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COMPONENT PARTS AND RAW MATERIALS SELLERS:
FROM THE TITANIC TO THE NEW RESTATEMENT

by M. Stuart Madden¹

ABSTRACT

Professor Madden evaluates the treatment of potential design and informational obligation liability for raw materials and component parts manufacturers under the Products Liability Restatement. Following an introduction to the approach taken under the *Restatement (Second) of Torts: Products Liability*, and the congruent approach of the new the *Restatement (Third) of Torts: Products Liability* (hereinafter *Third Restatement*), the author evaluates the *Third Restatement* and the limited number of decisions that have employed it. Further to the goal of evaluating the bona fides of the *Third Restatement* rule, the author describes the two principal approaches to modern Tort law. The first approach is the venerable corrective justice-morality model. The second model is that of economic efficiency-deterrence. Professor Madden concludes that the *Third Restatement's* synthesis in terms of warnings and design duties of raw materials or component parts suppliers proves up favorably under either construct, and that as respects these somewhat commingled issues represents a valuable contribution to Products Liability law.

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TABLE OF CONTENTS

- I. INTRODUCTION
- II. THE RESTATEMENT (SECOND) OF TORTS SECTION 402A
TREATMENT OF COMPONENT PARTS AND RAW
MATERIAL SELLERS' DUTIES
 - A. Generally
 - 1. Reduction in Avoidable Accident Costs
 - 2. Cost Spreading
 - 3. Justice
 - 4. Reasonable Foreseeability
 - B. Section 402A's Strategic and Successful Distortion of the
Standards for a Conventional Restatement
 - C. The Decisional Law Under Section 402A
- III. THE RESTATEMENT (THIRD) OF TORTS: PRODUCTS
LIABILITY TREATMENT OF COMPONENT PART
SUPPLIER AND RAW MATERIAL SELLERS' DUTIES
 - A. Generally
 - B. The Early Decisional Response
- IV. THE TORT GOALS OF CORRECTIVE JUSTICE AND
EFFICIENCY
 - A. Generally
 - B. Corrective Justice-Morality
 - C. Efficiency-Deterrence
 - 1. Least Cost Avoider
 - 2. Pareto Efficiency
- V. COMPONENT PART AND RAW MATERIAL SELLERS'
DUTIES ANALYZED IN TERMS OF CORRECTIVE
JUSTICE AND EFFICIENCY
 - A. Corrective Justice-Morality
 - B. Efficiency-Deterrence
- VI. CONCLUSION

INTRODUCTION

Imagine that the powers of Madison Avenue have at last persuaded you that you really would rather have a Buick. You buy one, and before the odometer registers 2000 miles, at a bend in the road and at a normal speed, the axle breaks. Your Buick stutters to a stop and you find yourself as a stimulus for a multi-car chain collision.

From your lap top modem at your hospital bed, you learn that the axle, part of Buick's original equipment, was manufactured not by General Motors, but by Acme Metal Works, a small but reputable manufacturer of axles for several automobile manufacturers. Your attorney, a graduate of the Salmon P. Chase School of Law, suggests that you bring a suit against Acme, since it appears that they manufactured an axle that was flawed in the manufacturing or inspection process, or was improperly designed. She suggests further that you sue Buick. You ask: "Why Buick?" The response is twofold. First, if the bank robber Willie Sutton had been a plaintiff's lawyer, he might say: "Because that's where the money is." Buick is solvent, and is not likely to repatriate to a foreign country during the pendency of the suit. Second, and in an insight that fills attorneys with a sense of *deja vu*, or more specifically a recollection of *MacPherson v. Buick Motor Co.*,² you remember that if the overall product is marketed as a Buick, and if buyers have the reasonable perception that they are buying a Buick, then Buick has a nondelegable duty to sell a duly safe vehicle.³

In a new scenario, a middle-aged man has suffered bone damage to his jaw. His surgeon informs him that all or most of his condition can be eliminated by implantation of a temporomandibular joint (TMJ), made of Teflon (TM). Teflon is a proprietary product of E.I. DuPont de Nemours. Such joints are manufactured by a company named Vitek. DuPont sells its product in bulk to a large number of purchasers, who use it for a multitude of purposes. While DuPont knows of many applications of its product, such as the popular cooking device coating, it neither knows of, nor does it take steps to inquire as to, the universe of Teflon's potential uses or misuses.

DuPont does know that Teflon has not been approved as safe for application in Type III medical devices, and the literature accompanying

2. 111 N.E. 1050 (N.Y. 1916).

3. *See id.* at 1053.

its sale makes no representation as to its suitability for such use. When Teflon is found to be unsuitable for human implantation, should DuPont be liable in products liability?⁴

A manufacturer sells truck chassis to which downstream assemblers will thereafter affix commercial truck bodies, ranging from beverage truck bodies to garbage truck bodies. Query: Is the component part manufacturer of the rear-view windows for such chassis charged with a duty to anticipate, and design for, rear vision mirrors suited to all potential uses?⁵

A final hypothetical is based upon the venerable Cub Scout Pinewood Derby competition. The miniature pine cars, fashioned by Cub Scouts and their moms or dads, formerly were accompanied by miniature driver figurines, approximately LEGO (TM)-sized. The assembly kit now announces that the driver figurines are no longer included. Perhaps the reason for the change is that the driver figurines posed a small parts hazard. Query: Would the driver figurine manufacturer have warnings or design duties regarding the inclusion of its otherwise non-defective stamped plastic figurines sold as a component part of a hobby kit principally manufactured by, and sold under the name of, the Pinewood Derby trademark?

4. See M. Stuart Madden, *Liability of Suppliers of Natural Raw Materials and the Restatement (Third) of Torts: Product Liability -- A First Step Toward Sound Public Policy*, 30 U. MICH. L. REV. 281, 305 (1997).

5. According to *Zaza v. Marquess & Nell, Inc.* 675 A.2d 620, 628 (N.J. 1996) (citations omitted):

[T]he fabricator of a component part that is not inherently dangerous has no control over whether the purchaser properly installs the component part into the final system. Where a finished product is the result of work by more than one party, a court must examine at what stage installation of safety devices is feasible and practicable. In many jurisdictions, responsibility for installing a safety device is determined by reference to three criteria: (1) the trade custom indicating the party that normally would install the safety device; (2) the relative expertise of the parties, looking to which party is best acquainted with the design problems and safety techniques in question; and (3) practicality, focusing on the stage at which installation of the device is most feasible.

For a suggested answer, see *Verge v. Ford Motor Co.*, 582 F.2d 384 (3d Cir. 1978), in which the court found not feasible the installation of safety devices by the competent manufacturer.

THE RESTATEMENT (SECOND) OF TORTS SECTION 402A
TREATMENT OF COMPONENT PARTS AND RAW MATERIALS
SELLERS' DUTIES

A. *Generally*

Component parts, raw materials and ingredients, and the responsibilities of sellers of such products, have long been treated as a special subcategory in products liability. The rationale has consistently been that component parts, raw materials, or ingredients enjoy one more, or all of these qualities that differentiate them from ordinary consumer products:

- (1) They often do not reach the final vendee or user in a form substantially unchanged and do not deserve strict products liability treatment under *RESTATEMENT (SECOND) OF TORTS: PRODUCTS LIABILITY* (hereinafter *Second Restatement*) Section 402A;⁶
- (2) The upstream supplier may in fact have sold a duly safe and perfectly merchantable product that only thereafter, by dint of design, formulation, application, warnings or other initiatives taken by others, became a part of a defective end product;⁷
- (3) The component part, raw materials or ingredient supplier often has no practical or efficient means of overseeing the use of its product by a large population of vendees, and thus cannot reasonably be expected to either foresee all potential hazards

6. The court in *Zaza* held that

[a] further requirement for the imposition of strict liability on a component part fabricator is that the component part reach the user without substantial change. Where a component part is subject to further processing, or where the causing of the injury is not directly attributable to any defect in the component part, the fabricator is typically not subject to strict liability.

675 A.2d at 629 (citations omitted).

7. Commenting upon the implications of an alternative rule, the *Third Restatement* section 5, comment (a) states in part: "[if] the component is not itself defective, it would be unjust and inefficient to impose liability solely on the ground that the manufacturer of the integrated product utilized the component in a manner that renders the integrated product defective." *RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY* § 5 cmt. a (1998).

inhering in various finished products, nor take steps to remedy those flaws;⁸

(4) With regard to raw materials and design duties at the least, absent adulteration or another production defect,⁹ there is no such thing as a misdesigned raw material, i.e., sand is sand, hydrochloric acid is hydrochloric acid;¹⁰

(5) Even without recourse against the component manufacturer, the injured party may proceed against the ultimate fabricator;¹¹ and

(6) It is the downstream fabricator whom we want to encourage to pursue risk reducing manufacturing decisions,¹² and who can most readily and inexpensively detect and remedy avoidable product risks.¹³

8. The *Third Restatement* explains that "[i]mposing liability would require the component seller to scrutinize another's product which the component seller has no role in developing. This would require the component seller to develop sufficient sophistication to review the decisions of a business entity that is already charged with responsibility for the integrated product." *Id.*

9. One example occurred when sheet steel with an unacceptable level of internal imperfections was rendered brittle and unsuitable for fabrication into automobile radiator fan blades. See *Pouncey v. Ford Motor Co.*, 464 F.2d 957 (5th Cir. 1972).

