be activated by hand, requiring

528. See Powles v. Wean United Corp., 126 A.D.2d at 625, 511 N.Y.S.2d at 62 (removal of the manufacturer's "safety cord" by a third party caused the plaintiff's hand to be caught between two moving rollers of a calendar press); Bingham v. Godfrey, 114 A.D.2d at 988, 495 N.Y.S.2d at 429 (rewiring of a vacuum cleaner by changing a three-pronged ground plug into a two-pronged standard plug and wrapping the ground and hot wires together caused plaintiff's decedent to be electrocuted).
529. Powles, 126 A.D.2d at 625-26, 511 N.Y.S.2d at 62-63; Bingham, 114 A.D.2d at 988, 495 N.Y.S.2d at 429.
530. See Powles, 126 A.D.2d at 625, 511 N.Y.S.2d at 62-63; Bingham, 114 A.D.2d at 988, 495 N.Y.S.2d at 429.
531. Powles, 126 A.D.2d at 625-26, 511 N.Y.S.2d at 62-63; Bingham, 114 A.D.2d at 988, 495 N.Y.S.2d at 429.
532. Powles, 126 A.D.2d at 625, 511 N.Y.S.2d at 63; Bingham, 114 A.D.2d at 988, 495 N.Y.S.2d at 429.
533. 120 A.D.2d 926, 502 N.Y.S.2d 886 (4th Dep't 1986).
534. 120 A.D.2d at 926, 502 N.Y.S.2d at 887.
535. Id.
536. Id.
only slight pressure on the lever.\textsuperscript{537} The accident occurred when plaintiff inadvertently brushed the lever with his right arm.\textsuperscript{538}

Plaintiff brought suit against the manufacturer under theories of negligence and strict products liability.\textsuperscript{539} Plaintiff's principal assertion was that the product was defective as originally designed because it was not equipped with a "point-of-operation" guard.\textsuperscript{540} The defendant moved for summary judgment under the Robinson rule.\textsuperscript{541} The court determined that:

Clearly, the substitution of the faulty dual activation system, which at the time of the accident allowed the press to be activated by exerting only slight pressure on the lever, for the original mechanical treadle "removed a safeguard against accidental activation that had been incorporated in the original structural design and would have been adequate to prevent this accident."\textsuperscript{542}

The court further stated that under Robinson, the manufacturer does not have a duty to foresee such material alterations.\textsuperscript{543} Based on the foregoing, the court should have absolved the manufacturer of a duty because the employer's material alteration was causally related to the accident. The court, instead, followed the reasoning of the Second Department and focused on the product as originally designed without point-of-operation guards.\textsuperscript{544} The court concluded that the plaintiff failed to show that any defect in the original design was a proximate cause of the accident.\textsuperscript{545} Thus, the manufacturer was absolved of liability not on "duty" grounds, but because the material alteration was found to be the sole proximate cause.\textsuperscript{546}

\textsuperscript{537} 120 A.D.2d at 926-27, 502 N.Y.S.2d at 887-88.
\textsuperscript{538} 120 A.D.2d at 926, 502 N.Y.S.2d at 887.
\textsuperscript{539} \textit{Id}.
\textsuperscript{540} 120 A.D.2d at 927, 502 N.Y.S.2d at 888.
\textsuperscript{541} \textit{Id}.
\textsuperscript{542} 120 A.D.2d at 927, 502 N.Y.S.2d at 887-88 (quoting Hanlon v. Cyril Bath Co., 541 F.2d 343, 346 (3d Cir. 1975)) (emphasis added).
\textsuperscript{543} 120 A.D.2d at 927, 502 N.Y.S.2d at 888.
\textsuperscript{544} \textit{Id}.
\textsuperscript{545} \textit{Id}.
\textsuperscript{546} \textit{Id}. Another case that utilizes this interpretation of Robinson is Garcia v. Biro Mfg. Co., 101 A.D.2d 779, 475 N.Y.S.2d 863 (1st Dep't 1984), \textit{rev'd on other grounds}, 63 N.Y.2d 751, 469 N.E.2d 834, 480 N.Y.S.2d 316 (1984). The plaintiff in Garcia was a meat market worker who sustained serious injuries when his right hand was pulled into a meat grinder manufactured by the defendant. 101 A.D.2d at 779, 475 N.Y.S.2d at 864. The meat grinder
This “modified” defect-proximate cause construction is unsound because the defect-proximate cause approach could never exist without its essential “foreseeability” standard. Only through the imposition of a “duty to foresee” can defect-proximate cause courts link the manufacturer’s original design to an accident arising out of a subsequent material alteration. It is foreseeability alone that allows courts to attribute to the manufacturer a duty which extends subsequent to the time that it designs and sells its products. Thus, in material alteration cases, foreseeability principles allow defect-proximate cause courts to focus on whether the product’s original design was “defective,” and whether that defect was, in any way, a contributing proximate cause of the accident. Absent a duty to foresee material alterations, however, the manufacturer does not owe a duty with respect to any danger attendant to its product in a materially altered condition. Hence, even in cases where the product may have been defectively designed, the proper interpretation of Robinson is that there can exist no legal relationship between a product in its condition as designed and sold, and any accident arising out of a subsequent material alteration. In such cases, the abolition of foreseeability (Step Two) should logically sever the manufacturer’s duty as a matter of law (Step Three).

Defect-proximate cause cases like Soler have reasoned that since the manufacturer has a duty to foresee alterations, it is therefore responsible for the safety of its product after it has been materially altered. Foreseeability therefore allows both the alteration and a “defect” in the original design to be contributing causes of an accident. Was manufactured and sold 21 years prior to the accident. Id. Subsequent to its sale, “some unknown third party modified it by cutting bolts holding a safety guard over the feeding mechanism, enabling the safety guard to be swiveled out of the way.” Id. Notwithstanding its finding that the accident would not have occurred had the guard remained in place, the court concluded that “the sole proximate cause of plaintiff’s injuries was the absence of the safety guard, a substantial modification for which the manufacturer was not responsible.” 101 A.D.2d at 780, 475 N.Y.S.2d at 865 (citation omitted); see also Kingsland v. Industrial Brown Hoist Co., 136 A.D.2d 901, 524 N.Y.S.2d 929 (4th Dep’t 1988). The court’s finding of “sole” proximate cause was unnecessary because under Robinson a manufacturer should be absolved of liability where a subsequent material alteration is in any way causally related to the accident.

