Notes

EXCLUDING SUBSEQUENT DESIGN MODIFICATIONS IN PRODUCT LIABILITY LITIGATION: THE PROPRIETY OF A POST-SALE VERSUS A POST-ACCIDENT EXCLUSION

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The applicability of the "subsequent remedial measure" exclusionary rule to strict product liability cases has plagued and divided courts for over a decade.[1] Codified in Federal Rule of Evidence 407[2] and various state counterparts,[3] the rule[4] forbids the use of evidence of post-accident modifications

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1. *See generally* D. LOUISELL & C. MUELLER, FEDERAL EVIDENCE § 166 pp. 404-27 (1985); MCCORMICK ON EVIDENCE § 275, at 815-18 (E. Cleary 3d ed. 1984); S. SALTZBURG & K. REDDEN, FEDERAL RULES OF EVIDENCE MANUAL 265-69 (4th ed. 1986); J. WEINSTEIN & M. BERGER, WEINSTEIN'S EVIDENCE ¶ 407 (1986) (these works discuss the subsequent remedial measure doctrine and FED. R. EVID. 407 generally, offer breakdowns of cases, and analyze judicial controversy on whether Rule 407, see *infra* note 2, should apply to strict product liability); Henderson, *Product Liability and Admissibility of Subsequent Remedial Measures: Resolving the Conflict by Recognizing the Difference Between Negligence and Strict Tort Liability*, 64 NEB. L. REV. 1, 2 (1985) (the author notes the national controversy and argues that the exclusionary doctrine should not be applied to exclude evidence of subsequent remedial measures in true strict product liability cases); Comment, *Federal Rule of Evidence 407 and Its State Variations: The Courts Perform Some "Subsequent Remedial Measures" of Their Own*, 49 UMKC L. REV. 338 (1981) (reviews the split of federal and state courts and suggests the United States Supreme Court decide the issue once and for all, at least on the federal level).

2. FED. R. EVID. 407 [hereinafter Rule 407] states:

> When, after an event, measures are taken which, if taken previously, would have made the event less likely to occur, evidence of the subsequent measures is not admissible to prove negligence or culpable conduct in connection with the event. This rule does not require the exclusion of evidence of subsequent measures when offered for another purpose, such as proving ownership, control, or feasibility of precautionary measures, if controverted, or impeachment.

3. For state variations of the rule excluding evidence of subsequent remedial measures, see ALASKA R. EVID. 407; ARIZ. R. EVID. 407; ARK. STAT. ANN. § 28-1001-407 (1979); CAL. EVID. CODE § 1151 (1966); COLO. R. EVID. 407; DEL. UNIF. R. EVID. 407; FLA. STAT. ANN. § 90.407 (West 1979); GA. CODE ANN. § 38-409 (1981); HAWAII R. EVID. 407; IOWA R. EVID. 407; KAN. STAT. ANN. § 60-451 (1976); KY. REV. STAT. § 411.330 (1978); LA. PROP. EVID. C. ART. 407 (proposed only); MICH. R. EVID. 407; MINN. R. EVID. 407; MONT. R. EVID. 407; NEB. REV. STAT. § 27-407 (1979); NEV. REV. STAT. § 48-095 (1979); N.J. R. EVID. 51; N.M. STAT. ANN. § 20-4-407 (Supp 1975); N.C. R. EVID. 407; N.D. R. EVID. 407; OHIO R. EVID. 407; OKLA. STAT. ANN. tit. 12, § 2407 (West 1980); OR. R. EVID. 407; S.D. CODIFIED LAWS ANN. § 19-12-9 (1979); TEX. R. EVID. 407; UTAH R. EVID. 407; VT. R. EVID. 407; VA. CODE § 8.01-418.1 (1981); WASH. R. EVID. 407;

for proving negligence or culpable conduct. Most courts applying the exclusionary rule to strict product liability cases follow the rule used in negligence actions. They designate the date of accident as the time after which subsequent design modifications are inadmissible.[5] Arizona and Idaho, however, have statutorily set the date of sale of the product as the effective time after which design modifications are inadmissible.[6] Colorado has enacted a statute that may be interpreted as doing the same.[7]

This Note examines the propriety of excluding evidence of design modifications made after the date of sale instead of after the date of accident. Next, it will be suggested that the date of sale as the effective date for excluding evidence of subsequent design modifications is more consistent with the underlying policy goals of the rule[8] and with the theory of strict product liability as embodied in section 402A of the Restatement (Second) of Torts.[9]

The first part of this Note reviews the ongoing debate regarding whether to apply the subsequent remedial measure exclusionary rule to strict product liability. It must be kept in mind that the theory advanced in the second part of this Note is relevant only to jurisdictions applying an exclusionary rule to product liability.[10] In the second part, the argument is made

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WIS. STAT. ANN. § 904.07 (West 1975); WYO. R. EVID. 407. *See also* D. LOUISELL & C. MUELLER, *supra* note 1, at § 163, 378-79; J. WEINSTEIN & M. BERGER, *supra* note 1, at ¶ 407[08]. *But see* ME. R. EVID. 407 (subsequent remedial measures are admissible as proof of negligence).

4. FED. R. EVID. 407 and all state statutes or common law rules codifying the subsequent remedial measures doctrine are hereinafter referred to as "the rule." The language of the statutes or rules in some states tracks FED. R. EVID. 407 verbatim while other states use varying language to state the same rule. The end result is that each of the statutes and rules prohibit the admissibility of subsequent remedial measures as proof of negligence. Thus, "the rule" is meant to include all statutes or rules generally, unless the context is otherwise. For a list of the statutes and rules embodying the doctrine, see *supra* note 3.

5. *See infra* note 28 for a listing of federal circuits and states applying the rule either by statute, rule of evidence, or common law. A list of jurisdictions permitting use of subsequent remedial measures as proof of a defect is found *infra* at note 26.

6. ARIZ. REV. STAT. ANN. § 12-686(2) (1978); IDAHO CODE § 6-1406 (Supp. 1987). *See infra* notes 63 and 75 for the text of the Arizona and Idaho statutes, respectively.

7. COLO. REV. STAT. § 13-21-404 (Supp. 1985). *See infra* notes 78-82 and accompanying text for interpretation and discussion of the statute.

8. The policies are to encourage, or at least not discourage, repairs and to prevent prejudicial inferences by juries of admission by conduct. *See infra* notes 15-17 and accompanying text. *See also* S. SALTZBURG & K. REDDEN, *supra* note 1, at 266-67 (suggesting a third possible rationale is that courts simply want to avoid punishing a defendant's praiseworthy behavior of making things safer).

9. Most courts have adopted strict liability for products as embodied in section 402A of the Restatement. *See* PROSSER AND KEETON ON THE LAW OF TORTS § 98, at 693-94 (W. Keeton 5th ed. 1984) [hereinafter PROSSER & KEETON]. The text of § 402A is as follows:

> (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
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> (a) the seller is engaged in the business of selling such a product, and
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> (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
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> (2) The rule stated in Subsection (1) applies although
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> (a) the seller has exercised all possible care in the preparation and sale of his product, and
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> (b) the user or consumer has not bought the product from or entered into any contractural relation with the seller.

10. The debate about whether an exclusionary rule should apply under strict product liability theory is discussed *infra* at notes 18-31 and accompanying text. This Note goes no further than suggesting that, if either a court or legislative body elects to apply an exclusionary rule to strict product liability actions, and if it chooses to do so based on the policy arguments which supposedly

that a post-sale exclusion is more consistent with the Restatement's language designating the date of sale as the time liability attaches, and is thus more likely than a post-accident rule to achieve the policy results ascribed to both the post-sale and post-accident rules. Additionally, the Arizona, Colorado, and Idaho statutes and recent judicial interpretations of the Arizona[11] and Colorado[12] statutes are discussed. The final part of this Note provides further analysis of the comparison between a post-sale and a post-accident rule by judging their comparative effect on the broader strict product liability policy goals of consumer protection.

SHOULD A SUBSEQUENT REMEDIAL MEASURE EXCLUSIONARY RULE APPLY IN STRICT PRODUCT LIABILITY CASES? A REVIEW OF THE NATIONAL SPLIT OF AUTHORITY

The practice of excluding evidence of post-accident design modifications in strict product liability litigation originated from the similar common law rule which excludes evidence of subsequent remedial measures for proving negligence.[13] The latter exclusionary rule, long and widely accepted in common law,[14] and presently codified in Rule 407,[15] is supported by two policy considerations. First, evidence of subsequent remedial measures is considered prejudicial because a jury may believe a defendant has admitted fault by virtue of his subsequent remedial conduct when in fact such conduct is often undertaken for many other possible reasons.[16] Second, the rule is presumed to encourage people to make safety improvements by eliminating the fear that such changes will later be used against them as proof of fault.[17]

A major split of authority has developed among both federal and state

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support such a rule, then a post-sale exclusion is more sensible than a post-accident exclusion as a means of achieving those policy goals. Beyond that proposition, this Note does not seek to support either argument as to whether an exclusionary rule should apply to strict product liability in the first place.