10. "Regarding the seller's exposure to liability for defective design, a basic raw material such as sand, gravel, or kerosene cannot be defectively designed. Inappropriate decisions regarding the use of such materials are not attributable to the supplier of the raw materials but rather to the fabricator who puts them to improper use." RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 5 cmt. c (1998).

11. Comment c to the *Third Restatement* notes that it is the final fabricator that makes the germane safety-related "decisions" regarding the final product, and it is that fabricator that is "the business entity that is already charged with responsibility for the integrated product." *Id.* § 5 cmt. a.

12. See *id.* § 5 cmt. a.

13. Regarding raw materials integrated into other products, the *Third Restatement* explains that:

The manufacturer of the integrated product has a significant comparative advantage regarding selection of materials to be used. Accordingly, raw-materials sellers are not subject to liability for harm caused by defective design of the end-product. The same considerations apply to failure-to-warn claims against sellers of raw materials. To impose a duty to warn would require the seller to develop expertise regarding a multitude of different end-products and to investigate the actual use of raw materials by manufacturers over whom the seller has no control. Courts uniformly refuse to impose

The American Law Institute's (hereinafter ALI) effort to accommodate this cluster of practical considerations is set out at section 5 to the *Third Restatement*. Contemplating component parts, raw materials and product ingredients, that section provides:

§ 5. Liability of Commercial Seller or Distributor of Product Components for Harm Caused by Products Into Which Components Are Integrated

One engaged in the business of selling or otherwise distributing product components who sells or distributes a component is subject to liability for harm to persons or property caused by a product into which the component is integrated if:

- (a) the component is defective in itself, as defined in this Chapter, and the defect causes the harm; or
- (b)(1) the seller or distributor of the component substantially participates in the integration of the component into the design of the product; and
- (2) the integration of the component causes the product to be defective, as defined in this Chapter; and
- (3) the defect in the product causes the harm.¹⁴

My goal in this essay is to examine both the premises of this new provision, and also to gauge preliminarily whether the *Third Restatement* section 5 conduces to identified tort objectives that have achieved greater or lesser following over the years. The doctrinal objectives that I have sketched out are these:

1. *Reduction in Avoidable Accident Costs*

Principal goals of accident law are the deterrence of harmful conduct and the encouragement of beneficial conduct. An accident law rule that provides in some measure both deterrence of risk-creating behavior and incentives for the actor to take affirmative steps to reduce

such an onerous duty to warn.

Id. § 5 cmt. c.

14. *Id.* § 5.

avoidable accident advances these twin objectives.

2. *Cost Spreading*

A premise of accident law liability rules is that a seller will be able to liquidate a fairly predictable loss future into a dollar amount that it will pay for third-party liability insurance.¹⁵ The cost of such insurance, and other internal costs of liability defense, will therefore be spread among consumers of the subject product in the form of higher consumer prices.¹⁶ An optimal liability rule will permit an insured to meet with its insurance carrier and describe with some particularity its potential future liability exposure. In contrast, an accident law rule that leaves a seller with indeterminate liability undermines the objective of cost spreading.

3. *Justice*

A general rule imposing joint liability upon component suppliers and final fabricators alike for the sale of defective finished products would, one acknowledges, achieve certain efficiencies in judicial administration. However, whatever the efficiency gains of such a rule, they would be dwarfed by various practical considerations. In this setting, a joint liability rule would be oblivious to tort considerations of justice.

A tort rule that achieves the zenith of efficiency but which disregards justice or practical consequences will be rejected as irrational, otherwise wasteful, or, as the comments to the *Second* and *Third Restatements* suggest, both.¹⁷ Omnibus component or raw material seller liability would be unjust as it would impose an irrational burden upon sellers to superintend, which is to say, to be hall monitors, regarding myriad potential downstream applications of their otherwise non-defective products.¹⁸ Such a burden would, it is seen, impose social costs, in the form of elevated product costs, or even total unavailability of valuable

15. See Steven W. Pottier & Robert C. Witt, *On the Demand for Liability Insurance: An Insurance Economics Perspective*, 72 TEX. L. REV. 1681, 1684 (1993).

16. Should accident incidence or other factors make it infeasible to transfer insurance costs to consumers, or render insurance unavailable, the actor must necessarily evaluate the practicality of continuing the conduct, i.e., in the current context, the manufacture and sale of products.

17. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 5 (1998).

18. *Id.* § 5 cmt. a.

products, that would occlude whatever deterrence attributes or administrative efficiencies that might be achieved.¹⁹

4. *Reasonable Foreseeability*

Within the shortest period of time, it now seems in retrospect, the so-called "strict liability" standard of the *Second Restatement* section 402A was pulled back into the gravitational field of the reasonableness standards of negligence.²⁰ Applying such a standard of reasonableness and reasonable foreseeability to a component seller's design and warning obligations does not, proponents of the *Third Restatement* rule might say, place a premium on ignorance.²¹ No modern accident law rules create incentives for ignorance. Rather, limitations on liability for component, raw materials and ingredient sellers simply and clearly recognize important distinctions between the component supplier's role and that of the final fabricator.²² A manufacturer remains responsible for being an expert in the field of the pertinent manufacturing endeavor.²³ A chair manufacturer is presumed to be an expert in the load strength and ergonomics of a duly safe chair, in both its intended use (sitting) and, at least with regard to load strength, a reasonably foreseeable "off label" use such as to support a person attempting to replace a light bulb.

Likewise, a seller of sand is held to the standard of an expert in the production of sand. We might suppose that such responsibility would run to such matters as making certain that your playground sand did not contain any dangerous level of adulteration, such as mineral radium or chrysotile asbestos. The sand seller is not expected to be an expert in the use of its product in the manufacture of glass since there are no identifiable perimeters around the potential end users of sand, or for that matter teflon, silicon, sheet metal or pig iron. Thus, a "reasonable

19. *See id.* § 2 cmt. a.

20. Consistent therewith, under the *Third Restatement*, only manufacturing defects are evaluated under a truly strict liability standard. Design and informational obligations are based upon reasonableness and foreseeability. *Id.* § 1 cmt. a.

21. *See id.* § 1 cmt. a.

22. *See id.*

23. *Borel v. Fibreboard Paper Prod. Inc.*, 493 F.2d 1076, 1089 (5th Cir. 1976); *Olson v. Prosoco, Inc.*, 522 N.W.2d 284, 289 (Iowa 1994); *Stahlheber v. Am. Cyanamid Co.*, 451 S.W.2d 48, 61 (Mo. 1970). *See also* DAVID G. OWEN ET AL., *PRODUCTS LIABILITY AND SAFETY* 73 n.6 (3d ed. 1996).

foreseeability" predicate to the component seller's design or warning duties will, in the majority of circumstances, preclude a finding of liability.²⁴

B. Section 402A's Strategic and Successful Distortion of the Standards for a Conventional Restatement

The objective of the *Third Restatement*, in keeping ALI²⁵ tradition, is not to reform the law, but rather to rationalize it. It does so by reconciling to the extent possible conflicting state standards and creating a unified presentation of products liability law that might prompt a state high court in a jurisdiction that had not ruled on the matter to adopt the *Third Restatement* position as the optimal rule of law.²⁶

The *Second Restatement* section 402A, published in 1965, was more of a law reform initiative than a typical Restatement. Nevertheless, it became enormously influential because (a) at the time of its publication, Products Liability law was a substantially incoherent welter of divergent voices, a Tower of Babel;²⁷ and (b) section 402A gave language that courts could understand, at least initially.

C. The Decisional Law Under Section 402A

1. Generally

Neither the *Second Restatement* section 402A nor its successor, *Third Restatement*, affect liability for the truly defective component part.

24. A liability prerequisite of reasonable foreseeability is therefore essential (1) preservation of incentives for reasonable user caution; (2) for harmonization with risk/utility analysis employed elsewhere in personal injury law, and in products liability law particularly; (3) as the cornerstone for judicious identification of substandard conduct; (4) is central to optimal evaluation of economic efficiency; and (5) is necessary to any reasonable expectation that tort rules will encourage beneficial conduct and deter wasteful or harmful conduct.

25. The American Law Institute is a private body of judges, practicing attorneys, and legal scholars that drafts and publishes the Restatements of various fields of the law.

26. *Cf.* AMERICAN LAW INSTITUTE, THIS IS THE AMERICAN LAW INSTITUTE 1-4 (1996) (describing ALI's purpose, operations, and membership).

27. *See Escola v. Coca Cola Bottling Co.*, 150 P.2d 436, 461 (Cal. 1944) (Traynor, J., concurring).