547. In fact, the New Jersey Supreme Court in Brown v. United States Stove Co., 98 N.J. 155, 484 A.2d 1234, 1240 (1984), had to distinguish Robinson for this very reason. For a detailed discussion of the role of foreseeability under the defect-proximate cause approach, see supra notes 59-223 and accompanying text.

548. See supra notes 510-22 and accompanying text.

549. See supra notes 59-103 and accompanying text.

550. See supra notes 104-08 and accompanying text.
accident. For example, where there may be some defect in the product’s original design, some courts reason that while the accident would not have occurred “but-for” the alteration, it also would not have occurred “but-for” the defect. Absent a duty to foresee alterations, however, the causation question cannot cut both ways. Without foreseeability, the questions of whether the product was defective as originally designed, and whether such defect was itself causally related to the accident, are rendered completely moot in cases where a subsequent alteration is causally related to the accident. A manufacturer cannot owe a duty with respect to an accident that would not have occurred “but-for” a material alteration which it had no duty to foresee. Any defect in the product’s original design would be irrelevant because, absent the alteration, it would not have caused the accident. Thus, despite Robinson’s confusing language, its refusal to adopt a foreseeability standard theoretically precludes the use of any version of the defect-proximate cause approach. Manufacturers must be entitled to judgment as a matter of law upon proving that a subsequent material alteration was a proximate cause of the accident. To even imply that the manufacturer’s design is at all

551. See supra notes 113-15 and accompanying text.

552. See supra text accompanying notes 149-90.

553. Without the aid of a foreseeability standard, any subsequent material alteration is outside the scope of a manufacturer’s responsibility. The manufacturer’s duty must be evaluated as of the time the product leaves its possession and control. If the product as originally designed would not have caused the accident, the manufacturer must be absolved of liability. Only where a subsequent intervening act or event falls within the scope of a defendant’s duty can that act or event be a contributing proximate cause of the accident. See, e.g., Derdiarian v. Felix Contracting Corp., 51 N.Y.2d 308, 414 N.E.2d 666, 434 N.Y.S.2d 166 (1980) (finding that where defendant contractor had a duty to barricade a roadway excavation site, given the probability that a vehicle may careen into it as a result of intervening driver negligence, the defendant cannot be fully absolved of liability). Thus, if a manufacturer has a duty to foresee certain misuses of its product, then both a defect in the design of the product and the intervening foreseeable misuse can be the contributing proximate causes of an accident. See Micallef v. Miehle Co., 39 N.Y.2d 376, 385, 348 N.E.2d 571, 577, 384 N.Y.S.2d 115, 121 (1976). This reasoning cannot apply in the context of product alteration under the Robinson rule. The abolition of a duty to foresee subsequent material alterations prevents the alteration from being regarded as a contributing proximate cause. It is for this reason that the defect-proximate cause approach cannot exist without its essential foreseeability standard.

legally responsible under such circumstances would be tantamount to resurrecting foreseeability as the standard for adjudicating material alteration cases.

Other lower courts have recognized this, and have properly construed Robinson as a "no-duty" rule. In Lovelace v. Ametek, Inc., for example, the Appellate Division, Third Department took the essential third step and absolved the manufacturer of a duty where a third-party's material alteration was a proximate cause of the accident. The plaintiff in Lovelace was severely injured while placing wet fabric into an extractor. The extractor operated in a manner similar to a top-loading washing machine in its spin cycle. Wet fabric is loaded into its drum which rotates at high speeds, forcing the moisture out by centrifugal force.

As originally designed and sold, the extractor was equipped with three safety devices: (1) two hinged, interlocking covers which completely overlaid the large opening at the top of the drum, (2) a device which prevented the machine from starting when the covers were left open, and (3) a locking mechanism which prevented the covers from later being opened while the drum was spinning. These safety features were subsequently bypassed by a third party. As altered, the extractor was fully operable without the protective cover. The plaintiff was injured while placing a wet fabric into the unprotected spinning drum, when a piece of fabric wrapped around his arm and dragged him into the drum.

The plaintiff brought an action against the manufacturer under theories of negligence and strict products liability. The trial court granted the manufacturer's summary judgment motion. The Third Department affirmed, holding that the manufacturer was entitled to judgment as a matter of law because (1) the subsequent bypassing of the machine's safety devices constituted a material alteration, and

556. Id. at 954-55, 490 N.Y.S.2d at 51.
557. Id. at 954, 490 N.Y.S.2d at 50.
558. Id.
559. Id.
560. Id. at 953-54, 490 N.Y.S.2d at 50.
561. Id. at 954, 490 N.Y.S.2d at 51.
562. Id.
563. Id. at 954, 490 N.Y.S.2d at 50.
564. Id.
565. Id.
566. See id. at 954-55, 490 N.Y.S.2d at 51. The court found that "someone other than
(2) "but for want of those devices the accident would not have occurred." The court reasoned that even if the material alteration "was foreseeable during the 60-year interval between its manufacture and the accident, the responsibility for injuries resulting therefrom would not fall on defendant." 