11. Readenour v. Marion Power Shovel, 149 Ariz. 442, 719 P.2d 1058 (1986).

12. Uptain v. Huntington Lab, Inc., 723 P.2d 1322 (Colo. 1986).

13. *See generally* Henderson, *supra* note 1, at 1-4.

14. *See* MCCORMICK, *supra* note 1, § 275, at 815-18, where the subsequent remedial measure doctrine and its history is treated generally. The treatise lists a number of cases employing the rule, some of which date back to the late nineteenth century. *See also* 2 WIGMORE, EVIDENCE § 283 at 152 n.1 (1940), noting that only three or four jurisdictions had "any inclination to qualify or repudiate this doctrine;" Henderson, *supra* note 1, at 1, where the author notes that "[m]ost jurisdictions have long recognized the rule that evidence of subsequent repairs" is inadmissible in negligence actions. The United States Supreme Court noted in 1892 that most states had by that time recognized the rule in negligence cases. Columbia and Puget Sound R.R. v. Hawthorne, 144 U.S. 202, 207 (1892).

15. *See* advisory committee note to FED. R. EVID. 407 which states: "The rule incorporates conventional doctrine which excludes evidence of subsequent remedial measures as proof of an admission of fault."

16. *Id.* For a discussion of reasons for making design changes other than to remedy defects, see *infra* note 53.

17. *See* advisory committee note to FED. R. EVID. 407 which calls this the "more impressive" ground. *See also* MCCORMICK, *supra* note 1, § 275, at 815, stating that "[t]he predominant reason for excluding such evidence . . . [is] a policy against discouraging the taking of safety measures." *But see* Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883, 887 (5th Cir. 1983) (primary rationale for applicability of rule is danger of confusion and prejudice of the jury which outweighs probative value); Kobayashi, *Products Liability Lawsuits—Part I: Admissibility Questions and Miscellaneous Evidentiary Developments*, 1981 TRIAL LAW. GUIDE 297, 321 (argues that the anti-deterrent premise "does not nowadays seem to bear much of a relationship to reality.")

jurisdictions as to whether the rule and goals which support it should be applicable to strict product liability.[18] The debate revolves around the distinctions between product liability and negligence theories and whether the policy of trying not to deter subsequent repairs plays a comparable role in product liability as in negligence actions.[19] The major distinction between the two theories which most affects this debate is that while negligence actions focus on the foreseeable consequences of the defendant's conduct, modern product liability law focuses on the quality of the defendant's product at the time of sale.[20] If a product is unreasonably dangerous, the defendant may be strictly liable without regard to his negligence.[21] Courts disagree on whether negligence or culpable conduct— the fault concepts embodied in the exclusionary rule —have any place in strict liability and whether the behavior of manufacturers of mass produced products is affected by the rule.[22]

Proponents of admissibility follow the rationale of the California Supreme Court in *Ault v. International Harvester Company*.[23] The *Ault*

18. For a list of court authority for and against application of the rule to strict liability, see *infra* notes 26 and 28. For a collection of commentaries both in favor and opposed to the applicability of Rule 407 to strict product liability cases, see Henderson, *supra* note 1, at 2-3, n.3. Additional arguments that the rule should not apply in strict product liability cases are found in McGehee, *Subsequent Remedial Measures in a Product Liability Case: The Fastest Spinning Wheel in Litigation*, 19 GA. ST. B.J. 89, 90 (1982) (arguing that humanitarian policies underlying strict product liabilty are furthered by the nonapplication of Rule 407); Comment, *An Exception to the Exceptions: The Subsequent Repair Rule in Montana*, 42 MONT. L. REV. 143 (1981) (arguing that the social policies underlying product liability theory are threatened by too many exceptions to the rule); Note, *Subsequently Remedying Strict Products Liability: Cann v. Ford*, 14 CONN. L. REV. 759 (1982) (argues that the rule hinders plaintiffs' recoveries and should be abandoned in both strict liability and negligence actions); Casenote, *Evidence of Subsequent Remedial Measures and Products Liability: Herndon v. Seven Bar Flying Service, Inc.*, 33 DE PAUL L. REV. 857 (1984) (argues that evidence of subsequent remedial measures is relevant in strict product liability and could be excluded in individual cases if unfairly prejudicial).

19. One of the goals of strict product liability theory is to eliminate the burden of proving fault or negligence in a manufacturing process not readily available or understandable to the public. Phipps v. General Motors Corp., 278 Md. 337, 351-53, 63 A.2d 955, 962-63 (1976). From this, an argument is made that alleviation of problems of proof in product liabilty could not "have been intended to countenance [such] an evidentiary rule." Caprara v. Chrysler Corp., 52 N.Y.2d 114, 119, 436 N.Y.S.2d 251, 256, 417 N.E.2d 545, 550 (1981).

20. *See* RESTATEMENT (SECOND) OF TORTS § 402A (1965); PROSSER & KEETON, *supra* note 9, § 103, at 712-13. *But see* Anderson, *Subsequent Remedial Conduct and Strict Liability in Tort*, 56 WIS. B. BULL. 20, at 22 (1983) (negligence and reasonableness are still part of the strict liability analysis in Wisconsin).

21. Greenman v. Yuba Power Prod., Inc., 59 Cal. 2d 57, 62-63, 377 P.2d 897, 900-01, 27 Cal. Rptr. 697, 700-01 (1962) (liability for manufacturer of power tool was not governed by contract warranties, but by strict liability in tort).

22. The Fifth Circuit noted a lack of evidence supporting the ability of the exclusionary rule to achieve the policy goal of encouraging product improvements but chose to avoid the risk of dissuading manufacturers from making improvements and applied the rule. Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883, 887 (5th Cir. 1983). The court relied primarily, however, on a relevancy rationale to exclude the evidence. *Id.* at 887-88.

For further discussion regarding the lack of any empirical evidence on which to determine the effects of the rule on manufacturers, see V. Schwartz, *The Exclusionary Rule on Subsequent Repairs-A Rule in Need of Repair*, 7 FORUM 1, 6 (1971)("[N]o court or writer has produced any empirical data showing that the rule has resulted in a single repair or that its absence would discourage repair activity."); Note, *California Supreme Court Holds Evidence of Subsequent Design Change Admissible to Prove Design Defect-Ault v. International Harvester Co.*, 1975 U. ILL. L.F. 288, at 292 (argues that the affect on manufacturers' behavior "is unpredictable without emperical study" and "substantial emperical evidence is necessary to intelligently evaluate the effect of the exclusionary rule. . . .").

23. 13 Cal. 3d 113, 528 P.2d 1148, 117 Cal. Rptr. 812 (1974).

court reasoned that since the focus in strict liability is on the product itself rather than on the manufacturer's conduct, the policy aim of not deterring subsequent repairs is diminished and the rule serves no other purpose than to shield defendants from liability.[24] The court declared that the rule's main purpose is anti-deterrence and that such a purpose is only valid in the context of negligence.[25] Moreover, the court suggested it is "manifestly unrealistic" to believe that a corporate mass producer of goods would forego making improvements in its product and risk more lawsuits as well as damage to its public image.[26] Other authorities argue that the evidence is more probative in strict liability than in negligence actions.[27]

In opposition to admission of such evidence, the leading case applying Rule 407 to product liability actions is *Werner v. Upjohn Co.*[28] The Fourth

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24. *Id.* at 120, 528 P.2d at 1152, 117 Cal. Rptr. at 816.

25. *Id.* at 119, 528 P.2d at 1151, 117 Cal. Rptr. at 815.

