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LIABILITY OF SUPPLIERS OF NATURAL RAW MATERIALS AND THE RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY—A FIRST STEP TOWARD SOUND PUBLIC POLICY

M. Stuart Madden

From its inception, the law governing liability for damage or injuries caused by defective products has pertained to potential liability for products that have been processed, finished, or fabricated. Naturally occurring raw materials, for the most part, have been considered beyond doctrinal concern, largely because characterizing a merchantable raw material, such as copper or pig iron, as defective is conceptually difficult. Nevertheless, certain doctrines that developed for the application of products liability to other products have gained sporadic application to naturally occurring raw materials, including the sophisticated purchaser defense, the bulk supplier defense, and the ingredient supplier defense. Madden argues that the proliferation of discrete defenses only has spawned confusion, and has not altered the decisional history demonstrating that liability will not be imposed for sale of bulk quantities of naturally occurring raw materials. Consequently, he concludes that the new Restatement should provide a comment stating explicitly that liability should not attach to such sellers absent a showing of a defect in the raw material itself that poses an unreasonable risk of personal physical injury.

INTRODUCTION

Tentative Draft Number 2 of the Restatement (Third) of Torts: Products Liability,¹ together with Tentative Draft Number 3,² address a very important practical issue: the duty in tort law of

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¹. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY (Tentative Draft No. 2, 1995) [hereinafter Tentative Draft No. 2].
². RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY (Tentative Draft No. 3, 1996) [hereinafter Tentative Draft No. 3].
suppliers of raw materials\textsuperscript{3} that occur in nature. The Reporters of the proposed Restatement have done a commendable job, but unresolved characterization and warning issues concerning natural raw materials retain their ambiguity in the current draft.\textsuperscript{4} In addition, crucial public policy issues surrounding the liability issue demand more precision.

The commentary to the Restatement (Second) of Torts section 402A\textsuperscript{5} intimates that merchantable, naturally occurring raw materials such as copper, silver, and lead generally should not be considered defective,\textsuperscript{6} and that sellers of such raw materials ordinarily should be conferred de jure immunity.\textsuperscript{7} To reach this

\textsuperscript{3} In its broad sense, the term “raw material” is used to describe material sold in bulk that is transformed in the course of the production of the completed product. Under this definition, both naturally occurring and synthetic or processed substances, ranging from rolled copper to Teflon\textsuperscript{8}, may be categorized as “raw materials.”

\textsuperscript{4} The principal characterization issues are the determination of whether naturally occurring raw materials are “products” within the meaning of products liability or whether a natural substance becomes a product only upon some measure of processing; and whether the incorporation of a raw material into another product so changes its original properties that the raw material seller is relieved of potential liability.

The pertinent warning or informational issues are whether there exists a duty to warn of the natural propensities of substances that have been in use since time immemorial; and, if such warnings are required, to whom are they owed. As to the latter point, the issue often is one of evaluating whether a seller of a raw material may fairly rely upon a sophisticated purchaser to convey any warning to those who will come into contact with the material.

\textsuperscript{5} See RESTATEMENT (SECOND) OF TORTS § 402A (1965). Section 402A states, in pertinent part: “(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 . . . .” Id.

\textsuperscript{6} See id. cmt. p (“[T]he 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.”); cf. Tentative Draft No. 3, supra note 2, § 10 cmt. c. Comment c states, in pertinent part:

A basic raw material such as sand, gravel, or kerosine cannot be defectively designed. If there is an inappropriate decision in the use of such materials, the failing is not attributable to the supplier of the raw materials, but rather to the fabricator that put them to use. . . . The same considerations apply to failure-to-warn claims against sellers of raw materials.