A similar no-duty interpretation of Robinson was utilized in McGavin v. Herrick & Cowell Co. The McGavin court stated that the appropriate test under Robinson is whether the third party's alteration was "material" and whether it was a proximate cause of the plaintiff's injuries. This interpretation is the correct one. The reasoning in Lovelace and McGavin is fully consistent with the Robinson court's refusal to utilize foreseeability principles in material alteration cases. It also takes the essential third step, thereby extending the Robinson rule to its logical conclusion. The fact that there may exist some factual question as to whether there was a defect in the original design need not defeat a manufacturer's sum-

defendant removed the protective covers, rotated the mechanical interference rod 180 degrees out of position, thereby forestalling the workability of the safety feature . . . ." Id. at 954, 490 N.Y.S.2d at 51. As if the removal of the protective covers was not enough, defendant's expert testified that the mispositioning of the interference rod was "not an easy feat." Id. Accordingly, the court found these alterations to be material. See id. at 954-55, 40 N.Y.S.2d at 51.

567. Id. at 954, 490 N.Y.S.2d at 51 (emphasis added).
568. Id. at 954, 490 N.Y.S.2d at 51. The court "flat-out" rejected any defect-proximate cause interpretation of Robinson, reasoning that the "plaintiff's objections to the extractor's design are premised on his expert's opinion that the manufacturer was duty bound to make the machine fail-safe, a thesis squarely rejected in Robinson . . . ." Id. at 955, 490 N.Y.S.2d at 51.
569. 118 A.D.2d 982, 500 N.Y.S.2d 85 (3d Dep't 1986).
570. Id. at 982-83, 500 N.Y.S.2d at 86-87. The plaintiff in McGavin was seriously injured when his right hand came in contact with the blade of a rung sawing and chucking machine. Id. at 982, 500 N.Y.S.2d at 86. The machine was manufactured and sold to plaintiff's employer approximately 30 years prior to the accident. Id. In plaintiff's products liability action against the manufacturer, evidence adduced during discovery revealed that the employer (third-party defendant) altered the machine by (1) removing the loading magazine, thereby causing operators to come in close proximity to the blade, and (2) converting the machine from a "Geneva" gear mechanism movement to an air-operated pneumatic movement. Id. at 982-83, 500 N.Y.S.2d at 86-87. With respect to the first alteration, the court found that "there is evidence in the record that defendant did not consider the loading magazine to be an integral safety feature of its machine, the removal of which would render the product unsafe." Id. at 983, 500 N.Y.S.2d at 86. As to the second alteration, the court determined that the manufacturer similarly failed to establish that it rendered the product unsafe and that it had any causal relation to the accident. Id. at 983, 500 N.Y.S.2d at 87. Accordingly, the court concluded that there existed "sufficient questions of fact as to whether these two modifications were substantial and a proximate cause of the injury so as to preclude summary judgment." Id. (emphasis added). The McGavin court properly construed Robinson to absolve a manufacturer of liability where a subsequent material alteration is causally related to the accident. Had the manufacturer made a sufficient showing of "materiality" and "but for" causation, summary judgment undoubtedly would have been granted.
mary judgment or directed verdict motion.

D. Problem Areas Under the Robinson Rule

While foreseeability is not utilized in adjudicating alteration cases in New York, two scenarios have arisen which stretch the Robinson doctrine to its limits. The first type is the “removability” scenario. These cases involve accidents arising from a third party’s subsequent removal of a safety feature which was designed in such a way as to render it easily removable. The second type is the “substitution” or “replacement” scenario, in which accidents arise out of a third party’s substitution of a component part of the product with a similar part not manufactured by the defendant. The New York Court of Appeals recently confronted these scenarios, and its opinions raise important questions regarding the parameters of a manufacturer’s duties under Robinson. It is significant, however, that these opinions reaffirm the demise of foreseeability in New York. They also illustrate that Robinson is a flexible doctrine, capable of application across the spectrum of alteration cases.

1. Removability of Safety Features: Lopez v. Precision Papers, Inc.—Removability cases typically involve products manufactured with safety features that are capable of being removed, but were not purposefully designed to be removed. In these cases, it may be highly foreseeable that a third party might remove the safety feature, especially when the removal increases the product’s versatility. Some products are equipped with safety features that are so easily removable that their subsequent removal is almost inevitable. Despite the degree of foreseeability, however, a third party’s removal of a safety feature alters the product from its condition as designed and sold. The key question is really one of degree, that is, whether the product was so easy to alter that the alteration cannot

571. See infra notes 572-627 and accompanying text (discussing the removability of safety features).

572. See infra notes 627-74 and accompanying text (discussing the replacement of component parts).

573. See cases cited supra note 398.

574. See, e.g., Germann v. F.L. Smithe Mach. Co., 395 N.W.2d 922 (Minn. 1986) (en banc), discussed supra notes 370-93 and accompanying text; Miller v. Anetsberger Bros., 124 A.D.2d 1057, 508 N.Y.S.2d 954 (4th Dep’t 1986), discussed supra notes 424-49 and accompanying text. The courts in Germann and Miller were so preoccupied with the foreseeability of the alterations that they actually mischaracterized them as “misuses.” See also Briney v. Sears, Roebuck & Co., 782 F.2d 585, 590 (6th Cir. 1986), discussed infra note 605.

575. See, e.g., Briney, 782 F.2d at 590; Germann, 395 N.W.2d at 924; Miller, 124 A.2d at 1054, 508 N.Y.S.2d at 956.
be deemed "material."

Removability cases have not presented a problem under the defect-proximate cause and duty-foreseeability approaches. Both approaches incorrectly rely on the foreseeability of the alteration to shape the manufacturer's duty. This foreseeability standard does not exist under the Robinson approach. The Robinson court clearly stated that a "manufacturer's duty . . . does not extend to designing a product . . . whose safety features may not be circumvented." Nevertheless, plaintiffs have questioned whether the Robinson rule was intended to apply with respect to products with removable safety features. If Robinson were not to apply, then foreseeability principles would be relevant in determining whether the product was "defective" due to the removability of its safety features. The New York Court of Appeals confronted these issues in Lopez v. Precision Papers, Inc. Its opinion in Lopez clarified what was previously one of the most controversial and frequently misunderstood of all New York alteration cases.