26. *Id.* at 120, 528 P.2d at 1151-52, 117 Cal. Rptr. at 815-16. Federal circuits following *Ault* and admitting the evidence in strict liability actions are the Eighth and Tenth Circuits. Herndon v. Seven Bar Flying Serv., Inc., 716 F.2d 1322, 1328 (10th Cir. 1983), *cert. denied sub nom.* Piper Aircraft Corp. v. Seven Bar Flying Serv., 466 U.S. 958 (1984) (the evidence is relevant and Rule 407's exclusion is inappropriate where society has decided to assess strict liability); Farner v. Paccar, Inc., 562 F.2d 518 (8th Cir. 1977). In addition to California, states permitting admission of such evidence are Alaska, ALASKA R. EVID. 407 (expressly admits), Caterpillar Tractor Co. v. Beck, 624 P.2d 790 (Alaska 1981); Connecticut, Sanderson v. Steve Snyder Enters., Inc., 491 A.2d 389 (Conn. 1985); Hawaii, HAWAII R. EVID. 407 (expressly allows admission to prove dangerous defects in products liability cases); Illinois, Sutkowski v. Universal Marion Corp. 5 Ill. App. 3d 313, 281 N.E.2d 749 (1972); Iowa, IOWA R. EVID. 407 (expressly admits); Kansas, KAN. CIV. PROC. CODE ANN. § 60-451, Siruta v. Hesston, 232 Kan. 654, 659 P.2d 799 (1983); Kentucky, KY. REV. STAT. § 411.330 (1978) (admittance conditional upon relevance determined at closed hearing); Maine, ME. R. EVID. 407 (rejects exclusionary rule altogether); Massachusetts, Carey v. General Motors, 337 Mass. 736, 387 N.E.2d 583 (Mass. 1977); Nevada, NEV. REV. STAT. § 48.095 (1979), Ginnis v. Mapes Hotel, 86 Nev. 408, 490 P.2d 135 (Nev. 1970) (*Ginnis* decided prior to adoption of § 48.095); New York, Caprara v. Chrysler, 52 N.Y.2d 114, 436 N.Y.S.2d 251, 417 N.E.2d 545 (1981)(New York has since limited *Caprara* to manufacturing flaws only, *see* cases cited *infra* note 37; Pennsylvania, Matsko v. Harley Davidson 325 Pa. Super. 452, 473 A.2d 155 (1984); South Dakota, Shaffer v. Honeywell, Inc., 249 N.W.2d 251 (S.D. 1976); Texas, TEX. R. EVID. 407 (states rule is not applicable to product liability); Wisconsin, Chart v. General Motors, 80 Wis. 2d 91, 258 N.W.2d 680 (1977), *aff'd,* D. L. by Friederichs v. Huebner 110 Wis. 2d 581, 392 N.W.2d 890 (1983); and Wyoming, WYO. R. EVID. 407 (accompanying comment indicates intent to follow *Ault*). *See also* D. LOUISELL & C. MUELLER, *supra* note 1, § 166 at 413-21.

27. *See, e.g.*, Farner v. Paccar Inc., 562 F.2d 518, 527 (8th Cir. 1977) (probative value of recall letter outweighed prejudice because of other independent evidence); Caterpillar Tractor Co. v. Beck, 624 P.2d 790, 793-94 (Alaska 1981) (subsequent design changes are "highly probative of the existence of a defect, which is the essence of a strict liability action. . . ."); Sutkowski v. Universal Marion Corp., 5 Ill. App. 3d 313, 319, 281 N.E.2d 749, 753 (1972); Caprara v. Chrysler Corp., 52 N.Y.2d 114, 123-27, 417 N.E.2d 545, 549-51, 436 N.Y.S.2d 251, 255-57 (1981) (evidence of a ball joint with a plastic insert and without one permits a jury to compare effects and eliminate other possible causes). *See also* Note, *Products Liability and Evidence of Subsequent Repairs,* 1972 DUKE L.J. 837, 846-47 (argues that evidence of subsequent repairs is valuable in determining feasibility of safer design and of defendant's control over the product).

28. 628 F.2d 848, 856-58 (4th Cir. 1980), *cert. denied,* 449 U.S. 1080 (1981). In addition to the Fourth Circuit, the First, Second, Third, Fifth, Sixth, Seventh and Ninth Circuits also apply FED. R. EVID. 407 to subsequent product design changes in strict product liability cases. *See* Gauthier v. AMF., Inc., 788 F.2d 634 (9th Cir. 1986); Fish v. Georgia-Pacific Corp., 779 F.2d 836 (2d Cir. 1985); Flaminio v. Honda Motor Co., 733 F.2d 463, 469 (7th Cir 1984); Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883 (5th Cir. 1983); Bauman v. Volkswagenwerk Aktiengesellschaft, 621 F.2d 230 (6th Cir. 1980); Oberst v. International Harvester Co., 640 F.2d 863 (7th Cir. 1980); Roy v. Star Chopper Co., 584 F.2d 1124 (1st Cir. 1978), *cert. denied,* 440 U.S. 916 (1979). States excluding the evidence are Arizona, ARIZ. REV. STAT. ANN. § 12-686(2); Colorado, COLO. REV. STAT. § 13-21-404 (Supp. 1985); Idaho, IDAHO CODE § 6-1406 (1980); Indiana, Ortho Pharmaceutical v. Chapman, 180 Ind. App. 33, 388 N.E. 2d 541, 558-562, (1979); Maryland, Troja v. Black &

Circuit held in *Werner* that regardless of the theory behind requiring a defendant to pay damages, the deterrent to making subsequent improvements is the same.[29] The court reasoned that it is not the question of whether the defendant or his product is at fault that inhibits him from making improvements, but rather it is the fear that the evidence may be ultimately used in a case against him.[30] Other cases hold that the evidence is highly prejudicial and of little probative value.[31]

Regardless of whether one supports or opposes exclusion, it is evident from both arguments that courts primarily accept or reject the subsequent remedial measure exclusionary rule in strict product liability actions based on whether they believe the rule actually affects the conduct of manufacturers. Those courts which accept the rule in product liability seem to believe that the rule works the same in product liability law as it does in negligence law; they apply the rule the same way in both situations.[32] This results in the exclusion of post-accident repairs only, while post-sale pre-accident design changes are unaffected by the rule.[33]

ADVANTAGES OF A POST-SALE EXCLUSION AS A MEANS OF ACHIEVING POLICY GOALS

The purpose claimed by courts for applying the subsequent remedial measure exclusionary rule to strict product liability actions is to encourage safer products[34] and to avoid jury prejudice.[35] However, the logic of these aims, when claimed to be just as applicable to strict product liability as to

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Decker, 488 A.2d 516, 521-523 (1985); Michigan, MICH. COMP. LAWS ANN. § 600.2946(3); Nebraska, NEB. REV. STAT. § 27-407 (1979); New Jersey, Price v. Buckingham Mfg. Co., 110 N.J. Super. 462, 266 A.2d 140, 141 (1970)(per curiam); Ohio, LaMonica v. Outboard Marine, 48 Ohio App. 2d 43, 355 N.E.2d 533, 535 (1976); Washington, Haysom v. Coleman Lantern Co., 89 Wash. 2d 474, 573 P.2d 785 (1978)(en banc). *See* D. LOUISELL & C. MUELLER, *supra* note 1, § 166, at 413-421 for a listing of cases supporting and opposing applicability of FED. R. EVID. 407 and its state counterparts to strict product liability actions.

29. *Werner*, 628 F.2d at 857. *See also* Cann v. Ford Motor Co., 658 F.2d 54, 60 (2d Cir. 1981) (court held that rule's anti-deterrence goal is relevant to defendants sued under either strict liability or negligence theory).

30. *Werner*, 628 F.2d at 856-57. The *Werner* court also refuted the *Ault* court's premise that if drafters of the exclusionary rule intended the rule to apply to strict liability, they would have used an expression other than "culpable conduct." In *Werner*, the court determined that "culpable conduct" is an act that is wrong, but not necessarily one that involves malice or guilty purpose; this rule should thus also apply on policy grounds to strict liability as well as traditional negligence. *Id.*; *Ault*, 13 Cal. 3d at 120, 528 P.2d at 1151,117 Cal. Rptr. at 823.

31. *See* Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883, 887-88 (5th Cir. 1983) (argues that the real issue is whether the product was defective at the time it was sold, and theory that change is probative is pure speculation); Cann v. Ford Motor Co., 658 F.2d 54, 60 (2d Cir. 1981) (such evidence is "highly prejudicial" and "extremely damaging"); Bauman v. Volkswagenwerk Aktiengesellschaft, 621 F.2d 230, 233 (6th Cir. 1980) (stating limiting instruction to prevent prejudice was necessary where such extremely damaging evidence was introduced to prove feasibility).

32. *See* cases cited *supra* note 28.

33. *See, e.g.*, Downie v. Kent Prods., 420 Mich 197, 362 N.W.2d 605 (1984), where the Michigan Supreme Court compared MICH. COMP. LAWS ANN. § 600.2946(3) with MICH. R. EVID. 407. The statute proscribes changes made after "the event of death or injury." The court declared that the "event" is the accident, not the sale, and that this is consistent with Rule 407. Thus, the court held, the statute is not applicable to post-sale, pre-accident measures. *Id.*

34. *See, e.g.*, *Werner*, 628 F.2d at 857; Readenour v. Marion Power Shovel, 149 Ariz. 442, 446, 719 P.2d 1058, 1062 (1986).