In comment p to the *Second Restatement* section 402A, the ALI states:

It seems reasonably clear that the mere fact that the product is to undergo processing, or other substantial change, will not in all cases relieve the seller of liability under the rule stated in this Section. If, for example, raw coffee beans are sold to a buyer who roasts and packs them for sale to the ultimate consumer, it cannot be supposed that the seller will be relieved of all liability when the raw beans are contaminated with arsenic, or some other poison On the other hand, the manufacturer of pigiron, which is capable of a wide variety of uses, is not so likely to be held to strict liability when it turns out to be unsuitable for the child's tricycle into which it is finally made by a remote buyer.²⁸

A harmonious note is added in the *Third Restatement* where the ALI confirms:

[I]f a cut-off switch is sold in a defective condition due to loosely connected wiring, the seller of the switch is subject to liability for harm to persons or property caused by the improper wiring after the switch is integrated into another product. Similarly, if aluminum that departs from the aluminum manufacturer's specifications due to the presence of foreign particles is utilized in the manufacture of airplane engines, the seller of the defective aluminum is subject to liability for harm to persons to persons or property caused by the defects in the aluminum.²⁹

Putting aside circumstances in which the component, raw material, or ingredient is defective, under the *Second Restatement* section 402A a component seller's warning duties extend only to such risks as were foreseeable at the time of the seller's initial introduction of the product into commerce.³⁰ Where such risks are foreseeable, the decisions

28. RESTATEMENT (SECOND) OF TORTS: PRODUCTS LIABILITY § 402A (1965).

29. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 5 cmt. b (1998).

30. *Zaza*, 675 A.2d at 632-33. The court stated: The general rule is that a manufacturer of

commend a manufacturer's duty in strict tort liability to provide warnings as to risks inhering in the use of its product as a component of another product only when the component supplier actually participated in the creation of the specifications for the end product, and in effect "signed off" on the suitability of its part or material for integration into such an end use.³¹ Departures from this approach seem localized to circumstances in which even ordinary end use of the product could cause death or serious bodily injury, or where the component supplier, in contrast to its vendee, was in a clearly superior situation from which to evaluate and reduce the risk.³²

With the passage of years following the 1965 publication of the so-called "strict liability" rule of the *Second Restatement* section 402A, the section 402A design and warning duties, when compared to the duties that had been assigned under negligence principles, grew to be interpreted so similarly as to become nearly indistinguishable. One California court, relying upon the *Second Restatement* sections 388 and 394 described the standard for that state in these words:

[T]he manufacturer has a duty to use reasonable care to give warning of the dangerous condition of the product or of facts which make it likely to be dangerous to those whom he should expect to use the product or be

a component part will not be held strictly liable for failure to warn where the danger involved is not foreseeable. *See, e.g., Cropper v. Rego Distribution Center, Inc.*, 542 F. Supp. 1142, 1156 (D. Del. 1982) (holding that component part manufacturer was not liable for failing to place in its catalog warning of dangers involved in using component part in connection with unloading riser, on ground that manufacturer could not be expected to foresee every possible misuse to which part might be put); *Mayberry v. Akron Rubber Machinery Corp.*, 483 F. Supp. 407, 413-14 (N.D. Okla. 1979) (holding that supplier of component parts which were not defective did not have duty to warn subsequent product manufacturer and employees of danger that might arise after components were assembled according to manufacturer's exclusive design).

31. *Cf. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY* § 5 cmt. a (1998) (stating that the decisional law has not imposed liability upon component suppliers who did not participate in the integration of the component into the design of the final product).

32. *E.g., Stuckey v. Northern Propane Gas Co.*, 874 F.2d 1563, 1568 (11th Cir. 1989) (finding that a propane gas supplier had a duty to warn that its product's odorant could fade); *Andrulonis v. U.S.*, 924 F.2d 1210, 1223 (2d Cir. 1991) (held: government liable for failure to provide adequate warnings of the risks of particular uses of rabies strain for research use). *See Arena v. Owens Corning*, 74 Cal. Rptr. 2d 580 (Cal. Ct. App. 1998).

endangered by its probable use, if the manufacturer has reason to believe that they will not realize its dangerous condition.³³

Accordingly, decisional law under both the negligent failure to warn and the strict liability failure to warn approaches of the *Second Restatement* has confirmed repeatedly that component and raw materials sellers of merchantable products should not, as a general proposition, be exposed to warning duties. Considerations of both fairness and financial burden have figured conspicuously in such conclusions. As one court stated:

Making suppliers of inherently safe raw materials and component parts pay for the mistakes of the finished product manufacturer would not only be unfair, but it also would impose an intolerable burden on the business world Suppliers of versatile materials like chains, valves, sand, gravel, etc., cannot be expected to become experts in the infinite number of finished products that might conceivably incorporate their multi-use raw materials or components.³⁴

Like considerations guided a widely referenced 1980 decision of a Pennsylvania federal trial court, *Orion Ins. Co. v. United Technologies Corp.*,³⁵ which involved a manufacturer who built a component part to specification.³⁶ Absent a defect in the part, and upon a showing that it was reasonable for the component manufacturer to rely upon said specifications, the *Orion* court concluded:

[N]o public policy can be served by imposing a civil penalty on a manufacturer of specialized parts for a highly

33. *Putensen v. Clay Adams, Inc.*, 91 Cal. Rptr. 319, 328 (Cal. Ct. App. 1970)(quoting the *Second Restatement* §§ 388, 394). *Putensen* involved the manufacture of tubing and its sale to hospitals. *Id.* at 323. Among the tubings' uses was catheterization. *Id.*

34. *In re Temporomandibular Joint (TMJ) Implant Recipients v. E. I. DuPont De Nemours & Co.*, 97 F.3d 1050, 1057 (8th Cir. 1996).

35. 502 F. Supp. 173 (E.D. Pa. 1980).

36. *Id.* at 174.

technical machine according to the specifications supplied by one who is expert at assembling these technical machines, who does so without questioning the plans or warning of the ultimate user. The effect of such a decision on component parts manufacturers would be enormous. They would be forced to retain private experts to review an assembler's plans and to evaluate the soundness of the proposed use of the manufacturer's parts.

The added cost of such a procedure both financially and in terms of stifled innovation outweighs the public benefit of giving plaintiffs an additional pocket to look to for recovery. I believe the better view is to leave the liability for design defects where it belongs and where it now is—with the originator and implementer of the design—the assembler of the finished product.³⁷

In reasoning similar to that of courts evaluating claims against sellers of component parts, harmonious conclusions have been reached consistently in claims brought against sellers of raw materials. For example, a seller's incapacity to anticipate, and therefore to affect end use risks, provided the basis for defendant's judgment in *Pennwalt Corp. v. Superior Court*.³⁸ That suit arose from injuries an eighteen year old plaintiff suffered while attempting to compound chemicals, including sodium chlorate, aluminum powder, and sulfur,³⁹ at home to create fireworks. Plaintiff brought suit against the manufacturer, distributor, and retailer of each chemical.⁴⁰ The appellate court held that the manufacturer of the chemicals should not be liable to plaintiff for the sale of a chemical that had been repackaged, relabeled, and distributed through a retailer over which the manufacturer had no control.⁴¹ The court explained:

Sodium chlorate has many legitimate uses, some of which involve using it in conjunction with other chemicals. Pennwalt cannot be expected to anticipate every possible

37. *Id.* at 178.

38. 218 Cal. Rptr. 675 (Cal. Ct. App. 1985).

39. *Id.*

40. *Id.* at 677.

41. *Id.*

use and issue warnings of any potential danger involved in each such use. To hold otherwise would place an impossible burden on a bulk manufacturer which would be tantamount to imposing absolute liability for injury resulting from the use of a product not claimed to be otherwise defective.⁴²

Another California case, *Walker v. Stauffer Chemical Corp.*,⁴³ involved a plaintiff who was injured seriously by an explosion of drain cleaner that contained sulfuric acid.⁴⁴ With respect to the mismarketing claim brought against the supplier of the sulfuric acid, the court observed: "We are referred to no California case, nor has independent research revealed any such, extending the strict liability of the manufacturer (seller) to the supplier of a substance to be used in compounding or formulating the product which eventually causes injury to an ultimate consumer."⁴⁵

The *Walker* court explained further:

We see no compelling reason for an extension [of strict liability] to a situation such as presented in the instant case We do not believe it realistically feasible or necessary to the protection of the public to require the manufacturer and supplier of a standard chemical ingredient . . . not having control over the subsequent compounding, packaging or marketing of an item eventually causing injury to the ultimate consumer, to bear the responsibility for that injury. The manufacturer (seller) of the product causing the injury is so situated as to afford the necessary protection.⁴⁶

Read together, *Pennwalt*, *Orion*, *Walker* and *Stauffer* invite the conclusion that under comment p to the *Second Restatement* section 402A, no liability should attach to the seller of component parts, raw materials or ingredients having multiple end uses, the selection of which is beyond the

42. *Id.*

43. 96 Cal. Rptr. 803 (Cal. Ct. App. 1971).

44. *Id.*

45. *Id.* at 805-06.

46. *Id.* at 806.

seller's control.