Lopez involved a forklift manufactured with a "removable" overhead guard. Eight such forklifts were purchased by plaintiff's employer for the purpose of transporting objects in and out of its warehouse. The overhead guard was affixed to the forklift to protect the operator while lifting pallets above head level in high clearance areas. Due to the size of the guard, however, the forklift could not be operated in low clearance areas, such as inside trucks. Thus, with the overhead guard attached, the forklift could not be used to load and unload trucks.

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577. See cases cited supra note 572.
578. Robinson, 49 N.Y.2d at 481, 403 N.E.2d at 444, 426 N.Y.S.2d at 721.
580. 67 N.Y.2d 871, 492 N.E.2d 1214, 501 N.Y.S.2d 798 (1986), aff'd 107 A.D.2d 667, 484 N.Y.S.2d 585 (2d Dep't 1985). The Appellate Division, Second Department's majority opinion and the dissenting opinion of Judge Rubin will be referred to for the purpose of summarizing the underlying facts of Lopez. Most of the facts are set forth in the dissenting opinion.
582. Id. at 669, 484 N.Y.S.2d at 588 (Rubin, J., dissenting).
583. Id.
584. Id. at 669, 673, 484 N.Y.S.2d at 588-90 (Rubin, J., dissenting).
585. Id.
To adapt the forklift for use inside trucks, plaintiff's employer removed the guard on two of its eight forklifts. The employer then established a “safety” rule which required the two forklifts without guards to be used only to load and unload trucks in low clearance areas. Any movement of objects inside the warehouse was to be made only by those six forklifts that had the overhead guards.

At the time of the accident, plaintiff, an experienced forklift operator, was unloading a pallet of paper rolls from a “high clearance” area inside the warehouse. “In derogation of his employer's rule, but in accordance with his shipping clerk's instructions,” plaintiff used one of the forklifts whose overhead guard had been removed. “After raising the fork blades over his head and inserting them inside the wooden pallet, plaintiff was injured by a roll of paper which fell from the pallet onto his head.”

Plaintiff brought an action against the manufacturer under theories of strict products liability, breach of warranty and negligence. Plaintiff alleged, inter alia, that the forklift was defective in design because it was manufactured with a non-welded, easily removable overhead guard. The trial court granted partial summary judgment in favor of the manufacturer on the removability issue. The court reasoned that under Robinson, “a manufacturer may not be held liable for the negligent alteration of the product by a user, even if the alteration is foreseeable.”

The Appellate Division, Second Department reversed, holding that Robinson does not, as a matter of law, preclude a finding of design defect under plaintiff's removability theory. In a controversial opinion, the court distinguished Robinson on the ground that the modification in Robinson was substantial and was not intended to

586. Id. at 669, 484 N.Y.S.2d at 588 (Rubin, J., dissenting).
587. Id. at 668, 484 N.Y.S.2d at 587.
588. Id. at 669, 484 N.Y.S.2d at 588 (Rubin, J., dissenting).
589. Id. at 667-68, 484 N.Y.S.2d at 586-87.
590. Id. at 670, 484 N.Y.S.2d at 588 (Rubin, J., dissenting).
591. Id. at 669, 484 N.Y.S.2d at 588 (Rubin, J., dissenting).
592. Id. at 667, 484 N.Y.S.2d at 586.
593. Id. at 667-68, 484 N.Y.S.2d at 586-87. The plaintiff also alleged that the forklift was defective in design because it lacked a warning device for excessive loads and guidelines for the design, construction and loading of pallets. Id. at 668, 484 N.Y.S.2d at 587. Since the Lopez appeal involved only the trial court's granting of partial summary judgment on the “removability” claim, the court did not have to address these additional defect claims. See id.
594. Id. at 668, 484 N.Y.S.2d at 587.
595. Id.
596. Id.
increase the versatility of the product. Conversely, the employer in Lopez removed the guard to make the forklift more versatile. On this basis, the court concluded that:

[1]he facts here simply do not approach those of Robinson. Because of the ease with which the overhead guard could be removed and the forklift's added versatility when operated without the guard, there is a legitimate jury question as to the scope of the forklift's intended purposes.

Thus, the jury could consider whether the manufacturer breached its duty by designing its forklifts with a guard capable of being removed.

Plaintiff's attorneys applauded the Second Department's decision in Lopez as a major victory in limiting the scope of Robinson and expanding the manufacturer's duty for subsequent alterations. Indeed, the court's reasoning did raise some important questions. Did the court create a jury issue simply because the guard's removal was foreseeable, or did it merely conclude that the removal was an alteration not sufficiently "material" to trigger the Robinson rule? Are alterations that render a product more versatile outside the scope of Robinson? Should a manufacturer have a duty to design products with "non-removable" safety features?

These questions were quickly put to rest by the New York Court of Appeals. The court affirmed the Second Department's holding not because the removal was "foreseeable," or that it was not "material," but solely because there was evidence "that the forklift was purposefully manufactured to permit its use without the safety guard." Since the court found that the manufacturer had designed the safety feature to be removable for the purpose of allowing the forklift to be used without it, the employer's removal did not "alter" the forklift from its condition as designed. At most, the use of the "guardless" forklift in a high, rather than low, clearance

597. See id. The court acknowledged that "Robinson represents a sensible limitation on the scope of manufacturer liability lest [sic] a manufacturer be made an insurer against all injuries that might arise from the use or misuse of a product." Id.
598. Id. at 669, 484 N.Y.S.2d at 587.
599. Id. (citations omitted).
600. Id. at 669, 484 N.Y.S.2d at 588.
603. Id. at 873, 492 N.E.2d at 1215, 501 N.Y.S.2d at 799.
area constituted a "misuse" of the product. Thus, the Court of Appeals in *Lopez* allowed the removability/defect question to proceed to the jury because it found no intervening "alteration" that would warrant summary judgment under *Robinson*.