35. *See Grenada*, 695 F.2d at 888; *Readenour*, 149 Ariz. at 451, 719 P.2d at 1067.

negligence, is consistent with product liability theory only if the exclusionary rule covers post-sale as well as post-accident changes. To achieve the claimed effects of "motivating," or at least not "discouraging" manufacturers from designing safer products, the rule should be applied at the time from which a person would think that such changes may be used against him in a future lawsuit. Such timing differs between strict liability and negligence because of the inherent differences in the methods by which liability attaches in each theory.[36] Foreseeability at the time of an accident determines negligence. On the other hand, liability in product liability cases is based on a finding of unreasonable danger which existed at the time of sale. Thus, while the rule sensibly excludes evidence of repairs made after an accident in negligence cases, it should exclude evidence of design changes made after the date of sale in product liability cases. This proposition, and the failure of courts to analyze or adopt it, is outlined below.

The Problem of Applying the Exclusionary Rule to Post-Accident Measures Only

Limiting the exclusionary rule to evidence of post-accident modifications is a natural result of applying the rule as it is applied in negligence actions. The "event" referred to in Rule 407 is the accident allegedly caused by the defendant's negligent act.[37] Interpreting the phrase "after an event" to mean post-accident, courts have denied defendants' claims that Rule 407 applies to pre-accident modifications.[38]

Such reasoning, however, fails to do justice to the policy goals supporting the application of the exclusionary rule to strict product liability actions. While acknowledging differences between product liability and negligence theories, courts have asserted that the differences are not significant enough to require different approaches when it comes to the goal of not deterring

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36. To establish a cause of action under § 402A of the RESTATEMENT (SECOND) OF TORTS, a plaintiff must prove that the defendant sold a defective product, that the defect was unreasonably dangerous, and that the defective condition existed at the time the product left the seller's hands. *See, e.g.*, Dietz v. Waller, 141 Ariz. 107, 110, 685 P.2d 744, 747 (1984) (the court lists these three elements as the basic elements of a strict product liability case). Thus, a major difference between the theories of negligence and strict liability is that in negligence, the issue of when a danger exists is at the time of accident, whereas in strict liability, the question is whether a danger existed at the time the product left the control of the seller. *See* Wade, *Strict Tort Liability of Manufactures*, 19 SW. L.J. 5, 20 (1965) (plaintiffs need to show that defendant was responsible for the defective condition, not as a matter of fault, which would be true in a negligence action, but by showing that the condition existed when it left the defendant's control).

37. *See, e.g.*, *Downie*, discussed *supra* at note 33. *But see* Cover v. Cohen, 61 N.Y.2d 261, 265-66, 461 N.E.2d 864, 868-69, 473 N.Y.S.2d 378, 382-83 (N.Y. 1984), where the New York Court of Appeals held that in design defect cases, the evidence is excluded from the date of sale. The court determined that references in earlier cases to "post-accident" modification did not mean that the time of accident is the determinative date of the rule. Those cases only used the time of accident, said the court, because such an adjective was descriptive of the modifications at issue. Other language in the same cases, however, pointed to the date of manufacture as the date the exclusion should be effective. *See* Rainbow v. Albert Elia Bldg. Co., Inc., 79 A.D.2d 287, 436 N.Y.S.2d 480, 484 (1981), *aff'd*, 56 N.Y.2d 550, 434 N.E.2d 1345, 449 N.Y.S.2d 967.

38. *See, e.g.*, Arceneaux v. Texaco, Inc., 623 F.2d 924, 928 (5th Cir. 1980) (held that Rule 407 does not prohibit the admission of pre-accident design modifications); Rozier v. Ford Motor Co., 573 F.2d 1332, 1343 (5th Cir. 1978); Henderson, *supra* note 1, at 17. *See also Downie*, 420 Mich. at 203-04, 362 N.W.2d at 611-12, discussed *supra* at note 33.

manufacturers from improving the designs of their products.[39] Beyond the question of the applicability of policy goals, courts fail to note or examine the mechanics of the exclusionary rule in conjunction with the question of whether liability is determined by unreasonable danger at time of sale or foreseeability at time of accident. To achieve the desired purposes behind the exclusionary rule, courts should re-examine the rule in light of strict liability theory.

Timing of the Act and Effect of Subsequent Changes

The timing of subsequent remedial measures and the relation that the timing has to the factors determining liability should be, but are not, considered by courts applying the exclusionary rule.[40] What courts do discuss are two very major differences between negligence and strict product liability theories. The first of these differences is that negligence theory focuses on fault while strict product liability theory focuses on the quality of the product.[41] The second difference is that liability in negligence requires a breach of a standard of reasonable conduct based on what was knowable prior to the accident,[42] whereas the standard of fault in a strict products liability suit is determined by unreasonable danger[43] based on a hindsight test.[44] Courts

39. Werner v. Upjohn Co., 628 F.2d 848 (4th Cir. 1980), *cert. denied*, 449 U.S. 1080 (4th Cir. 1981); Cann v. Ford Motor Co., 658 F.2d 54, 60 (2d Cir. 1981).

40. *See e.g., Werner*, 628 F.2d at 856-58. While the court acknowledged the difference between unreasonable danger of a product and a defendant's conduct, it held that the policies behind Rule 407 affect defendants' behavior in strict liability as well as in negligence. In reaching this conclusion, however, the court did not discuss the requirement that unreasonable danger must be determined to have existed at the date of sale rather than at the time of the accident.

41. *Werner*, 628 F.2d at 857-58; *Readenour*, 149 Ariz. at 446, 719 P.2d at 1062.

42. *See* PROSSER & KEETON, *supra* note 9, § 30 at 164-65. *See also Werner*, 628 F.2d at 857; Dart v. Wiebe Mfg., 147 Ariz. 242, 247-48, 709 P.2d 876, 881-882 (1985) ("In a negligence case, the inquiry focuses on the reasonableness of the manufacturer's choice of design in light of the knowledge available at the time of manufacture.").

43. *See* RESTATEMENT (SECOND) OF TORTS § 402A comment i, which states: "The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics." Courts use several methods to determine unreasonable danger. The two most common are the consumer expection test in comment i to § 402A and the risk/utility test. *See, e.g.*, Dorsey v. Yoder Co., 331 F. Supp. 753, 759-760 (E.D. Pa. 1971), *aff'd*, 474 F.2d 1339 (3d Cir. 1973), *quoting* Wade, *supra* note 36, at 17; the analysis prepared by Dean Wade, and as quoted in *Dorsey* is:

> '(1) the usefulness and desirability of the product, (2) the availability of other and safer products to meet the same need, (3) the likelihood of injury and its probable seriousness, (4) the obviousness of the danger, (5) common knowledge and normal public expectation of the danger (particularly for established products), (6) the avoidability of injury by care in use of the product (including the effect of instructions or warnings), and (7) the ability to eliminate the danger without seriously impairing the usefulness of the product or making it unduly expensive.'

Dorsey, 331 F. Supp. at 760. *See also* PROSSER & KEETON, *supra* note 9, at § 99, at 698-702. For a general discussion on the meaning of design defects, see generally Keeton, *Manufacturer's Liability: The Meaning of "Defect" in the Manufacture and Design of Products*, 20 SYRACUSE L. REV. 559, 568 (1969) ("[A] product is improperly designed if its sale would be negligence on the part of a maker who had full knowledge of all the risks and dangers that were subsequently found to exist in the product. . . ." However, the test "is not based upon the risks and dangers that the maker should have, in the exercise of ordinary care, known about . . . [but rather the] danger in fact, as that danger is found to be at the time of the trial."); Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825 (1973) (emphasizing that there is little difference between a negligent action and an action for strict liability).

44. *See, e.g., Werner*, 628 F.2d at 857; *Dart*, 147 Ariz. at 247, 709 P.2d at 881 (applying and

fail to discuss, in any way germane to the policy goals of the exclusionary rule, the timing of the act for which the defendant may later be liable. However, such timing should be taken into account if the exclusionary rule's antideterrent policy is to be furthered.

In negligence, a defendant may later be liable for a breach of duty based on a particular standard of care.[45] The critical time at which a remedial measure works against a defendant is after the accident occurs. A jury may use evidence of remedial actions taken after an accident to infer, sometimes erroneously, that the defendant admits being negligent. It is the fear of such an inference that may deter the defendant from making necessary improvements.[46] But if the defendant alleviates the danger between the time of his negligent act and the accident, so that he is not in breach of a duty at the time of the accident, he is not liable despite his earlier negligence.[47] In this situation, the remedial measure taken "before" the accident may help the defendant prove his disassociation from the accident and thus avoid liability.