\textsuperscript{7} The author employs the phrase de jure immunity in its conventional sense, which is to say that immunity is conferred as a matter of definition or as a matter of law. See, e.g., Plummer v. Abbott Lab., 568 F. Supp. 920 (D.R.I. 1983). In Plummer, a DES case, the trial court applied a de jure approach to granting defendant’s motion for summary judgment on the plaintiffs’ claims for negligent infliction of emotional distress based on heightened concern for the medical risks imposed upon their daughters. See id. at 922–24. In the court’s words:

As to each of the claims at bar, either a mother-and-daughter relationship exists, or the plaintiff herself is held out to be the injured party. Yet, having in mind the lack of physical symptomatology on the part of the mother in each instance, and
result, some courts have said that material not reduced to consumable form is not a product within the meaning of products liability law.\textsuperscript{8} Moreover, most naturally occurring raw materials are integrated into altogether different products before being sold to the consuming public. The implications of this process of integration into a new form were summarized by one respected author, who stated that once "the component part is no longer distinguishable or capable of being identified on its own, it loses its status as a product."\textsuperscript{9}

Such a finding—that the material is not a product within the contemplation of products liability law, that a "no duty"\textsuperscript{10} rather than a "limited duty"\textsuperscript{11} rule should apply—has a sound public

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\textsuperscript{8}See, e.g., Wyrulec Co. v. Schutt, 866 P.2d 756, 760 (Wyo. 1993) (holding strict liability doctrine inapplicable in a suit brought against an electrical utility for injuries sustained when an employee touched transmission wires because electricity is not "a product"); cf. Kennedy v. Vacation Internationale, Ltd., 841 F. Supp. 986, 989 (D. Haw. 1994) (holding that tile used in resort's flooring was not a "product" under Hawaii law because it became a building fixture when laid).

\textsuperscript{9}Charles E. Cantu, The Illusive Meaning of the Term "Product" Under Section 402A of the Restatement (Second) of Torts, 44 OKLA. L. REV. 635, 656 (1994).

\textsuperscript{10}A "no duty" rule is in essence a policy conclusion that the relationship between either the plaintiff and the defendant, or the plaintiff's harm and the defendant's causal contribution to that harm, does not warrant shifting the burden of plaintiff's loss to the defendant. Sometimes this "no duty" conclusion is reached on the basis that plaintiff's harm is so remote from defendant's conduct as to preclude liability. See, e.g., Palagraf v. Long Island R.R., 162 N.E. 99, 100-01 (N.Y. 1928) (denying recovery where defendant's conduct was not a wrong in its relation to plaintiff and thus did not involve an invasion of a legally protected interest). In other settings, a "no duty" rule is grounded in the perception that the plaintiff and defendant's relationship is so remote that any other course would be unwieldy, arbitrary, or both, from the perspective of judicial administration. See, e.g., Robins Dry Dock & Repair Co. v. Flint, 275 U.S. 303, 309 (1927) (stating that "a tort to the person or property of one man does not make the tortfeasor liable to another merely because the injured person was under a contract with that other, unknown to the doer of the wrong").

\textsuperscript{11}A "limited duty" rule, such as the "informed intermediary," "sophisticated purchaser," see infra note 13 and Part II.B, or "bulk supplier" rules, see infra notes 13, 37-40 and accompanying text, presumes that defendant has a duty toward plaintiff, but that it is delegable to another upon the satisfaction of certain circumstances. In the context of the "informed intermediary," "sophisticated purchaser," or "bulk supplier" doctrines, the delegee of such duties is ordinarily the immediate vendee.
policy basis. Raw materials suppliers are generally distanced from subsequent design decisions and subsequent warnings decisions, as well as remote from knowledge of the end use of the material in a finished product.¹² Courts also have appreciated that naturally occurring raw materials are ordinarily sold in bulk,¹³ and further have understood that such raw materials are conventionally “redesigned” in the course of creating the final manufactured product, and thus lose their essential characteristics. For example, redesigned aluminum, such as an aluminum alloy, is no longer raw aluminum.¹⁴ Additionally,

¹². Some courts have reached the same result by observing that the raw material had not been reduced to consumable form. See Cantu, supra note 9, at 653 (listing jurisdictions that have found electricity not to be a “product” within the meaning of products liability, based in part upon the conclusion that it is a “commodity which can not be packaged, labeled, and sold and, therefore, is not a fungible good”); cf. Houston Lighting & Power Co. v. Reynolds, 765 S.W.2d 784, 785 (Tex. 1988) (holding that although electricity is a “product,” strict liability was precluded because at the time of the accident, the electricity was not in the condition in which it could be sold).

¹³. As recited by the Reporters:

Some courts invoke special doctrines such as the “raw material supplier defense” or the “bulk sales/sophisticated purchaser rule” to negate liability. These formulations recognize that component sellers who do not participate in the design of the integrated product should not be liable merely because the components become physically part of other products that are dangerously defective.