What is most significant, however, is that the court declined the invitation to resurrect foreseeability in alteration cases. A manufacturer can be held liable in removability cases only where it is proven to have purposely designed the product to be *operated* without the safety feature.

a. Distinguished from *Germann*.— *Lopez* was a "misuse" case because the court found something more than the mere foreseeability of removal. The court found that the manufacturer actually intended that the safety guards be removed, and that its products be used without the guards. The removal of a safety feature cannot be said to "alter" a product purposefully designed to be used without it. This should be distinguished from *Germann*, which involved a press designed with a safety bar to be removed only for maintenance, and

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604. *Id.*

605. *Id.; see also Briney v. Sears, Roebuck & Co., 782 F.2d 585 (6th Cir. 1986).* The plaintiff in *Briney* injured his left hand while working on a 10-inch electric table saw. *Id.* at 586. The saw contained a blade guard, which was designed to be removable for some cuts. *Id.* at 586, 590. Plaintiff attempted to make a complex cut, which required the removal of the blade guard. *Id.* at 586. The removal of the guard allowed the plaintiff's hand to come in contact with the rotary blade. *Id.* at 586-87. The court upheld plaintiff's "removability" defect claim not because removal of the guard was foreseeable, but because "the table saw was designed so that the guard could be removed for some cuts." *Id.* at 590. Like the court in *Lopez*, the *Briney* court held that the manufacturer could be liable because the saw was purposefully manufactured to permit its use without the guard. *See id.* Thus, "[t]o hold that removing the guard assembly was a substantial change ignores plaintiffs' claim altogether." *Id.*

606. *See supra* note 603 and accompanying text. It is interesting to compare the court's reasoning in *Lopez* with that of *Steinmetz v. Bradbury Co., 618 F.2d 21 (8th Cir. 1980)*, which was decided under the defect-proximate cause approach. The plaintiff in *Steinmetz* was injured while working at a "rigidizer" machine. *Id.* at 22. A "rigidizer" has sheet metal fed into a slot located in the front of the machine which is pulled along and flattened by rollers. *Id.* at 23. The original manufacturer's design permitted the removability of a top safety plate for the purpose of exposing the rollers for cleaning. *Id.* The operator could then activate the machine to "jog the rollers around little by little, stopping repeatedly for inspection or adjustment." *Id.* The accident occurred during this cleaning process. While performing maintenance on the rollers, plaintiff activated the drive mechanism and left it on, wherein his hands were crushed between the rollers. *Id.* In a products liability suit brought by the plaintiff, the manufacturer asserted that it should be absolved of liability because the accident arose out of the removal of the safety plate. *Id.* at 22. The court held, however, that "[b]ecause it was foreseeable that an operator would be injured under the circumstances in which [plaintiff] actually was injured, these circumstances do not support a claim of misuse or alteration of the product." *Id.* at 23. Thus, the *Steinmetz* court utilized "foreseeability" as the predicate for liability. The *Lopez* court, on the other hand, declined to use foreseeability and imposed a duty on the manufacturer only because the removal of the safety features was consistent with the manufacturer's design objectives.
to be reattached during operation. There was no evidence that the manufacturer in *Germann* purposefully designed the press to be operated while the safety bar was removed. Thus, the employer’s *permanent* removal of this “temporarily” removable feature, and its use of the press without the feature, clearly “altered” that press from its condition as originally designed and sold.

b. The Second Department Strikes Back.— The Court of Appeals substantially limited the Second Department’s opinion in *Lopez*. A recent removability case decided after *Lopez* does, however, indicate an intention on the part of the Second Department to construe *Lopez* in the broadest manner possible.

In *Ayala v. V & O Press Co.*, the plaintiff was injured while operating an incline press. The press was manufactured in 1947 with a sweep guard which prevented entry of the operator’s hands into the machine’s point of operation. Plaintiff’s employer subsequently altered the press by removing the guard. In 1967, the employer hired a company (“Humm”) to replace the missing guard. Prior to the accident, however, the employer again altered the press by removing the new guard and wiring certain “side safety gates” so as to render the gates ineffective. The accident occurred when plaintiff’s hand entered the unguarded point of operation and was crushed by the ram of the press, which descended without warning.

The plaintiff commenced a products liability action against the manufacturer. According to the proof adduced, the sweep guard installed by Humm was made removable “so that it could be adjusted to allow for the different sizes of various dies.” Plaintiff’s expert testified that the manufacturer’s original guard was virtually the same and was, therefore, defective because of its removability.

The trial court granted summary judgment in favor of the manufac-

607. See supra notes 394-416 and accompanying text (discussing *Germann*).
608. See supra note 406.
609. See supra notes 409-12 and accompanying text.
611. Id. at 231, 512 N.Y.S.2d at 705.
612. Id. at 231-32, 512 N.Y.S.2d at 705.
613. Id. at 232, 512 N.Y.S.2d at 706.
614. Id. at 232, 512 N.Y.S.2d at 705.
615. Id. at 232, 512 N.Y.S.2d at 706.
616. Id.
617. Id. at 231, 512 N.Y.S.2d at 705.
618. Id. at 232, 512 N.Y.S.2d at 706.
619. Id. at 232-33, 512 N.Y.S.2d at 706.
turer under Robinson. 620

The Second Department reversed, holding that Lopez compels a different result. 621 Interestingly, the court deviated from its prior reasoning in Bingham and Powles. 622 The court declared that the proper interpretation of Robinson is that a manufacturer cannot be held liable "where it is shown that the accident would not have occurred but for the subsequent modification." 623 The court then correctly acknowledged that Lopez allows a removability/defect claim "provided that the product 'was purposefully manufactured to permit its use without the safety guard.' " 624 The court held, however, that summary judgment should have been denied because "the plaintiffs submitted certain evidence from which it could be inferred that the press was purposefully designed so as to allow removal of the sweep guard . . . ." 625