In strict product liability, on the other hand, the act for which the defendant may be later liable is the sale of a defectively designed product.[48] The critical time at which a subsequent design change may work against the manufacturer is thus any time after the sale of the product. Design changes made before a sale would be analogous to actions taken between a negligent act and an accident. Defendants would be motivated to make such changes in order to later prove disassociation from fault. But any design modifications made between the time of the sale and the time of the accident harm the defendant's position.[49] Evidence of the modification becomes antecedent

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discussing the hindsight test). *See generally* Henderson, *supra* note 1, at 12-13. Professor Henderson discusses the differences between a foreseeable knowledge test in negligence and the hindsight test in strict liability in conjunction with subsequent remedial measures.

45. *See supra* note 42 and accompanying text.

46. *See, e.g., Werner*, 628 F.2d at 857, where the court stated:

> The rationale behind Rule 407 is that people in general would be less likely to take subsequent remedial measures if their repairs or improvements would be used against them in a lawsuit arising out of a prior accident. By excluding this evidence defendants are encouraged to make such improvements. It is difficult to understand why this policy should apply any differently where the complaint is based on strict liability as well as negligence. From a defendant's point of view it is the fact that the evidence may be used against him which will inhibit subsequent repairs or improvement. It makes no difference to the defendant on what theory the evidence is admitted; his inclination to make subsequent improvements will be similarly repressed.

47. *See generally* PROSSER & KEETON, *supra* note 9, § 30, at 164-65. A cause of action founded upon negligence requires the existence of a legal duty, a breach of the duty, a legal or proximate cause, and actual damage resulting from the conduct. "Negligent conduct in itself is not such an interference with the interests of the world at large that there is any right to complain of it, or to be free from it, except in the case of some individual whose interests have suffered." *Id.* Thus, if a plaintiff has suffered but can prove no relationship between the defendant's conduct and the causation of the injury, then no cause of action sounding in negligence, from which liability would follow, would exist.

48. RESTATEMENT (SECOND) OF TORTS § 402A. *See* Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883, 888 (5th Cir. 1983); Dietz v. Waller, 141 Ariz. 107, 110, 685 P.2d 744, 747 (1984) (where the court noted that strict liability requires that the defective condition must have existed at the time the product left the defendant's control).

49. In negligence situations, an accident puts a defendant on notice that some correction may be required. Rule 407 is designed to encourage defendants to make such changes. On the other hand, manufacturers who make post-sale, pre-accident changes lack such notice. Thus, if Rule 407 excludes evidence of only post-accident modifications, negligence defendants have the added advantage of notice whereas strict product liability defendants do not.

proof of unreasonable danger existing at the time of sale. Thus, a manufacturer is inclined to avoid making such changes from the date of sale rather than simply from the date of accident.[50] This contrasts with the actor in negligence who is inclined to take affirmative steps after the act, but before the accident, to remedy the problem.

This analysis shows that application of the exclusionary rule to evidence of post-accident, and not post-sale, design changes defeats the policy goal of encouraging manufacturers to make products safer. The same analysis applies to relevancy and the exclusionary rule's policy aim of preventing prejudice. While post-sale and post-accident changes do have some evidentiary basis as proof of negligence or of product defect,[51] the probative value of such evidence is thought to be far exceeded by the danger of prejudice.[52] Whether the event is defined as the sale or the accident, in both post-event situations, modifications are often made for reasons having nothing to do with rectifying safety deficiencies.[53] Furthermore, post-sale, pre-accident changes are even less probative than post-accident changes because, especially in the absence of other accidents, they are even more attenuated and less indicative of fault than such changes occurring in the post-accident period.[54] Thus, extending exclusion to the date of sale serves the policy goals of the exclusionary rule.

The Statutes of Arizona, Colorado, and Idaho

The Model Uniform Product Liability Act,[55] put together by the U. S. Department of Commerce in 1977, suggests excluding evidence of design changes made subsequent to the date of sale.[56] Arizona,[57] Colorado[58] and

50. The distinctions between negligence and strict liability theories diminishes considerably in failure to warn cases. *Uptain v. Huntington Lab, Inc.*, 723 P.2d 1322, 1328 (Colo. 1986); *Werner*, 628 F.2d at 858. *See* PROSSER & KEETON, *supra* note 9, § 99, at 697. "There will be no liability without a showing that the defendant designer knew or should have known in the exercise of ordinary care of the risk or hazard about which he failed to warn." *Id. See also* COLO. REV. STAT. § 13-21-404 (Supp. 1985), *infra* note 78.

Another problem in warning cases is the difference between a danger learned of immediately, such as from a spontaneous accident, as opposed to an insidious problem, learned of slowly over time, such as the eventual discovery that asbestos is a carcinogen. *See* Beshada v. Johns-Manville Products Corp., 90 N.J. 191, 447 A.2d 539 (1982) (imposed duty on a manufacturer for failure to warn of danger who could not have known of danger at the time of sale).

51. Readenour v. Marion Power Shovel, 149 Ariz. 442, 445-56, 719 P.2d 1058, 1061-62 (1986); *See also supra* note 27 for cases stating that the probative value outweighs the danger of prejudicial misuse.

52. *Readenour*, 149 Ariz. at 445-56, 719 P.2d at 1061-62. *See also supra* note 31 for cases arguing that the danger of jury prejudice outweighs probative value.

53. *See e.g.*, Ault v. International Harvester Co., 13 Cal. 3d 113, 125-26, 528 P.2d 1148, 1156, 117 Cal. Rptr. 812, 820 (Clark, J., dissenting). Justice Clark noted that manufacturers often change designs to decrease costs, increase efficiency and generally improve marketability. This language is echoed in Grenada Steel Indus. v. Alabama Oxygen Co., 695 F.2d 883, 887-88 (1983).

54. *Readenour*, 149 Ariz. at 446, 719 P.2d at 1062.

55. Final Report of the Federal Interagency Task Force on Product Liability. Section 107 states in part:

> (A) Evidence of changes in (1) a product's design, (2) warnings or instructions concerning the product, (3) technological feasibility, (4) "state of the art", or (5) the custom of the product seller's industry or business, occurring after the product was manufactured, is not admissible for the purpose of proving that the product was defective in design. . . .

56. *See generally* Schwartz, *The Uniform Product Liability Act—A Brief Overview*, 33 VAND. L. REV. 579 (1980), reviewing the Uniform Product Liability Act and suggesting that its adoption

Idaho[59] have enacted product liability acts which have various provisions that exclude evidence of post-sale changes as proof of a product defect. None of these statutes, either expressly or in their accompanying commentary, mention either of the policy aims underlying Rule 407.[60] However, recent judicial interpretation, at least of the Arizona statute, suggests that those policy aims underlie the act.[61] In *Readenour v. Marion Power Shovel*[62] the Arizona Supreme Court compared the statute's extension of the exclusionary rule to the date of sale with the rule's post-accident exclusion.[63]

In *Readenour*, the plaintiff was permitted to offer evidence of post-sale, pre-accident design changes for purposes other than proving a product defect, such as proving feasibility of alternative designs and proving negligence.[64] The case reached the Arizona Supreme Court on a claim that the trial court erred in refusing to grant the defendant's requested jury instructions to limit the use of the evidence to the purposes for which it was offered.[65] Although Rule 407 expressly mentions exceptions for which such

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would "end the product liability problem for sellers without compromising consumer rights." *Id.* at 592.

57. The pertinent text of the statute is reproduced *infra* note 63. *See also infra* notes 66-69 and accompanying text.

58. *See infra* note 78 and accompanying text.

59. *See infra* note 75 and accompanying text.

60. For a discussion of the policies underlying Rule 407, see *supra* notes 15-17 and accompanying text.

61. Readenour v. Marion Power Shovel, 149 Ariz. 442, 445, 719 P.2d 1058, 1061 (1986) ("[T]he same policy considerations support both the statute and the rule.")

62. *Id.* at 444-446, 719 P.2d at 1060-62.

63. *Id.* ARIZ. REV. STAT. ANN. § 12-686 states in part:

> In any product liability action, the following shall not be admissible as direct evidence of a defect: . . . (2) Evidence of any change made in the design or methods of manufacturing or testing the product or any similar product subsequent to the time the product was first sold by the defendant.