THE PRODUCTS LIABILITY RESTATEMENT TREATMENT OF
COMPONENT PART SUPPLIER AND RAW MATERIAL SELLERS'
DUTIES

A. *Generally*

Commentary to section 2 (c) of the *Third Restatement* makes plain the ALI's conclusion, subject to an exception for the supplier who is substantially involved in the design of the eventual product, that absent a defect in the component, the raw material, or the ingredient, liability should not attach to component sellers whose product is integrated into a defective end product.⁴⁷ Comment a thereto states:

As a general rule, component sellers should not be liable when the component itself is not defective as defined in this Chapter. If the component is not itself defective, it would be unjust and inefficient to impose liability solely on the ground that the manufacturer of the integrated product utilizes the component in a manner that renders the integrated product defective. Imposing liability would require the component seller to scrutinize another's product which the component seller has no role in developing. This would require the component seller to develop sufficient sophistication to review the decisions of the business entity that is already charged with responsibility for the integrated product.⁴⁸

The *Third Restatement* provides further support and illustration, stating: "[A] basic raw material such as sand, gravel, or kerosene cannot be defectively designed Accordingly, raw-materials sellers are not subject to liability for harm caused by defective design of the end-product."⁴⁹

Should an employee of the downstream manufacturer or fabricator

47. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(c) (1998).

48. *Id.* § 2 cmt. a.

49. *Id.* § 5 cmt. c.

be put at an unreasonable risk by virtue of a misapplication of the component vendor's product, guidance as to the vendor's warnings obligations is found in the more general warnings provisions of the *Third Restatement*. Regarding sales to informed intermediaries under the *Third Restatement*, the conventional rule regarding a seller's informational obligation to the ultimate user is stated as follows:

There is no general rule as to whether one supplying a product for the use of others through an intermediary has a duty to warn the ultimate product user directly or may rely on the intermediary to relay warnings. The standard is one of reasonableness in the circumstances. Among the factors to be considered are the gravity of the risks posed by the product, the likelihood that the intermediary will convey the information to the ultimate user, and the feasibility and effectiveness of giving a warning directly to the user.⁵⁰

B. The Early Decisional Response

Because of the yet novel quality reality of the *Third Restatement*, it would not be realistic to expect a groundswell of judicial reaction, be it favorable or unfavorable. Nevertheless, the early decisions seem to suggest that courts find both the articulation and the application of the new rule appealing.

One example is a New Jersey Supreme Court case that involved injuries sustained by one Gerardo Zaza, an employee of Maxwell House Coffee (Maxwell House), a division of General Foods.⁵¹ Upon discovering a clog in a quench tank, Zaza was burned severely by scalding hot liquids while attempting to repair the malfunction.⁵² The defendant had bid to build the quench tank to the specifications of the buyer, and these specifications did not require any of the safety devices that might have prevented the injury.⁵³ Instead, the specifications merely

50. *Id.* § 2(c) cmt. i.

51. *Zaza v. Marquess & Nell, Inc.*, 675 A.2d 620, 624 (N.J. 1996).

52. *Id.*

53. *Id.*

required defendant to cut holes for any such safety devices.⁵⁴

Reviewing the trial court's grant of summary judgment,⁵⁵ the New Jersey Supreme Court quoted, with approval, an earlier draft of comment a to the *Third Restatement* referenced above. Affirming the judgment below, the state high court wrote:

The majority of courts from other jurisdictions have held that a manufacturer of a component part, which is not dangerous until it is integrated by the owner into a larger system, cannot be held strictly liable to an injured employee for the failure of the owner and/or assembler to install safety devices, so long as the specifications provided are not so obviously dangerous that it would be unreasonable to follow them.⁵⁶

The court in *Zaza* explained:

Holding defendant liable would impose on a component part fabricator, whose products were built in accordance with the designer's specifications and whose part when it left defendant's plant was not defective, the duty to investigate whether the use of its non-defective product would be made dangerous by the integration of that product into the complex system designed and installed

54. *Id.*

55. The trial court stated:

The plaintiff says the defendant failed to provide warnings. There was no way that the fabricator could even know what the final looks of that machine would be or what type of use the machine would entail or what component parts would be added to that tank in order to make it into a manufacturing instrument, into an operative working unit.

Id. at 626.

56. *Id.* at 630. See also *Orion Ins. Co. v. United Tech. Corp.* 502 F. Supp. 173, 178 (E.D. Pa. 1980); *Mayberry v. Akron Rubber Mach. Corp.*, 483 F. Supp. 407, 413 (N.D. Okla. 1979) (holding that "where a supplier furnishes a component part free of defects and without knowledge of the design of the end product, strict liability should not be imposed on the supplier for injury resulting from the end product design"); *Woods v. Graham Eng'g Corp.*, 539 N.E.2d 316, 318-19 (Ill. App. 2d 1989) (holding that component manufacturer liable only when responsible for final design of product or component part itself caused injury).

by experts. Component fabricators would become insurers for the mistakes and failures of the owners and installers to follow their own plans. Defendant would have to retain an expert to determine whether each and every integrated manufacturing system that incorporates one of its sheet metal products is reasonably safe for its intended use Even if defendant wanted to provide a warning, there is no suitable location on the quench tank for a warning. The quench tank is not a single unit designed to come into contact with workers. Moreover, plaintiff did not produce any evidence that the tank was so obviously dangerous that International had an obligation to warn the users of the trecar-carbon regeneration system. Maxwell House's plans called for the installation of safety devices, and professionals were hired to ensure that the plans were followed The duty to warn does not extend to the speculative anticipation of how component parts that are not defective can become potentially dangerous, depending on the nature of their integration into a complex system designed and assembled by another.⁵⁷

Another recent obeisance to the *Third Restatement* component seller rule is *Artiglio v. General Electric Co.*,⁵⁸ a silicon breast implant suit before a California Appeals Court, in which appellant appealed a summary judgment.⁵⁹ The underlying claim was that the silicon supplier breached a duty to warn customers about the claimed potential hazards of silicon in these medical devices.⁶⁰ The facts showed that General Electric (GE), the manufacturer of the silicon, supplied it in fifty-five gallon drums to McGhan Medical Corp., which manufactured the implants.⁶¹ On appeal, GE argued the rectitude of the verdict, stating that:

[B]ecause it supplied silicone materials which are used in

57. *Id.* at 634-35.

58. 71 Cal. Rptr. 2d 817 (Cal. Ct. App. 1998).

59. *Id.* at 818.

60. *Id.*

61. *Id.*

a number of other products, because the silicone materials it provided were subject to further processing by the actual manufacturers of breast implants and because the implant manufacturers themselves had the ability to determine the suitability and safety of the implants, it owed no duty of care to the eventual recipients of the silicone breast implants.⁶²

After turning to what may eventually become an obligatory reference to the *Third Restatement* section 5 comment c, the appellate court continued by relying upon comment b, which addresses “sophisticated buyers” and states:

[W]hen a sophisticated buyer integrates a component into another product, the component seller owes no duty to warn either the immediate buyer or ultimate consumers of dangers arising because the component is unsuited for the special purpose to which the buyer puts it. To impose a duty to warn in such a circumstance would require that component sellers monitor the development of products and systems into which their components are to be integrated.⁶³

Affirming the court below, the appellate division summarized:

Taken together, [authority establishes] that component and raw material suppliers are not liable to ultimate consumers when the goods or material they supply are not inherently dangerous, they sell goods or material in bulk to a sophisticated buyer, the material is substantially changed during the manufacturing process and the supplier has a limited role in developing and designing

62. *Id.* GE’s chemical “building block” for the manufacture of silicon was polydimethylsiloxane (PDMS). *Id.* GE used PDMS manufacturing “a host of silicone materials for use by the manufacturers of everything from bed pads to electronic circuit boards to food additives to other medical devices.” *Id.*

63. *Id.* at 822 (The Proposed Final Draft of the Restatement Third of Torts, Products Liability, § 5, approved on May 20, 1997).

the end product. When these factors exist, the social cost of imposing a duty to the ultimate consumers far exceeds any additional protection provided to consumers.⁶⁴

THE TORT GOALS OF CORRECTIVE JUSTICE AND EFFICIENCY

A. Generally

One court wrote recently: "Products liability law is based on concepts of fairness, feasibility, practicality and functional responsibility. [Courts] have always stressed the public's interest in motivating individuals and commercial enterprises to invest in safety. . . ."⁶⁵

In the above review of the liability rules and the decisional law thereunder, the courts, the ALI authors of the comments to the *Second Restatement* (Second) of Torts section 402A, and the *Third Restatement* frequently invoke expressions such as "just," or "unjust," or "efficient," or "social cost." These terms have broadly understood common colloquial meanings, so that an "inefficient" tort rule is interpreted as one that wastes money. I would like now to think in terms of economic efficiency-deterrence, and corrective justice-morality, in a more particularized way.

There are today two contrasting schools of tort philosophy.⁶⁶ The older of the two approaches is commonly termed corrective justice, and its influential group of scholars hew to the position that the original and

64. *Id.* See also *In re TMJ Implants Products Liability Litigation*, 97 F.3d 1050, 1057 (8th Cir. 1996).

65. *Zaza v. Marquess & Nell Inc.*, 675 A.2d 620, 636 (N.J. 1996).