Since the guard in Ayala was designed to be removed only for the purpose of adjusting the dies, the case should not have fallen within the scope of the Lopez rule. The Court of Appeals in Lopez intended to uphold only those removability claims in which the manufacturer intended that the product be operated without the safety feature. It was not intended to apply in cases where the safety feature is merely designed to be removable for maintenance or adjustment purposes. There was nothing in the Ayala opinion to indicate that the manufacturer designed the guard to be removable for operational purposes. Thus, the facts of Ayala are more analogous to Germann, and did not fall within the limited class of cases to which Lopez should apply. In allowing the removability claim to proceed to the jury, the Second Department construed Lopez too broadly, which was precisely what the Court of Appeals had sought to avoid. 626

620. Id. at 231, 512 N.Y.S.2d at 705.
621. Id. at 233, 512 N.Y.S.2d at 706.
622. See supra notes 526-32 and accompanying text (discussing Bingham and Powles).
625. Id. at 233-34, 512 N.Y.S.2d at 706-07 (emphasis added).
626. The objective of the Appellate Division, Second Department in broadly construing Lopez is all too apparent in the more recent case of McAvoy v. Outboard Marine Corp., 134 A.D.2d 245, 520 N.Y.S.2d 586 (2d Dep't 1987). In McAvoy, the Second Department denied the manufacturer's summary judgment motion based upon the removal of a "chute" that

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2. Substitution or Replacement of Component Parts: *Sage v. Fairchild-Swearingen Corp.*

One of the most complex issues to arise under the *Robinson* rule is the extent to which a manufacturer can be held liable for injuries arising from the replacement of a component of the product with a "substantially similar" part manufactured by a different entity. The New York Court of Appeals recently confronted this scenario in *Sage v. Fairchild-Swearingen Corp.* Its decision reaches the outer limits of the *Robinson* rule, and raises monumental questions of product identification and causation.

The product involved in *Sage* was a Metro II nineteen-seat Commuter Aircraft manufactured by defendant and owned by plaintiff's employer. The plaintiff worked as a station agent responsible for unloading the passengers' baggage from the plane's cargo compartment. When the plane landed, plaintiff entered the aft hatch of the cargo compartment and unloaded the baggage onto a cart located on the ground below. The door to the compartment was five feet wide and was located at the rear of the passenger section.

To allow the access of baggage handlers, the manufacturer supplied its planes with a free-standing ladder of approximately six feet in length. The manufacturer designed the ladder to be stored inside the cargo compartment by hanging it across the doorway, parallel to the ground. The ladder would be suspended by two aft hangers (hooks), placed on opposite sides of the door frame. The hanger/hooks were "u" or "v" shaped with a 1.3 inch opening at the top. They were riveted onto each side of the door frame. Some time after sale, however, for reasons unclear in the opinion, the employer replaced one of these hangers with its own substitute, which it

would have prevented the lawnmower blades from being exposed to plaintiff. *Id.* at 245, 520 N.Y.S.2d 586. In so doing, the court reverted to its prior reasoning in *Lopez* and held that "[g]iven the ease with which the safety feature could be removed and the lawnmower's added versatility with the optional grass catcher assembly, questions of fact exist as to the scope of the lawnmower's intended purposes and whether [it] was reasonably safe without the removable parts." *Id.* at 246, 520 N.Y.S.2d 587. It is precisely this reasoning that was limited by the Court of Appeals in *Lopez.* See supra note 603 and accompanying text.

628. *Id.* at 582-83, 517 N.E.2d at 1305, 523 N.Y.S.2d at 419.
629. *Id.*
630. *Id.*
631. *Id.*
632. *Id.*
633. *Id.*
634. *Id.*
635. *Id.*
636. *Id.*
made by duplicating the manufacturer's original design.\(^{637}\) The employer attached the replacement hook to the doorway of the cargo compartment.\(^ {638}\)

At the time of the accident, plaintiff was unloading the baggage from the cargo compartment.\(^ {639}\) When plaintiff completed her work, she sat on the floor of the doorway opening "with her legs dangling preparatory to jumping to the ground some 4 to 5 feet below."\(^{640}\) Plaintiff grasped the aft side of the door frame, and when she attempted to jump, her finger became caught on one of the hanger/hooks.\(^ {641}\) Plaintiff sustained serious injuries eventually necessitating amputation of her finger.\(^ {642}\)

In a products liability action against the manufacturer, plaintiff alleged a defect in the design of the entire doorway to the cargo compartment, as well as the design of the hanger/hook itself.\(^ {643}\) Plaintiff's expert testified as to three specific design defects:

1. [1] the hanger presented a 'very serious hazard to any personnel who are coming anywhere near it' because it protrudes into the space where personnel have to be, 'right at the edge of the compartment' where people are getting in and out of the cargo area;
2. [2] the 'placement of that hook [made] it a very inadequate solution to its function'; and
3. [3] the hook itself was dangerous because it was only 1/16 inch thick and because its "u" or "v" shape guided whatever came in contact with it — in this case plaintiff's finger — to the narrowed space at the bottom of the hook's opening.\(^ {644}\)

The opinions of plaintiff's expert were corroborated by the employer's chief of maintenance.\(^ {645}\) The manufacturer itself acknowledg-
edged that once a hanger/hook broke, it was not expected that the
purchaser would buy a new one because he could easily fabricate a
new part.646

At the conclusion of plaintiff's case, the manufacturer moved to
dismiss on the ground that the hook that caused plaintiff's injuries
was a replacement part, the substitution of which constituted a ma-
terial alteration under Robinson.647 The court denied the motion
since the plaintiff's theory of liability sounded in design defect,
rather than in manufacturing defect in the hanger/hook itself.648
The court reasoned that if the jury found that the manufacturer's
hook and doorway were defective in design and that the replacement
part was "substantially the same as the original," then the manufac-
turer can be held liable if the design defect was causally related to
the accident.649 The court then submitted interrogatories to the jury
asking three questions: (1) On the date of the accident, was the
hanger/hook a replacement part? (2) Did it have the same design
and substantially the same characteristics as the hanger/hook manu-
factured by the defendant? (3) Was the manufacturer's hanger/
hook defective as originally designed and was it a proximate cause
of the accident?650 The jury answered all three questions in the af-
firmative, and rendered a verdict in favor of plaintiff, holding the
manufacturer seventy-five percent responsible for plaintiff's
injuries.651