ARIZ. R. EVID. 407 is identical to FED. R. EVID. 407. Prior to *Readenour*, the Arizona Court of Appeals held Rule 407 applicable to strict product liability actions. Hallmark v. Allied Prods. Corp., 132 Ariz. 434, 440-41, 646 P.2d 319, 325-26 (Ct. App. 1982).

64. *Readenour*, 149 Ariz. at 447, 719 P.2d at 1063-64. The plaintiff also claimed the evidence was admissible as proof of unreasonable danger. *Id.* at 446, 719 P.2d at 1062. The court held that unreasonable danger is similar to culpability, and, construing the intent of the statute to be the same as the intent of the rule, disallowed the evidence as proof of unreasonable danger. *Id.* at 448, 719 P.2d at 1063. But Arizona has adopted the risk/utility test, and one of the factors to be considered in that test of unreasonable danger is feasibility of alternative designs. Byrns v. Riddell, Inc., 113 Ariz. 264, 550 P.2d 1065 (1976). Thus, permitting the evidence as proof of feasibility while also stating that the evidence may not be used to prove unreasonable danger appears somewhat inconsistent.

65. *Readenour*, 149 Ariz. at 444, 719 P.2d at 1060. A contrary position is that post-accident changes should be governed in product liability actions by relevancy theories under FED. R. EVID. 403, which states: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." *See* Herndon v. Seven Bar Flying Serv., Inc, 716 F.2d 1322, 1328-29 (10th Cir. 1983), *cert. denied sub nom.* Piper Aircraft Corp. v. Seven Bar Flying Serv., 466 U.S. 958 (1984). If this rule had been applied in *Readenour*, no instruction would have been required because the trial judge thought that ARIZ. REV. STAT. ANN. § 12-686(2) did not apply, and used a Rule 403 analysis to begin with. *Readenour*, 149 Ariz. at 449-50, 719 P.2d at 1065-66. The defendant would thus have no claim. Without the existence of the statute or another rule limiting the use of the evidence, no need would have existed for an instruction under ARIZ. R. EVID. 105 (instructions required, if requested by opposing party, when evidence inadmissible for one purpose is admitted for another). *Id.* at 450-52, 719 P.2d at 1066-68. *See also* J. WEINSTEIN & M. BERGER, *supra* note 1, at ¶ 407-12. Kentucky has adopted this approach in KY. REV. STAT. ANN. § 411.330 (1978) (the proponent of the evidence of

evidence may be used, the Arizona statute is silent regarding other uses.[66] The defendant claimed that the instructions were proper under the statute as well as under the rule while the plaintiff claimed that the statute itself contradicted the rule and thus violated the state's constitution by virtue of precluding Rule 407 from controlling in the matter.[67]

While remaining faithful to the presumed legislative intent behind the statute, the Arizona Supreme Court interpreted the statute as supplementing rather than contradicting Rule 407.[68] The court inferred from the statute's narrow phraseology of "direct proof of a defect" that the legislature intended to permit use of the evidence for other relevant purposes. From this inference, the court imputed to the statute the express exceptions of the rule.[69] This finding resolved the defendant's claim that instructions limiting the use of evidence should have been given.[70] The court then pointed out that the statute applies to evidence only in the post-sale, pre-accident period because Rule 407 already governs the admissibility of all post-accident measures regardless of whether the case sounds in strict liability, negligence, or breach of warranty theory.[71] Construing the statute and rule together, the court held that evidence of either post-sale or post-accident design changes is inadmissible as proof of a product defect resulting from either negligent conduct or from defective product quality.[72]

In *Readenour*, the Arizona Supreme Court acknowledged that the policy grounds of fostering public safety and preventing prejudice also apply to the statute.[73] It is noteworthy, however, that the court was not promoting its own theory, but simply advancing a plausible theory upon which the leg-

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the subsequent remedial measure in product liability must persuade the court of its relevance before it may be presented to the jury).

66. *See* ARIZ. REV. STAT. ANN. § 12-686(2), *supra* note 63.

67. *Readenour*, 149 Ariz. at 444-46, 719 P.2d at 1060-62. Evidentiary statutes are constitutional in Arizona only if they supplement rather than contradict rules of evidence promulgated by the Arizona Supreme Court. *Id.* at 444-45, 719 P.2d at 1060-61. The court compared the two provisions with the intention of interpreting the statute, without violating the statutory language or legislative intent if possible, in such a way that Rule 407 would not be contradicted. *Id.* at 445, 719 P.2d at 1061.

68. *Id.* at 446, 719 P.2d at 1062. If the question of admissibility were governed exclusively by Rule 407, pre-accident changes would be admissible since the Rule affects only post-accident changes.

69. *Id.* at 445-46, 719 P.2d at 1061-62.

70. *Id. See also supra* note 65 for a discussion on how the the court applied its statutory interpretation to resolve the defendant's claim that an instruction was required.

For a discussion of the limited effectiveness of a limiting instruction when the evidence is admitted for other purposes, see Birnbaum, *Products Liability: The Growing Trend to Deny Admission of Post-Accident Remedial Measures*, NAT'L L.J., July 23, 1979, at 18, col. 1; Field, *The Maine Rules of Evidence: What They Are and How They Got That Way*, 27 ME. L. REV. 203, 218 (1975) (calls such instructions to consider the evidence for a limited purpose inadequate). *But see* Bauman v. Volkswagenwerk Aktiengesellschaft, 621 F.2d 230, 233 (6th Cir. 1980) (the court stated that where extremely damaging evidence was used to prove controverted feasibility, a limiting instruction was necessary to prevent prejudice).

71. *Readenour*, 149 Ariz. at 446, 719 P.2d at 1062. In the Arizona product liability statute, the term "product liability action" includes "actions sounding in negligence, strict liability or breach of warranty." *Id.* at 445, 719 P.2d at 1061 n.4. *See* ARIZ. REV. STAT. ANN. § 12-681(3). Conceivably, this could preclude admission of the evidence in a product negligence action, but the court limited its holding to the proof of a defect resulting from negligence, rather than the negligent design itself. *See supra* note 68 and accompanying text.

72. *Readenour*, 149 Ariz. at 446, 719 P.2d at 1062.

73. *Id.* at 445-46, 719 P.2d at 1061-62.

islature may have relied.[74]

The Idaho legislature has enacted a statute[75] similar to Arizona's. It precludes use of post-sale design changes not only as proof of a defect, but also as proof of technological feasibility, apparently whether such feasibility is contested or not.[76] On the other hand, the statute expressly permits admission of the evidence for other uses, whereas the Arizona statute does not.[77] The Idaho statute has not yet been reviewed by any appellate court.

The language of the Colorado statute[78] is less clear than the Arizona and Idaho statutes. It seems to limit admission of post-sale design changes only if they were made because of knowledge obtained after the date of sale. In *Uptain v. Huntington Lab, Inc.*,[79] the Colorado Supreme Court discussed the statute briefly, holding that it was inapplicable in a case involving a warning label where the dangers warned of were not discovered until after the date of sale.[80] The court did not, however, discuss whether the statute totally precluded admission of evidence of a subsequent design change other than a warning, when the technology for such a change was known and available at the time of manufacturing, but when such a change was not known to be safer than the design originally employed.[81] The statute is writ-

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74. *Id.* at 444-46, 719 P.2d at 1060-62.

75. IDAHO CODE § 6-1406 provides in part:

> (1) Evidence of changes in (a) a product's design, (b) warnings or instructions concerning the product, (c) technological feasibility, (d) "state of the art," or (e) the custom of the product seller's industry or business, occurring after the product was manufactured and delivered to its first purchaser or lessee who was not engaged in the business of either selling such products or using them as component parts of another product to be sold, is not admissible for the purpose of proving that the product was defective in design or that a warning or instruction should have accompanied the product at the time of manufacture.... (2) [T]his evidence may be admitted for other relevant purposes, including but not limited to proving ownership or control, or impeachment.

Note the similarity of this language with section 107 of the Model Uniform Product Liability Act, *supra* note 55.

76. The statute expressly states that the evidence is inadmissible to prove technological feasibility and feasibility is omitted from the statute's exception clause. For a full text of the statute see *supra* note 75.

77. The pertinent part of ARIZ. REV. STAT. ANN. § 12-686(2) is at *supra* note 63. For a discussion on the reconciliation of the exceptions of Rule 407 with the lack of exceptions in ARIZ. REV. STAT. ANN. § 12-686(2), see *supra* notes 65-69 and accompanying text.

78. COLO. REV. STAT. § 13-21-404 provides:

> In any product liability action, evidence of any scientific advancements in technical or other knowledge or techniques, or in design theory or philosophy, or in manufacturing or testing knowledge, techniques, or processes, or in labeling, warnings or risks or hazards, or instructions for the use of such product, where such advancements were discovered subsequent to the time the product in issue was sold by the manufacturer, shall not be admissible for any purpose other than to show a duty to warn.