¹⁴. Characterizing a naturally occurring raw material as defectively designed is nonsensical. In most instances such a basic raw material is not susceptible to change, i.e., copper is a defined element with immutable characteristics and cannot in any sensible way be “redesigned.” Therefore, as this Article notes, to impose warnings obligations upon the sellers of basic raw materials makes little sense, either from a practical or prudential standpoint. Cf. Brown v. Superior Ct., 751 P.2d 470, 478 (Cal. 1988) (“While [defective equipment] might be ‘redesigned’ by the addition of safety devices, there is no possibility for an alternative design for a drug like DES, which is a scientific constant compounded in accordance with a required formula.”).
decisional and scholarly support exists for the common sense conclusion that there are no "design alternatives" to raw materials.\textsuperscript{15} As copper is copper, there can be no liability for defective design of it. Furthermore, the duty to warn is best placed on those who alter the raw material and shape it into the resulting product. They know best how to make the warnings and are able to assure that those who need to be warned see the warnings, read them, and understand them.

The Reporters' treatment of naturally occurring raw materials shows substantial fidelity to more than thirty years of decisional law.\textsuperscript{16} The Reporters conclude, as have the decisions upon which they rely, that a raw material is not defective—upon either a design or a warning rationale—simply through its inclusion in an end-use product that causes injury or harm.\textsuperscript{17}

It is essential that the new \textit{Restatement} be as explicit as possible to retain this basic fabric of law. A suggestion for

\textsuperscript{15} See, \textit{e.g.}, Singleton v. Manitowoc Co., Inc., No. 90-1714, 1991 WL 64953, at \textsuperscript{**2} (4th Cir. Apr. 29, 1991) ("[A] defect is a condition of a product by which it does not conform to recognized standards in the design of the product, recognized standards imposed by society, or consumer expectations."); Tentative Draft No. 3, \textit{supra} note 2, § 10 cmt. c ("A basic raw material such as sand, gravel, or kerosine cannot be defectively designed.").

Manufacturing defects play no essential role in the analysis of potential products liability for naturally occurring raw materials. A manufacturing defect is defined as "a physical departure from a product's intended design that poses risks of harm to persons or property." Tentative Draft No. 2, \textit{supra} note 1, § 1 cmt. a, at 1. As there is no intended design of a raw material, there can be no departure from it.

\textsuperscript{16} See Tentative Draft No. 3, \textit{supra} note 2, § 10 reporters' note cmt. b. The reporters' note states:

The issue is whether the seller of a component or raw material has a duty to inform itself about specific applications . . . and a further duty to determine whether the buyer who will integrate it into another product is knowledgeable as to the dangers attendant to that specific application. The Reporters have found no cases imposing such an onerous duty.

\textit{Id.} at 40.

\textsuperscript{17} See Tentative Draft No. 3, \textit{supra} note 2, § 11 cmt. a. The comment states that

when a product has a manufacturing defect . . . it must also be established that, had there been no defect, the harm to the plaintiff would have been avoided or diminished. Similarly, if a product was defectively designed or was defective because of inadequate instructions or warnings . . . it must be established that, had the product been properly designed or had the product been accompanied by reasonable instructions or warnings, the harm to the plaintiff would have been avoided or diminished. Moreover, the harm to the plaintiff must be of the sort that was reasonably to be expected given the nature of the defect.

\textit{Id.}
improving the language of the Restatement is offered in the Conclusion. This Article will show why a rationale for excluding naturally occurring raw materials from potential products liability is consistent with the doctrine's original purposes, as well as the goals of deterrence, fairness, and judicial efficiency.

I. EARLY PRODUCTS LIABILITY LAW—BEFORE THE RESTATEMENT (SECOND)

Whether the issue is one of design or warnings, a predicate to the application of products liability doctrine has always been that the material implicated in plaintiff’s suit be a “product.”

Yet it does not follow that anything of physical mass that is sold is potentially subject to a products liability claim for personal injury, property damage, or economic loss accompanied by other damages compensable in tort. Two decades before the 1965 publication of the Restatement (Second) of Torts section 402A, California Supreme Court Justice Roger Traynor made clear that the basis for strict liability applied to products whose marketing and use is routinely the result of production by “valuable [trade] secrets,” “sealed package[s],” “advertising,” “marketing devices such as trade-marks,” and a general consumer inability “to investigate for himself the soundness of [the] product.”