The New York Court of Appeals upheld the trial court's ruling,
reasoning that the unique facts of Sage do not warrant dismissal
under the Robinson rule.652 The court summarized that under
Robinson, a manufacturer is not responsible for accidents arising out
of the subsequent material alteration of its product.653 The court fur-
ther confirmed that notwithstanding the foreseeability of the altera-
tion, the manufacturer simply has no opportunity to avoid material
alterations once the product leaves its hands.654

646. Id.
647. Id.
648. Id.
649. Id. at 584-85, 517 N.E.2d at 1306, 523 N.Y.S.2d at 420.
650. Id. at 584, 585, 517 N.E.2d at 1306, 523 N.Y.S.2d at 420.
651. Id. at 582, 517 N.E.2d at 1305, 523 N.Y.S.2d at 419.
652. Id. at 586-88, 517 N.E.2d at 1307-09, 523 N.Y.S.2d at 421-22.
653. Id. at 586, 517 N.E.2d at 1307, 523 N.Y.S.2d at 421. The court reasoned that "[a]
manufacturer has no control over the use of a product after it leaves its hands . . . so its
liability is normally 'gauged' as of the time the product was marketed." Id. (citations omitted).
654. Id. The court reaffirmed the validity of the Robinson rule, stating that "[e]ven
though the manufacturer could have foreseen that others would change the product and in-
The *Sage* court upheld the application of the Robinson "no-duty" rule in "substitution" cases such as *Hansen v. Honda Motors Co.* and *Mazzola v. Chrysler France, S.A.* In *Hansen*, for example, the plaintiff removed the manufacturer's original motorcycle wheel and replaced it with a custom wheel of a different design. Similarly, in *Mazzola*, a "molded hose" was removed and replaced with a "flexible hot water hose" of a lesser quality. The court found that the facts of *Sage* do not approach those of *Hansen* and *Mazzola*, since those cases involved something more than a physical change in the component part itself. The design of the part was actually altered, and the accidents arose out of the alterations.

In *Sage*, however, the employer's "physical" replacement of the manufacturer's original hanger/hook did not alter the manufacturer's design. The replacement hook was merely a copy of the manufacturer's design dimensions, and it was placed in the exact location of the original hook. There was no evidence that the replacement hook had any qualities or dangers that did not exist in the manufacturer's original. More importantly, plaintiff's theory of defect pertained to the dimensions of the hook and its placement on the cargo doorway. The hook was not defective in and of itself, but was defective only in relation to the overall design of the compartment doorway and the manufacturer's choice of the hook's location on that doorway. The accident, therefore, arose not out of the actual "replacement" of the part, but out of the manufacturer's overall defective design. Thus, the fact that "the hanger [hook] actually involved in the accident was a replacement and not the original is not dispositive because in fabricating and installing a new part

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655. *Id.* at 586, 517 N.E.2d at 1307, 523 N.Y.S.2d at 421-22.
656. 104 A.D.2d 850, 850-51, 480 N.Y.S.2d 244, 245 (2d Dep't 1984), discussed *supra* notes 454-62 and accompanying text.
658. *Id.* at 25-26; *cf.* *Sage*, 70 N.Y.2d at 586, 517 N.E.2d at 1307-08, 523 N.Y.S.2d at 422. (distinguishing the *Sage* replacement part from the inferior replacement part in *Mazzola*).
659. 70 N.Y.2d at 586-87, 517 N.E.2d at 1307-08, 523 N.Y.S.2d at 421-22.
660. *Id.*
661. *Id.* at 586-87, 517 N.E.2d at 1307-08, 523 N.Y.S.2d at 422.
662. *Id.* at 586, 517 N.E.2d at 1307, 523 N.Y.S.2d at 421; see *supra* note 644 and accompanying text (discussing testimony of plaintiff's expert).
663. 70 N.Y.2d at 586, 517 N.E.2d at 1307, 523 N.Y.S.2d at 421.
[the employer], as the jury found, did no more than perpetuate defendant’s bad design . . . . \textsuperscript{664}

The court reasoned that under these circumstances, the manufacturer should bear the loss because it sold a defectively designed product “knowing that if the part broke it might be copied and replaced by the purchaser relying on the original design.”\textsuperscript{665} The manufacturer should not be encouraged to design “flimsy parts secure in the knowledge that once the part breaks and is replaced, it will no longer be liable.”\textsuperscript{666}

The court’s opinion in \textit{Sage} represents a fair and rational application of \textit{Robinson} to a unique fact pattern. Unlike other “substitution” cases where the replacement of a part changes the product’s design, the jury in \textit{Sage} found that the employer’s replacement of the hanger/hook did not change the manufacturer’s design. What is most important is that the \textit{Sage} court based its decision on the fact that the component part in question was only \textit{incidentally} related to the manufacturer’s \textit{overall} defective design. The \textit{Sage} court made it clear that the defect at issue was not the physical characteristics of the hanger/hook as an isolated part.\textsuperscript{667} Rather, the defect alleged was the design of the hanger/hook as placed in the opening of the cargo compartment of the aircraft.\textsuperscript{668} As the court noted, “the hanger was replaced[,] but, as the jury found, the hanger design was not altered and it was the manufacturer’s defective design — both of the hanger and of the compartment doorway — which caused injury.”\textsuperscript{669} In essence, the injury causing aspect of the product was the overall design of the doorway, which necessarily included the dimensions and placement of the hook. The replacement of the manufacturer’s hook with a hook of the same dimensions, and its placement in the exact same location as the original, did nothing to alter that design. The fact that plaintiff caught her finger on the replacement hanger/hook and not the original was fortuitous. Her injuries did not