Whereas the Arizona and Idaho statutes, *infra* notes 63 and 75, apply to all subsequent design changes, the language of COLO. REV. STAT. § 13-21-404 may not affect changes where the knowledge employed existed prior to the sale of the product. The words "where such advancements were discovered subsequent to the time the product in issue was sold" make the applicability of the statute turn on whether the information necessary to make the change actually was discovered after the sale of the product. If knowledge existed before sale, yet was integrated into a design after sale, the statute would not apply. The Arizona and Idaho statutes have no such limiting language.

79. 723 P.2d 1322 (Colo. 1986).

80. *Id.* at 1328. Note that the statute already permits such evidence to be used any time to show a duty to warn. Thus, the evidence should be admissible under the statute, regardless of whether the knowledge became available before or after the sale. This is the view taken by the dissent. *Uptain*, 723 P.2d at 1334. *See* text of COLO. REV. STAT. § 13-21-404, *supra* note 78.

81. No such evidence was at issue in *Uptain*. *But see* Roberts v. May, 41 Colo. App. 82, 583

ten to exclude evidence of warnings made after the time of manufacturing as proof of a defect, while it is written to permit evidence of any post-sale design advancement as proof of a duty to warn.[82]

THE BROADER STRICT LIABILITY GOAL OF CONSUMER PROTECTION AND THE UNDERLYING POLICY GOALS OF THE EXCLUSIONARY RULE

The relationship of both the post-sale and post-accident rules to the broader policies of modern product liability theory is examined below. The policy goals underlying strict product liability include forcing the marketplace to absorb a greater share of the cost of injuries,[83] alleviating plaintiffs' burden of proof,[84] and promoting accident prevention.[85]

The attempt to distribute the costs of injury and property damage throughout the marketplace has succeeded too well as far as manufacturers and insurance companies are concerned.[86] In the process of enacting product liability acts, some states were influenced in part by threats from the insurance industry that product liability insurance would no longer be provided to manufacturers.[87] Another factor that influenced states was the possibility that manufacturers would close down due to unaffordable premiums.[88] One solution to this problem may be to minimize product lia-

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P.2d 305, 309 (1978) discussed *infra* note 82 (COLO. REV. STAT. § 13-21-404 was not yet in affect when *Roberts* was decided).

82. *See supra* note 78. The statute states "evidence of any . . . warnings . . . shall not be admissible for any purpose other than to show a duty to warn." On the other hand, everything that is excluded by the statute is excepted in the event a plaintiff wishes to show a duty to warn.

COLO. R. EVID. 407, which is identical to the FED. R. EVID. 407, is accompanied by a note from the Colorado Evidence Committee which states: "The phrase 'culpable conduct' is not deemed to include proof of liability in a 'strict liability' case based on a defect, where subsequent measures are properly admitted as evidence of the original defect." The Colorado Supreme Court has not ruled whether COLO. R. EVID. 407 should be applied in all strict liability actions, although the court did decide to apply it to the warning situations in *Uptain*. *Uptain*, 723 P.2d at 1326-28 (after holding the rule applicable, the court held the evidence was subject to one of the rule's express exceptions but properly excluded under Rule 403 as prejudicial). The Colorado Court of Appeals has held that COLO. R. EVID. 407 does not apply to product liability cases. Roberts v. May, 41 Colo. App. 82, 583 P.2d 305 (1978).

83. *See* Greenman v. Yuba Power Prod., Inc., 59 Cal. 2d 57, 63, 337 P.2d 897, 901, 27 Cal. Rptr. 697, 701, (1962) (purpose of such liability is to insure costs of injuries are borne by manufacturers that put such products on the market).

84. Phipps v. General Motors Corp., 278 Md. 337, 351-53, 363 A.2d 955, 962-63 (1976) (states that injured parties suing under the theory of strict product liability should not be forced to comply with the proof requirements of negligence actions).

85. Phillips v. Kimwood Mach. Co., 269 Or. 485, 503-04, 525 P.2d 1033, 1041-42 (1974). The court states: "We suspect that, in the final analysis, the imposition of liability has a beneficial effect on manufacturers of defective products both in the care they take and in the warning they give." *Id.* at 1042.

86. *See* Peck & Kennedy, *The Colorado Product Liability Act of 1977*, 1977 COLO. LAWYER 2122, 2123, nn.4-6 for a discussion on the insurance industry's view that costs were out of control at the time the Colorado Legislature was considering its Product Liability Act.

87. *See, e.g.*, North Dakota Products Liability Act, N.D. CENT. CODE § 28-01.1-01, claiming there is a "crisis" due to excessive product liability litigation and recovery. *See also* Birnbaum, *Unmasking the Test for Design Defect: From Negligence [to Warranty] to Strict Liability to Negligence*, 33 VAND. L. REV. 593, 644-45 (1980) (states that a serious insurance problem has erupted due to insurance carriers' uncertainties in the tort system, and argues that a cap should be put on product verdicts and settlements).

88. Protecting manufacturers from greater financial burdens resulting from product liability suits is a concern. *See* Costello & Weinberger, *The Subsequent Repair Doctrine and Products Liabil-*

bility recoveries resulting from prejudicial inferences from evidence of subsequent design modifications. A post-sale exclusion, encompassing a post-accident rule, would exclude all such potentially prejudicial design changes.[89]

The second goal, easing the plaintiff's burden of proof, is affected in several ways by the exclusion of evidence of subsequent design changes. Strict liability only requires proof of unreasonable danger of a product itself, and plaintiffs are spared the proof requirements of negligence actions.[90] But the characterization and timing of the test used to determine unreasonable danger vary from jurisdiction to jurisdiction.[91] The effect of the exclusionary rule on a plaintiff's burden depends on the combination of the test used to determine unreasonable danger and the time after which such changes are excluded.

A major factor affecting a plaintiff's burden of proof is whether the jury is to make its determination of liability based on information available at the time of sale[92] or at the time of trial.[93] In a true hindsight test based on knowledge available at the time of trial, both a post-sale and a post-accident exclusion of design changes would impede a plaintiff's attempt to meet his burden of proof. In this situation the jury needs proof of current information, and both exclusionary rules would exclude potentially probative evidence against the interests of the plaintiff.

In defective design and warning cases, however, the test for liability often approaches the foreseeable danger test of negligence rather than a true strict liability test based on hindsight.[94] If liability is based on information available at the time of sale, it approaches a negligence test because of the emphasis on what was knowable prior to the act of selling. A post-sale ex-

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ity, 51 N.Y. ST. B.J. 463, 465 (1979) where the authors note that small manufacturers may very much need a policy of protection if they are ever to become large manufacturers. An opposing argument is that economic self interest is one factor which should motivate manufacturers to make changes on their own, according to the theory put forth in Ault v. International Harvester, 13 Cal. 3d 113, 120, 528 P.2d 1148, 1152, 117 Ca. Rptr. 812, 816 (1974).

89. Readenour v. Marion Power Shovel, 149 Ariz. 442, 445-56, 719 P.2d 1058, 1061-62 (1986).

90. *See* Caprara v. Chrysler Corp., 52 N.Y.2d 114, 119, 436 N.Y.S.2d 251, 255, 417 N.E.2d 545, 550 (1981) where the court stressed "the need to overcome the inordinately difficult problems of proof which face contemporary consumers who suffer at the hands of articles of commerce whose proclivities to injure so often are within the sole ken of those who design and manufacture them. . . ."

91. *See* PROSSER & KEETON, *supra* note 9, § 99, at 694-702.

92. This is the approach of Dean Wade. *See* Wade, *supra* note 43, at 834-35; Wade, *On the Effect in Product Liability of Knowledge Unavailable Prior to Marketing*, 58 N.Y.U. L. REV. 734 (1983). *See, e.g.*, Boatland of Houston, Inc., v. Bailey, 609 S.W.2d 743 (Tex. 1980) (knowledge available at time of manufacture was test used).

93. This is the approach of Dean Page Keeton. *See* Keeton, *Products Liability—Inadequacy of Information*, 48 TEX. L. REV. 398, 403-04 (1970); Keeton, *supra* note 43, at 568. This was the test applied in Beshada v. Johns-Manville Prod. Corp., 90 N.J. 191, 209, 441 A.2d 539, 549 (1982).