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18. See, e.g., Greenman v. Yuba Power Prods., Inc., 377 P.2d 897, 901 (Cal. 1962) (stating that strict liability’s purpose is “to ensure that the costs of injuries resulting from defective products are borne by the manufacturers that put such products on the market rather than by the injured persons who are powerless to protect themselves”).

19. Cf. Public Serv. Ind., Inc. v. Nichols, 494 N.E.2d 349, 355 (Ind. Ct. App. 1986) (applying strict liability where electricity “had been reduced to consumption level and passed through customer meters”). But cf. Houston Lighting & Power Co. v. Reynolds, 765 S.W.2d 784, 785 (Tex. 1988) (holding a power company was not subject to strict liability for injuries caused by contact with high-voltage power lines because the electricity, while considered a “product,” did not reach the consumer without substantial change in the condition in which it was sold); Wyrulec Co. v. Schutt, 866 P.2d 756, 761 (Wyo. 1993) (holding that an electrical utility company could not be strictly liable where a roofer was injured after touching electrical wires because “electricity is a service and not a product”).

In contrast, it generally has been held that in the law of trespass and nuisance, no such threshold showing of “consumable form” applies. See generally GERALD W. BOSTON & M. STUART MADDEN, LAW OF ENVIRONMENTAL AND TOXIC TORTS: CASES, MATERIALS AND PROBLEMS 28–37 (1994).

20. See Escola v. Coca Cola Bottling Co., 150 P.2d 436, 443 (Cal. 1944) (Traynor, J., concurring). Justice Traynor saw the need for strict products liability for mismanufactured products—products that did not conform to the manufacturer’s own
Two decades later, Justice Traynor commanded a majority of the California Supreme Court for his modern expression of a rule of strict liability for the sale of defective products that injure a user. In Greenman v. Yuba Power Products, Inc., the California Supreme Court stated:

A manufacturer is strictly liable in tort when an article he places on the market, knowing that it is to be used without inspection for defects, proves to have a defect that causes injury to a human being.

... To establish the manufacturer's liability it was sufficient that plaintiff proved that he was injured while using the Shopsmith in a way it was intended to be used as a result of a defect in design and manufacture of which plaintiff was not aware that made the Shopsmith unsafe for its intended use.

As the New York Court of Appeals in MacPherson v. Buick Motor Co. had done many years earlier, the Greenman court supported its new doctrine with authority derived from cases involving merchantability and fitness for consumption or intimate bodily application, such as food, cosmetics, or toiletries. Read together, the court found that the earlier holdings shared common characteristics: "Recognized first in the case of unwholesome food products, such liability has now been extended to a variety of other products that create as great or greater hazards if defective." As examples, the court referenced decisions involving soda bottles, vaccines, insect spray, a surgical pin, a skirt, an automobile, an automobile tire, a home specifications, such as a reusable soda bottle. Justice Traynor observed, "As handicrafts have been replaced by mass production ... the close relationship between the producer and consumer of a product has been altered." Id. Thus, the liability envisioned by Justice Traynor, the eventual author of Greenman, was for mass-produced items, i.e., chattels or personal property. Neither the decision's rationale, nor its focus, were directed at mass-produced naturally occurring raw materials.

22. Id. at 900–01.
25. Id. at 900.
permanent, hair dye, and an airplane. Justice Traynor's emphasis on tire, auto, clothing, and toiletry cases to inaugurate a new doctrine of strict products liability shows that the products liability obligation was not intended to reach materials that were sold without substantial finishing or processing.

II. THE TREATMENT OF NATURALLY OCCURRING RAW MATERIALS UNDER THE RESTATEMENT (SECOND)

Two years after Greenman, the American Law Institute (the ALI) published the Restatement (Second) of Torts. Under section 402A, the decisional law has continued to lend substantial support to the conclusion that the purpose of products liability doctrine is to protect consumers from unreasonable risks of harm caused by manufactured or processed products. Modern decisions continue to send the same message: the principal target of products liability law is "item[s]" on a "product line," or "chattel[s]," which are defined in one dictionary as "moveable item[s] of personal property."