\textsuperscript{664} Id. at 587, 517 N.E.2d at 1308, 523 N.Y.S.2d at 422.
\textsuperscript{665} Id.
\textsuperscript{666} Id.
\textsuperscript{667} A superficial reading of \textit{Sage} may lead one to conclude that the specific defect alleged was the design of the hook itself. The court, however, noted that “[a]lthough the verdict sheet referred only to the defective hanger, the [trial] court explained to the jury in its charge that the question of whether the hanger was defective referred \textit{not} only to the design of the hanger itself but \textit{also} to its location in the opening of the cargo compartment.” \textit{Id.} at 585, 517 N.E.2d at 1306-07, 523 N.Y.S.2d at 420-21 (emphasis added).
\textsuperscript{668} Id. at 584-86, 517 N.E.2d at 1306-07, 523 N.Y.S.2d at 420-21.
\textsuperscript{669} Id. at 586-87, 517 N.E.2d at 1308, 523 N.Y.S.2d at 422 (emphasis added).
arise out of the "replacement" of the hook or even the "replacement hook" itself. They arose out of the manufacturer's defective design of the doorway.

The facts of *Sage* are to be distinguished from those "substitution" cases where the replacement part *itself* causes injury, and not any other feature or component of the product. It should also be distinguished from cases in which the only defect alleged was in the specific component of the manufacturer. In such cases, even if the manufacturer's part is replaced with a part "substantially similar" in design, the manufacturer should be absolved of liability. To hold a manufacturer liable for injuries caused by someone else's product would violate fundamental principles of product identification and causation.

It is perhaps unfortunate that in dictum, the *Sage* court spoke of deterring manufacturers from designing "flimsy parts." *Sage* was not a "flimsy parts" case because the replacement part at issue was not defective per se, but was merely one component of an overall poor design. A careful reading of *Sage* reveals that its reasoning is intended to apply only in rare "substitution" cases where the replacement of the part, as well as the part itself, are not the injury-causing aspects of the product. As one commentator notes:

[t]he *Sage* opinion, unfortunately, is likely to be misconstrued by some claimants and defendants' counsel and perhaps even by some judges. There is indeed some superficial "shock potential" to a casual reader's observation that a product manufacturer might be held liable for bad design when a replacement part plainly not of the manufacturer's making nevertheless results in liability . . . . Some will undoubtedly read *Sage* as signifying an erosion of the Robinson rule. Such a reading, however, would be erroneous. The Robinson rule is alive and well.

**CONCLUSION**

To hold a manufacturer responsible for accidents arising out of a third party's subsequent material alteration of its product contravenes the fundamental notions of products liability. A manufacturer

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671. See supra notes 454-62 and accompanying text.
672. See supra notes 8-13 and accompanying text.
673. 70 N.Y.2d at 587, 517 N.E.2d at 1308, 523 N.Y.S.2d at 422.
is not an insurer against all injuries that may arise out of a product. Its duty is gauged as of the time the product leaves its possession and control. A third party's subsequent material alteration exceeds that duty.

The three-step approach proposed in this Article provides a workable solution whereby a manufacturer's liability can be rationally limited, consistent with the policies underlying products liability law. A manufacturer cannot, as a matter law, owe a duty with respect to any accident arising out of a subsequent material alteration. When faced with an alteration case, the trial judge should (1) adjudicate the question of "duty" as a matter of law, consistent with the court's lawmaking function;\(^7\) (2) abstain from using foreseeability principles when adjudicating that duty;\(^6\) and thus (3) absolve the manufacturer of responsibility where the evidence establishes that the product underwent a subsequent material alteration which was causally related to the accident.\(^7\)

The defect-proximate cause approach, utilized by a majority of courts, fails to take either step and allows the threshold question of duty to proceed to the jury under a foreseeability standard. This, in effect, designates the manufacturer as an insurer with a duty to design "accident-proof" products.\(^6\) The duty-foreseeability approach takes the first step in purporting to adjudicate as a matter of law the manufacturer's duty with respect to product alteration. It fails, however, to take the essential step and abstain from using foreseeability principles in adjudicating that duty.\(^6\) Foreseeability, while applied with respect to the "misuse" of a product in its condition as originally designed, cannot apply where the product is subsequently "altered" from that condition.\(^6\) As illustrated by a comparison of Westerberg and Germann, the use of a foreseeability standard yields inconsistent and inequitable results.\(^6\)

The New York Robinson approach recognizes this, and allows courts to perform the first two steps in adjudicating the duty question without the use of foreseeability principles.\(^6\) In this respect, the Robinson rule had a monumental effect in creating a rational

\(^{675}\) See supra notes 263-333 and accompanying text.
\(^{676}\) See supra notes 334-509 and accompanying text.
\(^{677}\) See supra notes 510-674 and accompanying text.
\(^{678}\) See supra notes 59-223 and accompanying text.
\(^{679}\) See supra notes 334-462 and accompanying text.
\(^{678}\) See supra notes 224-52 and accompanying text.
\(^{681}\) See supra notes 347-416 and accompanying text.
\(^{682}\) See supra notes 466-509 and accompanying text.
limitation on what the other approaches deemed absolute liability. What the Robinson rule did not emphasize was that the use of the first two steps necessitates the use of the third.683 If a manufacturer has no duty to foresee the myriad of ways that a product could be subsequently and materially altered, then it cannot, as a matter of law, be responsible for any accident arising out of the alteration. The duty of the manufacturer inheres in the product so long as it remained substantially in the same condition as designed and sold. Thus, any causal relationship between a material alteration and the accident must sever the relationship between the manufacturer's design choice and the accident, and must absolve the manufacturer of liability.

While some appellate courts have recognized this, other courts should utilize the three-step approach proposed in this Article. The approach is grounded upon sound notions of public policy and provides a fair means of adjudicating material alteration cases.

683. See supra notes 510-70 and accompanying text.