66. Gary T. Schwartz, *Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice*, 75 TEX. L. REV. 1801 (1997). Mr. Schwartz stated that: "currently there are two major camps of tort scholars. One understands tort liability as an instrument aimed largely at the goal of deterrence, commonly explained within the framework of economics. The other looks at tort law as a way of achieving corrective justice between the parties." *Id.* See generally John Borgo, *Causal Paradigms in Tort Law*, 8 J. LEGAL STUD. 419, 454-55 (1979) (commending "conception of tort law that rivals the dominant economic one," employing "notions of individual moral responsibility . . . logically excluded from the latter"); Matthew S. O'Connell, *Correcting Corrective Justice: Unscrambling the Mixed Conception of Tort Law*, 85 GEO. L.J. 1717 (1997). The article stated that generally accepted theories of tort law can be divided into two classes: instrumental theories, which view social cost and efficiency as the essential factors in evaluating rights and duties under the law, and noninstrumental theories, which view law as the vindication of a scheme of moral responsibility. *Id.*

primary goal of tort law, including the law of products liability, is righting wrongs caused by tortious behavior.⁶⁷ With its strong overlay of moral obligation, and the annulment of a wrongdoer's unjust enrichment, the corrective justice approach posits that tort's principal *raison d'être* is to return parties suffering personal physical injury or property damage due to another's tortious conduct to the status quo ante, at least insofar as money damages can so do.⁶⁸ The more recently developed approach is one of economic efficiency, an evaluation that seeks to demonstrate that the appropriate measure of the success, or failure, of tort law ought to proceed under an economic analysis,⁶⁹ emphasizing evaluation of such considerations as wealth maximization, avoidance of waste, and overdeterrence.⁷⁰

B. Corrective Justice-Morality

As a corollary to the corrective justice rectificatory goal of setting matters straight between the parties, the corrective justice model sets forth the broader societal objective of reducing the occurrence of similar wrongs in the future. The corrective justice objective of deterrence is evidenced in such early writings as that of one academic author, who in 1890 wrote of the goals of the negligence action in these words: "The really important matter is to adjust the dispute between the parties by a rule of conduct which shall do justice if possible in the particular case, but which shall also be suitable to the needs of the community, and tend to prevent like accidents from happening in the future."⁷¹ The Supreme Court, in

67. See JULES L. COLEMAN, *RISKS AND WRONGS* 197 (1992).

68. See *id.* (noting that one of two ways of "understanding tort law ... emphasizes its role in rectifying for wrong done").

69. See generally Richard A. Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, 8 HOFSTRA L. REV. 487 (1980) (discussing efficiency norm and wealth maximization); Gary T. Schwartz, *Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?*, 42 UCLA L. REV. 377, 381 (1994).

70. See *id.*

71. William Schofield, *Davies v. Mann: Theory of Contributory Negligence*, 3 HARV. L. REV. 263, 269 (1890); accord *Barrett v. Superior Court* (Paul Hubbs Constr. Corp.), 272 Cal. Rptr. 304 (Cal. Ct. App. 1990) (interpreting term "wrongful act" in wrongful death statute to mean tortious act). The Barrett court commented further that by choosing not to limit the measure of damages, "California has chosen to strengthen the deterrent aspect of the civil sanction: 'the sting of unlimited recovery . . . more effectively penalize [s] the culpable defendant and deter[s] it and others similarly situated from such future conduct' . . .

Cipollone v. Liggett Group,⁷² implicitly recognized the deterrence role of an award of tort damages, i.e., that a tort judgment equates to a "requirement or prohibition" in that such tort judgments force actors to make behavioral modifications upon pain of paying large money awards.⁷³

Corrective justice principles in tort are intended to minimize not only the personal physical injury effect of accidents, but also to lessen the intrusions such accidents work upon others' autonomy and liberty interests. Personal autonomy is stated repeatedly to be part of that bundle of modern citizenship rights, the perimeters of which law should mediate.⁷⁴ A dictionary defines "autonomy" as "independence or freedom."⁷⁵ If the correlative right of "liberty," which has been defined as "freedom from external control or interference, obligations, etc.; freedom to choose,"⁷⁶ is added to freedom, then the freedom to choose and the informed choice rationale of a seller's warnings obligations are inextricably related.

C. *Efficiency-Deterrence*

Economic analysis of tort law is not limited to one analytical construct. More than one vantage point from which an economic observation of products liability rules may be made. The "utilitarian theory" invites the assessment of the relative social cost associated with favoring one course of conduct over another. Coase, with his example of the physician and the confectioner,⁷⁷ prompts application of utilitarian

. rather than to protect defendants from excessive financial burdens." *Id.* at 308 (citations omitted). See also *Pierce v. Pacific Gas & Elec. Co.*, 212 Cal. Rptr. 283, 291 (Cal. Ct. App. 1985) (stating one principal purpose of strict liability was to provide an economic incentive for improved product safety).

72. 505 U.S. 504 (1992).

73. *Id.* at 536 (Blackmun, J., concurring in part and dissenting in part).

74. E.g., *General Motors Corp. v. Saenz*, 873 S.W.2d 353, 363 (Tex. 1993) (Doggett, J., dissenting). Justice Doggett stated that "[t]he requirement that manufacturers provide adequate warnings serves the dual goals of 'risk' reduction and the protection of individual autonomy in decision-making." *Id.* (quoting W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 96, at 685 (5th ed. 1984)).

75. THE RANDOM HOUSE COLLEGE DICTIONARY 92 (rev. ed. 1975).

76. *Id.* at 772.

77. See Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 13 (1960) (stating that in a setting where confectioner's operation causes disturbance to physician's practice, appropriate question is not who should compensate physician in nuisance, but rather

theory to the products liability context, in which the question might be posed this way: To what extent is it worthwhile to restrict or encumber product availability in order to achieve marginally safer products, or, considering social cost, is it preferable to ensure a broader range of products, conceding that more products with marginally higher potential for harm will exist in the market? Thus, a utilitarian or social cost model measures a tort rule's practical effect on plaintiffs and defendants as a whole, and considers how much social and economic cost we are prepared to incur in order to maintain product availability.

Another perspective that has played an ascendant role in modern economic analysis of tort law involves the concepts of "wealth maximization" and "efficiency," and the relationship between them. Michael D. Green describes the "wealth maximization"--"economic efficiency" relationship in these terms: "By economic efficiency [is meant] maximizing total societal resources, without concern for the distribution of those resources among members of society."⁷⁸ One of the efficiency school's most noteworthy constructs has been to "emphasize [tort law's] role in substituting for efficient contractual exchange."⁷⁹ To Posner, apart from the corrective justice, moral and fairness attributes of tort liability, the law and economics argument is that any intentional tort or accident law doctrine should "deter[r] persons from engaging in activities that a reasonable person would view ahead of time to be socially wasteful."⁸⁰

In Posner's words, such torts, i.e., unconsented to harmful acts, "involve . . . a coerced transfer of wealth to the defendant occurring in a setting of low transaction costs. Such conduct is inefficient because it violates the principle . . . that where market transaction costs are low, people should be required to use the market if they can and to desist from the conduct if they can't."⁸¹ Posner concludes that such bypassing of the market is inefficient and therefore should create liability in tort.⁸²

whether social costs and gains are best served by preservation of status quo, by cessation of confectioner's activities, or by cessation of physician's activities).

78. Michael D. Green, *Negligence = Economic Efficiency: Doubts*, 75 TEX. L. REV. 1605, 1607 n.12 (1997) (citing Richard A. Posner, *Wealth Maximization and Judicial Decision-Making*, 4 INT'L REV. L. & ECON. 131, 132 (1984)).

79. COLEMAN, *supra* note 67 at 197.

80. JAMES A. HENDERSON, JR. ET AL., THE TORTS PROCESS 29-30 (4th ed. 1994) (discussing RICHARD A. POSNER, ECONOMIC ANALYSIS OF THE LAW 206-11 (4th ed. 1992)).

81. RICHARD A. POSNER, ECONOMIC ANALYSIS OF THE LAW 208 (4th ed. 1992).

82. *Id.* at 207-09.

Transferred to a products liability context, what of the seller of a defective product that causes personal physical injury or property damage?

Economists might recast the corrective justice goals of encouraging individual autonomy and liberty to efficiency-based objectives phrased in terms of discouraging involuntary transfers of wealth, market avoidance,⁸³ or imposition of negative externalities. A product purchaser has a societally-countenanced expectation, the argument goes, that the product will not create an unreasonable risk of harm if used for its reasonably foreseeable purpose.⁸⁴ Should the product prove dangerously defective, and should the purchaser be injured or his property damaged, the manufacturer has, in a sense, subverted the market and created accident costs⁸⁵ that might have been avoided had the

83. See Alan Schwartz, *Proposals for Products Liability Reform: A Theoretical Synthesis*, 97 YALE L.J. 353, 355 (1988) (supposing consumer sovereignty as dominant objective in transactions between contracting parties, under which norm: "the law should reflect the preferences of competent, informed consumers regarding risk allocation.") See also Kathryn Dix Sowle, *Toward a Synthesis of Product Liability Principles: Schwartz's Model and the Cost-Minimization Alternative*, 46 U. MIAMI L. REV. 1, 9 (1991). Werner Z. Hirsch has observed that: "broadly speaking, a tort is a civil (seldom a criminal) wrong. Such a wrong occurs when one party, usually unintentionally, destroys another party's initial entitlement by imposing a negative externality on him. The courts can then provide a remedy in the form of damages. When externalities result in the forcible taking of initial entitlements--for example, when a slaughterhouse pollutes the air of the surrounding neighborhood--liability rules can be invoked. Concomitantly government assumes responsibility for the imposition of objectively determined compensation and its prompt payment to the party harmed." WERNER Z. HIRSCH, *LAW AND ECONOMICS: AN INTRODUCTORY ANALYSIS* 127 (1979).

84. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. a (1998) (Reporters' Note). The comment states that "[S]trict liability has been justified on fairness grounds because the product containing a hidden manufacturing defect that causes harm disappoints the consumer's or user's reasonable expectations with regard to safety." (citing, inter alia, F. Patrick Hubbard, *Reasonable Human Expectations: A Normative Model for Imposing Strict Liability for Defective Products*, 29 MERCER L. REV. 465 (1978); Marshall S. Shapo, *A Representational Theory of Consumer Protection: Doctrine, Function and Legal Liability for Product Disappointment*, 60 VA. L. REV. 1109 (1974)).

85. See GUIDO CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* 129 (1970) (discussing loss spreading, general deterrence, and specific deterrence approaches to accident cost reduction). Stephen Sugarman has summarized Calabresi's cost-avoidance philosophy:

In [*The Costs of Accidents*], Calabresi argued that society's policy towards accidents should be to minimize the sum of primary, secondary, and tertiary accident costs. Reducing primary costs concerns

manufacturer simply bargained for pertinent product-related rights.

Perhaps the best substitute for an actual bargained for exchange is a circumstance in which a buyer, fully apprised of pertinent safety-related information and instructions for the safe operation of a product, makes an informed decision to purchase the product for the buyer's use or for devotion to the use of others. Such a knowledgeable consent or choice model for sale of a product with a high risk level means, in a proto-contractual sense, that the seller has bargained for the right to sell it. In essence, the seller preserves the transaction within the market by conveying warnings sufficient to permit the purchasers to make informed choices of whether or not to expose themselves to the risk. Absent a bargain struck with an informed purchaser, the sale of a product defective for want of adequate warnings, and that proximately causes plaintiff's harm, represents an involuntary or coerced transfer of wealth from the injured party to the injurer.

A primitive but persuasive evaluative standard was offered in a negligence context by Judge Learned Hand in the opinions in *United States v. Carroll Towing Co.*,⁸⁶ and *Conway v. O'Brien*.⁸⁷ In those two cases, the Second Circuit held that the degree of care appropriate to a given action or omission to act should be the result of a three-factor

promoting safety (while not discouraging, if possible, socially desirable innovation). Reducing secondary costs concerns spreading the costs of compensation paid to accident victims. Tertiary costs are the transactions costs; these costs include the costs of lawyers' fees, insurance administration, the parties' time, and court costs.

Stephen D. Sugarman, *A Restatement of Torts*, 44 STAN. L. REV. 1163, 1167 (1992) (review essay). Jules Coleman further explains the three types of costs attributable to personal injury or property damage torts:

Primary costs are the dollar equivalent of the damages caused by accidents. Secondary costs are the costs of bearing the costs of accidents. These are the costs associated with the various schemes for distributing the primary (and tertiary) costs of accidents. Secondary costs are reduced when they are spread maximally over persons and time, or when they are borne by those individuals in the best position to bear them. Tertiary costs are the administrative costs of any system, including the tort system, for determining who should bear the costs of accidents.

COLEMAN, *supra* note 67 at 204.

86. 159 F.2d 169, 173 (2d Cir. 1947).

87. 111 F.2d 611, 612 (2d Cir. 1940), *rev'd on other grounds*, 312 U.S. 492 (1941).

calculus: (1) the likelihood that the conduct will injure others; (2) multiplied by the seriousness of the risk if it happens; (3) balanced against the burden of taking precautions against the risk.⁸⁸ In formula, the calculation is known as B (Burden) $< P$ (Probability of Harm) $\times L$ (Magnitude of Loss Should It Occur).⁸⁹ The Learned Hand approach can be conformed to a more modern utilitarian analysis by visualizing B , or the Burden upon the actor, as encompassing not only the particular burden of precautionary measures upon the actor, but also the burden upon society if the conduct must either be eliminated due to liability rules, or made more expensive if the precautionary measures are undertaken.⁹⁰

Posner machined the Hand formulation into an efficiency principle by explaining that:

Hand was adumbrating, perhaps unwittingly, an economic meaning of negligence. Discounting (multiplying) the cost of an accident if it occurs by the probability of occurrence yields a measure of the economic benefit to be anticipated from incurring the costs necessary to prevent the accident If the cost of safety measures [including, perhaps, 'eliminating the activity'] or of curtailment--whichever cost is lower--exceeds the benefit in accident avoidance to be gained by incurring that cost, society would be better off, in economic terms, to forgo accident prevention.⁹¹

88. *Carroll Towing*, 159 F.2d at 173; *Conway* 111 F.2d at 612.

89. *Carroll Towing*, 159 F.2d at 173.

90. Likewise, in keeping with a utilitarian economic view that transcends the concerns of the individual plaintiff and defendant, consideration of the factors P (Probability of Harm) and the L (Magnitude of the Loss should it occur) would be enlarged to contemplate the likelihood of harm to others identically or similarly situated, and the magnitude of the potential harm, not only in terms of the individual plaintiff but also to the population exposed to the risk.

91. Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 32 (1972). Posner continues:

When the cost of accidents is less than the cost of prevention, a rational profit-maximizing enterprise will pay tort judgments . . . rather than incur the larger cost of avoiding liability. Furthermore, overall economic value or welfare would be diminished rather than increased by incurring a higher accident-prevention cost in order to avoid a lower accident cost Perhaps, then, the dominant function of the fault

1. *Least Cost Avoider*

A leading exponent of the efficiency role of the common law of tort has been Guido Calabresi, who has argued persuasively that in matters of compensation for accidents, civil liability should ordinarily be laid at the door of the "cheapest cost avoider," the actor who could most easily discover and inexpensively remediate the hazard.⁹² Together with A. Douglas Melamed, and employing the setting of environmental harm, Calabresi asserts that considerations of economic efficiency dictate placing the costs of accidents "on the party or activity which can most cheaply avoid them."⁹³ Posner's harmonious observation has been that in

system is to generate rules of liability that if followed will bring about, at least approximately, the efficient--the cost-justified--level of accidents and safety Because we do not like to see resources squandered, a judgment of negligence has inescapable overtones of moral disapproval, for it implies that there was a cheaper alternative to the accident Where, [alternatively,] the measures necessary to avert the accident would have consumed excessive resources, there is no occasion to condemn the defendant for not having taken them.

Id. at 33.

92. Jeff L. Lewin, *Calabresi's Revenge? Junk Science in the Work of Peter Huber*, 21 HOFSTRA L. REV. 183, 193 (1992).

93. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1108-09 (1972); see also MARK C. RAHDERT, COVERING ACCIDENT COSTS: INSURANCE, LIABILITY, AND TORT REFORM 29, 32-33 (1995) (analyzing rationale for insurance and addressing concern that cost-spreading function will divert compensatory responsibility away from least cost avoider). One frequently-referenced validation of the "least cost avoider" can be found in *Union Oil Co. v. Oppen*, 501 F.2d 558 (9th Cir. 1974), a California coastal oil spill case in which the court allowed commercial fishermen to recover from defendant their business losses caused by lost fishing opportunity during a period of pollution. *Id.* The court found justice and efficiency were served by placing responsibility for the loss on the "best cost avoider" (in this setting the defendant oil company), reasoning: "[T]he loss should be allocated to that party who can best correct any error in allocation, if such there be, by acquiring the activity to which the party has been made liable The capacity 'to buy out' the plaintiffs if the burden is too great is, in essence, the real focus of Calabresi's approach. On this basis there is no contest--the defendants' capacity is superior." *Id.* at 570. (citing Guido Calabresi, *THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS*, 50 - 52 (1970)). Calabresi and Hirschhoff provide a concise description of what the least cost avoider approach requires, both of private parties and of the government:

The strict liability test we suggest does not require that a governmental

the so called alternative care - indemnity damage shifting scenario, "we do not want both tortfeasors to take precautions; we want the lower cost accident avoider to do so."⁹⁴ It is seen readily that a cheapest cost avoider leads us to the conclusion that the component parts supplier, or a raw materials supplier, is not ordinarily the entity that can most readily detect risks posed by a completed product, or reduce such risks to a reasonable level.

2. *Pareto Efficiency*

From another, yet still efficiency-influenced, perspective a products liability doctrine that passes efficiency muster probably would result also in a Pareto superior or even a Pareto optimal resolution.⁹⁵ A rule is Pareto optimal when its effects benefit all parties, in essence, a win-win proposition.⁹⁶ As summarized by Mark Seidenfeld: "An economic change

institution make . . . a cost-benefit analysis. It requires . . . only a decision as to which of the parties to the accident is in the best position to make a cost-benefit analysis between accident costs and accident avoidance costs and to act on the decision once it is made. The question for the court reduces to a search for the cheapest cost avoider.

Guido Calabresi & Jon T. Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055, 1060 (1972).