94. When jurors determine unreasonable danger based on what was known or should have been known at a certain date, they are in essence determining liability based on foreseeable consequences of designs or warnings. *See* Henderson, *supra* note 1, at 8-16. In regard to determining liability on what should have been known at the time of the act in question, the author notes:

> To inquire whether the risks associated with a product line outweigh its utility and benefits, and then to limit the jury's consideration to that information known about the product at the date of manufacture/design, including foreseeable dangers, is to ask whether an ordinarily prudent manufacturer/designer would have produced and sold the product as it was produced and sold. Negligence by any other name is still negligence.

Id. at 11.

clusion would allow all information needed to make a time of sale determination of liability. Thus, in this situation the time after which subsequent remedial measures are excluded coincides with a plaintiff's burden of proof. On the other hand, a post-accident exclusionary rule would be unrelated to the determination of liability at the time of sale. Such a rule would allow evidence of some changes, specifically post-sale, pre-accident changes, made after the time at which knowledge of danger is measured while it would disallow evidence of other changes which were made after an accident occurred. The use of a post-accident exclusion would make sense only if the test for unreasonable danger were based on information available at the time of the accident, but no court has made this a test of unreasonable danger.

The plaintiff's burden of proving unreasonable danger is also made easier when evidence can be offered to show the economic and technological feasibility of alternative designs. This burden is simplified when a plaintiff is able to show evidence that a defendant actually made post-sale changes in the product.[95] The post-accident rule, and to a greater extent, the post-sale rule prevent plaintiffs from doing this. A plaintiff is back to square one by having to gain access to a manufacturing process possibly unavailable or not understandable to the public and thus the policy goal of lessening the plaintiff's burden of proof is impeded.[96] The exclusionary rule's policy goal of preventing prejudicial inferences of admission by conduct could be reconciled with the broader policy of lessening the plaintiff's burden of proof by allowing the plaintiff to at least mention to the jury the feasibility of a change actually made while remaining silent about the defendant's actual implementation of the change.[97] Nonetheless, the policy against discouraging changes may be hindered if defendants knew in advance that a design change they researched and developed subsequent to the sale could still be used by the plaintiff to show a jury the feasibility of that design.[98]

95. For a discussion on the propriety of proving feasibility in product liability actions with evidence of subsequent remedial measures, see Herndon v. Seven Bar Flying Serv., 716 F.2d 1322, 1328 (10th Cir. 1983), *cert. denied sub nom.* Piper Aircraft Corp. v. Seven Bar Flying Serv., 466 U.S. 958 (1984); Henderson, *supra* note 1, at 13-16; Note, *supra* note 27, at 846-47 (arguing that evidence of repairs "is relevant to the proof of a reasonably attainable safety standard" to which the "product can be compared"); Casenote, *supra* note 18, at 872-73. *See also* Boeing Airplane Co. v. Brown, 291 F.2d 310, 315 (9th Cir. 1961) (design change admissible to show feasibility at time of design of product).

96. For example, plaintiffs are not likely to know or to be able to determine the adequacy of airplane fuel systems, steering mechanisms of earth movers, etc. *See* Britain, *Product Honesty*, 79 NW. U.L. REV. 342, 355 (1984). One commentator argues that design changes up to the time of trial should be admissible in order to aid a plaintiff in establishing the scientific knowability of a hazard. While the defendant should not be penalized for making such changes, the details of manufacturing are infinitely unknowable; thus the burden of proof should be shifted to the defendant to prove that the later design changes were *not* knowable at the time of manufacture. *See* Twerski, *Post-Accident Design Modification Evidence in Manufacturing Defect Setting: Strict Liability and Beyond*, 4 J. PROD. LIAB. 143, 158-159 (1981).

97. Rule 407 requires feasibility to be controverted before the plaintiff may offer evidence of a subsequent remedial measure to prove feasibility. *See* rule 407, *supra* note 2. One possible solution for defendants to the feasibility problem, if they wish to avoid showing that they actually made the change, is to admit feasibility and then play it down. *See* Annotation, *Admissibility of Evidence of Subsequent Remedial Measures under Rule 407 of the Federal Rules of Evidence*, 50 A.L.R. FED. 935, § 5[d], at 941 (1980).

98. *See* Costello & Weinberger, *supra* note 88, at 499. The authors argue for application of the rule in strict product liability cases and suggest that failure to apply the exclusionary rule to design defect cases "could result in the regression in the art of product design."

Accident prevention is the third major policy goal of modern product liabilty theory.[99] Under the assumption that the post-sale exclusionary rule really encourages manufacturers to make changes they would otherwise forego in the absence of the rule,[100] the rule helps achieve the accident prevention goal by fostering product improvements.[101] A post-sale rule would be more effective than a post-accident rule because a defendant's fear of making changes would abate sooner.

Despite the reasons supporting the application of a post-sale rather than a post-accident rule to strict product liability, many drawbacks remain which defeat the policy goals underlying both rules.[102] For example, if negligence and strict liability are pleaded together,[103] the post-sale, pre-accident change may be offered to show foreseeability of danger for the negligence count.[104] If prior accidents are admissible to prove knowledge of a dangerous condition, the threat of punitive damages for intentional neglect could cancel the presumed deterrent of fear of future evidentiary use.[105] Another drawback of both rules is that it is likely that many people are not aware of either rule.[106] Even in the absence of an exclusionary rule, they would probably correct defective conditions to avoid subsequent lawsuits. Finally, many products consumed in Arizona, Colorado, and Idaho are produced by manufacturers in large industrial states such as California, Illinois, Pennsylvania, and Texas, where the evidence of subsequent design changes is permitted as proof of a defect. It seems unlikely that the behavior of manufacturers from those states would be affected by the policies behind either a post-sale or a post-accident exclusionary rule of other states.[107]

CONCLUSION

The debate over the application of an exclusionary rule is likely to continue in the absence of any empirical evidence showing the effect these rules have on manipulating the behavior of manufacturers.[108] Moreover, it ap-

99. *See supra* note 85 and accompanying text.

100. *See* discussion, *supra* note 22 and accompanying text; *see also infra* text accompanying note 107.

101. Readenour v. Marion Power Shovel, 149 Ariz. 442, 446, 719 P.2d 1058, 1062 (1986).

102. *See supra* notes 15-17 and accompanying text for a discussion of the policy goals of the subsequent remedial measure exclusionary doctrine.

103. Plaintiffs often plead both counts. *See* Wade, *supra* note 92, at 748.

104. *But see* D.L. v. Huebner, 110 Wis. 2d 581, 619, 329 N.W.2d 890, 903 (1983) (exclusionary rule inapplicable where both negligence and strict liability pleaded simultaneously).

105. *See* Kobayashi, *supra* note 17, at 321 where the author argues that people will not refuse to take remedial steps merely to come within the scope of some evidentiary rule, "particularly in light of the liberalized scope of punitive damage awards."

106. *See, e.g.*, Herndon v. Seven Bar Flying Serv., 716 F.2d 1322, 1328 (10th Cir. 1983), *cert. denied sub nom.* Piper Aircraft Corp. v. Seven Bar Flying Serv., 499 U.S. 958 (1984); J. WEINSTEIN & M. BERGER, *supra* note 1, at ¶ 407[02].

107. Both plaintiffs and defendants should examine the laws available in both state and federal courts. If the federal court is in the Eighth or Tenth Circuit, subsequent remedial measures might be admissible where they may not be in a state court, and are thus more favorable to plaintiffs. Likewise, defendants might want to remove, if possible, to a federal court. In California, for example, subsequent remedial measures are admissible in the state courts under *Ault*, but are inadmissible, (at least from the date of accident) in federal courts of the Ninth Circuit. For a discussion of conflict of laws and Rule 407 in federal courts, see D. LOUISELL & C MUELLER, *supra* note 1, at § 166.

108. *See supra* note 22 for a discussion of the lack of empirical evidence that the policy goals of the exclusionary rule are actually achieved.

pears that courts will continue to disagree on whether the subsequent remedial measures exclusionary rule should apply to strict product liability. This is because of the widespread disagreement concerning what point in time knowledge should be measured or what type of test should be employed to determine unreasonable danger. But as this Note points out, the time of accident does not have the same meaning in strict product liability as it does in negligence, as far as the finding of fault is concerned, regardless of whether the focus is on conduct or the product.[109] Therefore, if a jurisdiction does apply an exclusionary rule on the belief it will promote consumer safety and prevent misuse of evidence by a jury, then the designation of the time of sale is more consistent with the elements of a prima facie strict liability claim. Courts applying Rule 407 or a similar exclusionary rule should thus examine the application of the rule with the elements of product liability theory rather than applying the rule in exactly the same way as it was conceived for negligence actions.

109. *See supra* notes 37-39 and accompanying text.