27. See 1 M. STUART MADDEN, PRODUCTS LIABILITY § 6.1, at 192 & n.12 (2d ed. 1988) (listing decisions in which 33 jurisdictions have adopted strict liability for defective products).


29. Armstrong v. Cione, 738 P.2d 79, 82 (Haw. 1987) (finding insufficient plaintiff's strict liability claim for injury from a plate glass shower door in apartment because door was part of the premises rather than a product). As the court explained:

[T]he public interest in human life and safety requires the maximum possible protection that the law can muster against [defective products] . . . and that the burden of accidental injuries caused by defective chattels should be placed upon those in the chain of distribution as a cost of doing business and as [a deterrent].

Id. at 82 (first alteration in original) (quoting Stewart v. Budget Rent-A-Car Corp., 470 P.2d 240, 243 (Haw. 1970)).

30. WEBSTER'S NEW WORLD DICTIONARY 242 (2d College ed. 1980). In the regulated areas, such as medical devices, federal regulations impose requirements upon the
The discussion that follows describes the two principles that commonly control the treatment of naturally occurring raw materials. First, when there is a change in the material over which the supplier has neither knowledge nor control, there is no liability for the supplier. Second, there is de jure or de facto immunity for sellers of such raw materials, pursuant to the alternative conclusions that either such materials are definitionally excluded from potential liability or, on the facts of the case, doctrines such as the sophisticated purchaser defense or the bulk supplier defense preclude liability.

A. Uncontrolled Change in Products Results in No Duty

For design or warnings liability alike, the Restatement (Second) of Torts section 402A(1)(b) requires that a product sold "must be ‘expected to and does reach the user or consumer without substantial change in the condition in which it is sold.’" The "without substantial change" predicate to section 402A is explained in comment p:

Thus far the decisions applying the rule stated have not gone beyond products which are sold in the condition, or in substantially the same condition, in which they are expected to reach the hands of the ultimate user or consumer. In the absence of decisions providing a clue to the rules which are likely to develop, the Institute has refrained from taking any position as to the possible liability of the seller where the product is expected to, and does, undergo further processing

“finished device.” Mendes v. Medtronic, Inc., 18 F.3d 13, 19 (1st Cir. 1994) (citing 21 C.F.R. § 820.20(a) (1996)). Cf. Schaffer v. A.O. Smith Harvestore Prods., Inc., 74 F.3d 722, 729 (6th Cir. 1996) (“[T]here is no duty to warn extending to the speculative anticipation of how manufactured components, not in and of themselves dangerous or defective, can become potentially dangerous dependent upon their integration into a unit designed and assembled by another.” (citation omitted)). If there is no liability for the manufacturer of the component part in the latter setting, it follows a fortiori that there should be no liability for the seller of the naturally occurring raw material, the relationship of which to the finished product is at an even greater remove.

31. See infra notes 33-40 and accompanying text.
32. See supra note 7; see also BLACK’S LAW DICTIONARY 416, 425 (6th ed. 1990) (defining de jure as “of right” and “as a matter of right,” and de facto as “[i]n fact, in deed, actually”).
or other substantial change after it leaves his hands and before it reaches those of the ultimate user or consumer.34

This comment is instructive: In effect, the ALI took a position with respect to raw materials such as pigiron. The comment noted that in the case of a raw material "capable of a wide variety of uses," responsibility shifts. If the "ultimate user" manufactures a child's tricycle with the pigiron, and the pigiron is unsuitable for that purpose, liability is imposed on the party that manufactured the tricycle, not on the supplier of the pigiron.35 The comment also clearly stated that when material sold in bulk is itself defective, and that defect causes a harm, liability indeed may be imposed on the supplier.36

Thus comment p proposes that no liability should attach to the seller of raw materials having multiple end uses, the selection of which is beyond the seller's control. In harmony with this is the "no duty" rule adopted by courts considering claims involving bulk sales of substances incapable of being labeled at the time of their unfinished and initial introduction into commerce. For

34. Restatement (Second) of Torts § 402A cmt. p (1965). The comment provides further:

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. The question is essentially one of whether the responsibility for discovery and prevention of the dangerous defect is shifted to the intermediate party who is to make the changes. No doubt there will be some situations, and some defects, as to which the responsibility will be shifted, and others in which it will not. The existing decisions as yet throw no light upon the questions, and the Institute therefore expresses neither approval nor disapproval of the seller's strict liability in such a case.