94. POSNER, *supra*, note 81 at 189. In some settings defendants themselves have sought to employ the cheapest cost avoider rationale to promote a finding of no liability when a consumer aware of product risks is, the argument goes, the party that can most cheaply avoid the accident costs. See *Dewey v. R.J. Reynolds Tobacco Co.*, 577 A.2d 1239, 1254 (N.J. 1990) (discussing defendant's argument that cigarette consumers are cheapest cost avoiders).

95. The Pareto criteria for wealth maximization analysis are summarized in THE ECONOMIC ANALYSIS OF TORT LAW which states:

The first application of the Pareto criteria is to evaluate the desirability of changes in the distribution of goods. Pareto's system allows that evaluation without regard to the desirability of the initial distribution among individuals of either their abilities to pay or enjoy and without the need for interpersonal utility comparisons. Imagine a society in which all resources have already been allocated to particular individuals. Now imagine a change in allocations that left at least one person better off and no one worse off. Surely that change is desirable from any perspective. Economists refer to such a change in the allocation of resources as a Pareto superior change.

DAVID W. BARNES & LYNN A. STOUT, THE ECONOMIC ANALYSIS OF TORT LAW II (1992).

96. *Id.* at 12. Richard A. Posner further elaborated upon the principle by stating:

is considered a Pareto improvement [or Pareto superior] if it makes some individuals better off without making any person worse off. A state of the economic system is Pareto optimal [or Pareto efficient] if there is no Pareto superior state that society can reach. If we are using the Pareto criterion to evaluate our economic system, we say that a Pareto optimal state is "economically efficient."⁹⁷ A liability rule that creates burdens upon one participant with no correlative benefits to other participants would be denominated Pareto inefficient.

V. COMPONENT PART AND RAW MATERIAL SELLERS' DUTIES ANALYZED IN TERMS OF CORRECTIVE JUSTICE AND EFFICIENCY

A. *Corrective Justice-Morality*

With regard to warnings obligations particularly, the "informed consent" rationale reflects the societal judgment that a product user or consumer is entitled to make his own choice as to whether the product's utility or benefits justify exposing himself to the risk of harm.⁹⁸ From the standpoint of corrective justice, warnings adequate to permit a product user to make an informed decision as to whether to expose himself or others to the risk are central to preservation of a product user's autonomy interests.⁹⁹ From an efficiency perspective, informed decision making by a

[T]he Pareto principle . . . is that a change (including a change brought about by an accident or an intentional act) is good if it makes at least one person better off and no one worse off. This is a 'liberal' principle akin to Kant's and Mill's principle that everyone is entitled to as much liberty as is consistent with the liberty of all other people.

Richard A. Posner, *Wealth Maximization and Tort Law: A Philosophical Inquiry*, in PHILOSOPHICAL FOUNDATIONS OF TORT LAW 99, 104 (David G. Owen ed., 1995).

97. MARK SEIDENFELD, MICROECONOMIC PREDICATES TO LAW AND ECONOMICS 49 (1996). For a general description of Pareto optimality principles, see ROBIN PAUL MALLOY, LAW AND ECONOMICS: A COMPARATIVE APPROACH TO THEORY AND PRACTICE (1990).

98. See, e.g., *Borel v. Fibreboard Paper Prod. Corp.*, 493 F.2d 1076 (5th Cir. 1973). The court stated that "a true choice situation arises, and a duty to warn attaches, whenever a reasonable man would want to be informed of the risk in order to decide whether to expose himself to it." *Id.* at 1089; *Graham v. Wyeth Lab.*, 666 F. Supp. 1483, 1498 (D. Kan. 1987) (holding that consumer has right to know risks so that he can make informed decision).

99. Conversely, a risk creator's interest in self autonomy diminishes to the extent that he has "already injected himself into the plaintiff's realm." *Andrulonis v. United States*, 724 F.

plaintiff permits the buyer-seller transaction to be fairly characterized as an agreement that avoids the extracontractual inefficiencies of involuntary wealth transfers.¹⁰⁰

In the context of hypothesized warnings that might be required of a seller of, to employ an earlier example, Teflon (TM), there is no practicable means for a seller to communicate cautionary information to the ultimate user or consumer. There is an accepted doctrine in the law of product warnings that permits a bulk seller to discharge its warning obligations by its provision to the immediate vendee, ordinarily the injured party's employer, sufficient safety related information to permit the vendee to provide adequate warnings to users.¹⁰¹ This approach fails in the setting of raw materials and components parts sellers for this reason: The accepted doctrine is premised on the seller's ascertainment that the vendee is sufficiently sophisticated and responsible to convey such information to the users. This predicate is arguably workable when the product is established and its accepted use fairly well defined. An example might be an industrial solvent, and the risks to be communicated might logically focus on ventilation, inhalation, dermal exposure and flammability. For newer synthetic products, in contrast, the boundless and growing potential applications and misapplications, effectively preclude a seller's confident transmittal of safety information to its vendee. Due to the new and dynamic uses to which the raw material might be put, a seller might not yet know of either the potential risks or the capacity of the vendee to responsibly communicate them to either employees or consumers.

A representative expression of the "informed consent" rationale of warnings analysis has been put this way: The duty to warn arises "whenever a reasonable man would want to be informed of the risk in order to decide whether to expose himself to it."¹⁰² Thus, a core attribute of the Reporters' approach is one of vindicating the personal autonomy interest that underpins corrective justice.

Supp. 1421, 1494 (N.D.N.Y. 1989) (quoting Shlomo Twerski, Note, *Affirmative Duty After Tarasoff*, 11 HOFSTRA L. REV. 1013, 1025 (1983)), *modified on other grounds*, 924 F.2d 1210 (2d Cir. 1991).

100. *Moran v. Johns-Manville Sales Corp.*, 691 F.2d 811, 814 (6th Cir. 1982) (citing *Borel v. Fibreboard Paper Prods. Corp.*, 493 F.2d 1076, 1089 (5th Cir. 1973)). The *Borel* case stated that a product must not be made available to the public without disclosure of the dangers that the application of reasonable foresight would reveal. *Borel*, 493 F.2d at 1089.

101. RESTATEMENT (THIRD) OF PRODUCTS LIABILITY § 2 cmt. i (1998).

102. *Borel*, 493 F.2d at 1089.

With respect to warning obligations to intermediaries, no hardship is worked upon corrective justice principles by continuation of the nearly universal rule that a warning only to an intermediary will satisfy a seller's obligations when, in the totality of the circumstances, it can be predicted that pertinent safety-related information will be effectively conveyed to the end user.¹⁰³ In a scenario often involving risks of personal injury to workplace users of the product, the *Third Restatement* preserves the conventional rule regarding a seller's informational obligation to remote users by stating: "The standard is one of reasonableness in the circumstances. Among the factors to be considered are the gravity of the risks posed by the product, the likelihood that the intermediary will convey the information to the ultimate user, and the feasibility and effectiveness of giving a warning directly to the user."¹⁰⁴ This approach is in no material way unlike that suggested by the earlier *Second Restatement* section 388, comment n and it is consistent with the protocol described in the leading case law.

A like conclusion can be reached in claims arising from use of, or contact with, raw materials. In terms of corrective justice, the sellers of raw materials, many of which are transformed into a seemingly limitless array of applications by downstream participants in the commercial chain, have not, in any meaningful way, caused a plaintiff's harm. As a plaintiff may pursue a remedy against the distributive participant who did work the allegedly harmful change or modification in the material that triggered a warning obligation, the principles of corrective justice likewise are preserved.

B. Efficiency-Deterrence

In the context of component part suppliers or the sellers of raw materials that will be transformed into a part of a multitude of products, the developed Hand formulation, supports the conclusion under the *Third Restatement* that neither warning nor design duties should ordinarily attach to the supplier. Apart from the rare instance in which the supplier knows specifically of, or has actually participated in the judgment to utilize the component part or raw material in an application that entails excess preventable risk, the supplier will not have the expertise to appreciate, and

103. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. i (1998).

104. *Id.*

as a practical matter has no means to accurately foresee, the uses to which the product will be put. The burden, therefore, of assuming this responsibility (acquisition of staff, micro-inquiries into the proposed uses to which vendees will put the product) will therefore be quite large. Even at its extremity such a burden could not be confidently discharged, as the potential incautious uses to which a component part or a raw material may be put are bordered only by the human imagination. Thus, definitionally the burden of such precautionary measures is potentially boundless, and therefore in most instances greater than the probability of a harm (again unquantifiable) times the magnitude of the loss should it occur (again unquantifiable).

In the main, the *Third Restatement's* treatment of warnings can be harmonized readily with both Posner's market efficiency and Calabresi's least cost avoider approaches. By declining to take a position that suggests that a warning should be given even where the risk and the means of its avoidance are abundantly clear, the Reporters avoid adding unnecessary precautionary costs to the marketing of products of utility by stating that:

From a fairness perspective, requiring individual users and consumers to bear appropriate responsibility for proper product use prevents careless users and consumers from being subsidized by more careful users and consumers, when the former are paid damages out of funds to which the latter are forced to contribute through higher product prices.¹⁰⁵

While phrased in terms of fairness, this assertion speaks with equal persuasiveness in terms of efficiency.¹⁰⁶ In addition, a sketch of

105. *Id.* § 2 cmt. a.

106. *But see* Howard A. Latin, *Behavioral Criticisms of the Restatement (Third) of Torts: Products Liability*, 16 J. PROD & TOXICS LIAB. 209, 212 (1994). Latin argues:

[The Reporters suggest] that courts should avoid requiring warnings about "obvious product" risks. However, courts often disagree about which particular product hazards are obvious, and the Reporters offer no guidance on just how obvious a risk must be before courts should hold as a matter of law that warnings need not mention the risk. A hazard obvious to 80 percent of product users would not be evident to the other 20 percent, and the costs of providing a more complete warning to this minority group may be justified in comparison with the

Pareto efficient application to a component seller's warning duties readily reveals that warning duties create a cost to the seller, which will be passed along to vendees, with no commensurate benefit in terms of reducing avoidable accident costs. As it is the downstream formulator or fabricator that can most readily and inexpensively anticipate and ameliorate risk, placement of informational obligations upon the vendee can be considered Pareto efficient, while application of warnings duties upon the component seller would be Pareto inefficient.

Regarding the *Third Restatement's* approach to warnings to intermediaries and with respect to raw materials, the influence of efficiency considerations is even more apparent. In confirming that the objective of the *Third Restatement* § 2(c) comment i is indistinguishable from that of the *Second Restatement* section 388 comment n,¹⁰⁷ the Reporters emphasize the *Third Restatement's* goal of lowering accident costs by recognizing that it is ordinarily the workplace supervisor who can most efficiently and effectively communicate risk information, particularly in settings involving bulk sales of potentially hazardous materials.¹⁰⁸ Thus, the *Third Restatement* promotes an efficient rule that would relieve the component or ingredient supplier of liability when the component or ingredient is not itself defective. In such circumstances, the component or ingredient supplier ordinarily has no meaningful control over the hazard level, if any, of the finished product.¹⁰⁹ As between the ingredient supplier

accident losses that could be prevented. Once it is acknowledged that human cognitive capacities and receptivity to new information vary widely, which is amply demonstrated by the social science evidence, there is no reason to assume that a risk "obvious" to many product users will be equally "obvious" to others.

Id. at 216. See also Howard A. Latin, "Good" Warnings, Bad Products, and Cognitive Limitations, 41 UCLA L. REV. 1193 (1994) (setting forth considerable social science evidence supporting the above-stated assertion).

107. Comment i of § 2(c) of the *Third Restatement* and comment n of § 388 of the *Second Restatement* both pertain to warning duties to third persons.

108. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(c) cmt. i, no. 5 (1998) (Reporters' Note).

109. Any substance can be hazardous. As the 16th century physician Paracelsus stated: "What is not a poison? All things are poison and none without poison. Only the dose determines that a thing is not a poison." Charles E. Erway, III, *The Ingredient Supplier Defense*, 16 J. PROD. & TOXICS LIAB. 269, 273 & n.15 (1994) (quoting AMERICAN CONFERENCE OF GOVERNMENTAL INDUS. HYGIENISTS, THRESHOLD LIMIT VALUES—DISCUSSION AND THIRTY-FIVE YEAR INDEX WITH RECOMMENDATIONS 332 (1984)).

and the downstream assembler or formulator, the proper conclusion is that the downstream formulator, with its superior (and often exclusive) knowledge of the product's end use, and which is responsible for ultimate design, formulation, packaging, risk information and marketing, should remain the principal locus of potential liability.¹¹⁰

The tort goal of deterrence is in no way compromised by application of a "no duty" rule to mere suppliers of merchantable raw materials. A residual duty of reasonableness exists in the supplier's duty to supply what has been ordered. If a standard grade of copper is ordered and what is supplied is contaminated or a different grade and an injury results, the raw material supplier should be subject to liability. Likewise, if a raw material supplier goes beyond its traditional role and actively participates in the manufacturing process, its conduct should be judged on the basis of a reasonableness standard. Both of the aforementioned duties provide the raw materials supplier with an incentive to conduct its business consistent with a standard of reasonableness, and to avoid harmful behavior.

Deterrence only works if behavior exists that can be encouraged or prevented. Case law ranging from the most inchoate early rules to the most modern analyses have suggested that the manufacturer of the product, and not the raw material supplier, is in the best position to prevent

110. Illuminating in this regard is *Shell Oil Co. v. Harrison*, 425 So. 2d 67, 70 (Fla. Dist. Ct. App. 1982), a suit brought against the manufacturer of the chemical DBCP, which was sold to a formulator who used it as an ingredient of a fumigant claimed to have injured farm workers. *Id.* at 68. As the court stated: "[L]abeling and packaging requirements necessarily differ depending on the particular [end product] formulation and, thus, place the responsibility on the formulator for providing adequate warning to the public" *Id.* at 70. Similarly, and illustrative of application of the least cost avoider approach, is *Beauchamp v. Russell*, 547 F. Supp. 1191 (N.D. Ga. 1982), involving the issue of the connection, if any, between an air valve component in a pneumatically-run pelletizer and the injury of plaintiff's spouse. *Id.* at 1193. The court suggested that the duty to warn should properly be placed upon the participant in manufacture with the greatest access to information and the easiest means of its dissemination. *Id.* at 1197. In the words of the court:

The responsibility for information collection and dissemination should rest on the party who has the greatest access to the information and who can make it available at the lowest cost. Where a component part is incorporated into another product, without material change, the manufacturer of the part is in the best position to bear this responsibility."

Id.

an accident or injury. First, the manufacturer is a knowledgeable purchaser, usually industrial, and is aware of the problems that a raw material can cause. Second, the manufacturer alone knows about its products, as well as who is likely to use them. The manufacturer is in the appropriate position to formulate warnings and to design its product so as to prevent injury. If it is impossible to prevent some risks, the *Third Restatement* requires manufacturers to warn about them, unless they involve hazards that everybody knows about.

The TMJ cases are significant because they have made it clear that knowledge of how a raw material will be used does not, by itself, create a duty to investigate the risks posed by the final product.¹¹¹

A *Third Restatement* "no duty" rule governing sales of merchantable component parts, raw materials, and ingredients, represents sound policy. If those who mined copper, lead, or fabricated steel were strictly liable for harms caused by end-use products, insurance would be either unavailable or enormously costly. Those saddled with the task of actuarially determining a proper rate would be faced with indeterminate liability because they would not know what products would eventually be made. Delineating a rational starting point for, or cessation of potential liability, would be impossible. By way of contrast, an insurer for the end-use product producer can look at, and evaluate, based on history and rational projections, insurance risks of end-use products. Information on liability costs, past and projected, is crucial to carriers seeking to make coverage decisions and to set premiums. This information is available to the manufacturer of the end product, while it is normally unavailable to the supplier of raw materials potentially suited to a large number of potential end uses. Thus, the raw materials manufacturer, if subject to potential liability for harms caused by products in which the material ultimately was an ingredient, could never procure liability insurance in an informed and cost effective way. In terms of efficiency, insurance becomes less expensive, and the raw materials supplier and the end use manufacturer avoid duplicating insurance coverage.

111. See, e.g., *In re TMJ Implants Products Liability Litigation*, 97 F.3d 1050 (8th Cir. 1996).

CONCLUSION

Liability issues pertaining to component part, raw material and ingredient suppliers are both longstanding and pervasive in the purchase and sale of products. These questions concerned transactions ranging from the sale of behemoth turbines for ocean-going vessels in *East River Steamship Corp. v. Transamerica Delaval*,¹¹² where the Supreme Court applied the economic loss doctrine, and the Supreme Court observed that virtually every product has components,¹¹³ to the more prosaic, for example, fiber binding tape that a hypothetical business, "Boxes Are Us", might use to secure cardboard boxes used in shipping countless types of items.¹¹⁴ The longstanding nature of these questions was highlighted recently in a newspaper article I read that speculated that the reason the iceberg damaged the Titanic so mortally was because the rivets employed to bind together the hull plates had a level of internal metallurgical imperfections far exceeding what would be expected even in that era.

To borrow from Max Weber, Restatements float or sink on the moving stream of judicial acceptance. The rules expressed in the *Third Restatement* will either be validated as a material contribution to the rationalization of this field by a swell of favorable references in judicial opinions, or it will atrophy. Some, such as Guido Calabrese, have suggested that the *Third Restatement* will not be successful. With temerity, I think the great Yale scholar, and now federal judge, is in error. As suggested earlier, no new treatment of products liability will overrun judicial and statutory thinking as did the *Second Restatement* Section 402A. But in its introductory commentary, the ALI recognizes that habit and acculturation may militate against abandonment of the classical doctrinal labels, such as strict tort liability or negligence.¹¹⁵ Even when that proves true, the *Third Restatement* Reporters and the ALI agree, the venerable doctrinal categories can coexist with the functional definitions of manufacturing defects, design defects and warning/instructions defects. And, when used as a means of evaluating products liability claims, whether bonded with a doctrinal title or standing alone, the *Third*

112. 476 U.S. 858 (1986).

113. *Id.* at 867.

114. Such tape, we might imagine, would be suitable for securing boxes containing quilts, but a broken foot waiting to happen if used to secure a cast iron anvil.

115. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY INTRODUCTION (1998).

Restatement, including its provisions for sellers of component parts, raw materials and product ingredients, represents a work product satisfying the highest and best purposes of the American Law Institute.