35. See, e.g., Pennwalt Corp. v. Superior Ct., 218 Cal. Rptr. 675, 677 (Ct. App. 1985) (finding bulk chemical manufacturer not liable to ultimate consumer injured in explosion caused by careless compounding of chemicals that had been repackaged, relabeled and resold by distributor and retailer over which manufacturer had no control); Jones v. Hittle Serv., Inc., 549 P.2d 1383, 1394 (Kan. 1976) (holding that a manufacturer who sells its product to a trained and capable distributor who is familiar with the product owes no duty to warn the ultimate consumer).

36. See Restatement (Second) of Torts § 402A cmt. p (1965).
example, in *Groll v. Shell Oil Co.*, a suit brought against the
bulk supplier of the chemical BT-67, which had been incorporat-
ed into store and lantern fuel, the plaintiff was burned while
trying to light a fire. Finding no liability for failure to warn, the
court concluded that a bulk supplier’s duty to warn simply does
not arise absent “tangible items that could be labeled, or sent
into the chain of commerce with the manufacturer’s instruc-
tions.”

Accordingly, this practical proposition that a supplier should
not be responsible for change to a product outside of its control
supports the general approach in the *Restatement (Second).*
Naturally occurring raw materials are sold in bulk to intermedi-
ary fabricators or processors; they are not “sold in the condition,
or substantially the same condition, in which it is expected to
reach the ultimate user or consumer.”

**B. De Jure and De Facto Immunity**

In the thirty years following publication of section 402A,
judicial decisions have followed two paths toward excluding raw
materials sellers from design or warnings liability—de jure
immunity or de facto immunity. De jure immunity is granted
by decisions that find, expressly or implicitly, that certain
transactions in naturally occurring raw materials are not the
products that the authors of the *Restatement (Second)* envisioned
as properly subject to strict liability.

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37. 196 Cal. Rptr. 52 (Ct. App. 1983).
38. *Id.* at 55. See also Werckenthein v. Bucher Petrochemical Co., 618 N.E.2d 902,
908–09 (Ill. App. Ct. 1993) (holding that where suppliers of chemicals in bulk had
warned of consequences of prolonged exposure, and a chemist failed to follow the
industry practice for testing such a chemical, manufacturer does not breach duty to warn
by failing to provide a specific precaution against chemist’s practice of sniffing directly
from the container); House v. Armour of Am., Inc., 886 P.2d 542, 554 (Utah Ct. App.
1994) (“A bulk supplier of raw materials which are not themselves inherently dangerous
has no duty to warn ultimate users of the manufactured product.”), aff’d, 1996 WL
714611 (Utah, Dec. 13, 1996); *cf.* *Jones*, 548 P.2d at 1393 (noting that “[a]l bulk supplier
. . . is in an entirely different position from one who sells packaged commodities or who
deals directly with the consumer”).
39. See *Leon v. Caterpillar Indus., Inc.*, 69 F.3d 1326, 1338 (7th Cir. 1995) (affirm-
ing jury verdict for manufacturer in a forklift operator’s strict liability action against
manufacturer where manufacturer interposed the defense that retailer’s faulty instal-
lation of a deadman’s switch was the proximate cause of the accident).
41. See supra notes 7, 32 and accompanying text.
42. *Cf.* Edward M. Mansfield, *Reflections on Current Limits on Component and Raw
Material Supplier Liability and the Proposed Third Restatement*, 84 Ky. L.J. 221, 231
De facto immunity is granted by decisions that state that a raw material supplier in a particular case had no duty to warn because either the buyer was a sophisticated or a professional user and did not need to be warned;\(^{43}\) or the buyer was in a superior position to know of the end use to which the product would be devoted and was in a better position than the raw material supplier to identify what warnings were needed and to make them.\(^{44}\) Distinguishable in degree from both the bulk supplier and the component supplier defenses, the raw material supplier defense (sometimes aptly termed the ingredient supplier defense)\(^{45}\) posits that the manufacturer’s “end” product no longer is the “material” that the raw material or ingredient supplier originally sold.\(^{46}\) This distinction turns upon the supplier’s position not only that it has no control over packaging of the end product (a limitation that is common with bulk suppliers), but also that it has no control over the form or composition of the end product itself. As such, the raw material or ingredient supplier participates neither in the risk creation nor in the risk

(1995–96) (“A raw material by definition is of value to society precisely because it can be adapted to a wide variety of applications. . . . That does not mean that they are ‘safe’ in all applications; no material is.”). See generally Williams & German, supra note 34, at 25 n.8 (arguing that the preconditions in section 402A(1)(a) that the “seller” engage ‘in the business of selling such a product’” should operate to “exclude bulk suppliers from liability because they do not sell finished ‘products’”).

43. See, e.g., Kalinowski v. E.I. DuPont de Nemours & Co., 851 F. Supp. 149 (E.D. Pa. 1994). In discussing the sophisticated user doctrine, the court commented that the “Sophisticated User” defense does not absolve the bulk supplier of the duty to warn ultimate users. Rather, applying § 388 [comment n] of the Restatement (Second) of Torts simply permits the court to find that such supplier discharged its duty by reasonably relying upon the intermediary to convey appropriate warnings to the ultimate users.

Id. at 157.

44. See Smith v. Walter C. Best, Inc., 927 F.2d 736, 741–42 (3rd Cir. 1990) (affirming the district court’s grant of summary judgment in a silicosis case based upon the sophisticated purchaser defense); see also Kenneth M. Willner, Note, Failures to Warn and the Sophisticated User Defense, 74 VA. L. REV. 579, 589 (1988) (noting that under the sophisticated user defense “sellers act reasonably if they do not warn intermediate purchasers of dangers of which the intermediate purchasers are already knowledgeable”).

45. See Erway, supra note 13, at 269 (“[A]n ingredient supplier provides a raw material or substance, such as a potentially hazardous chemical, to manufacturing companies that create their own products.”).

46. See id. In raising this defense the ingredient or raw material seller argues that “the manufacturer’s end product, whatever it may be, is not the same ‘product’ as what the ingredient supplier sold.” Id. After all, any substance can be hazardous. As the 16th-century physician Paracelsus stated: “What is it that is not poison? All things are poison and none without poison. Only the dose determines that a thing is not poison.” Erway, supra note 13, at 273 (citation omitted).
reduction, if any, of the finished product. As a practical matter, the buyer of the raw materials should make the warnings to the end user because it is in the best position to do it. One simply cannot put warning tags on bulk pigiron, copper, steel, or lead.

The rationale unifying these theories is that knowledgeable purchasers are "in a far better position to communicate an effective warning to the ultimate user." The rule has been applied in a variety of situations involving eventual finished products such as capacitors in dataphones made from bulk materials such as silica.

47. Sara Lee Corp. v. Homasote Co., 719 F. Supp. 417, 422 (D. Md. 1989) (finding that a supplier of polystyrene beads to a manufacturer of board insulation was in the best position to warn user).

Between the ingredient supplier and the downstream formulator, the supportable conclusion is that the downstream formulator, with its superior knowledge of the product’s eventual use, is responsible for ultimate design, formulation, packaging, risk information, and marketing. See, e.g., George v. Parke-Davis, 733 P.2d 507, 515–16 (Wash. 1987) (finding no liability in an indemnification action brought by a pharmaceutical company against the supplier of the active ingredient diethylstilbestrol (DES)). Finding no liability for the ingredient supplier, the court explained:

DES is not inherently harmful, and still is prescribed today for ailments not associated with pregnant women. Thus, it is the way in which DES is used, and not DES per se, which is harmful. Furthermore, the [FDA] requires the tablet manufacturers and not the bulk manufacturers, to account for and warn of a drug’s properties. It would therefore be anomalous to require the raw [ingredient] manufacturer to conduct separate tests to determine the adverse effects of the drug when by federal statute, the tablet manufacturer bears this responsibility.

Id. at 515 (citation omitted). Shell Oil Co. v. Harrison, 425 So. 2d 67 (Fla. Dist. Ct. App. 1982), involved a suit brought against the manufacturer of the chemical DBCP, which was sold to a formulator who used it as an ingredient of a soil fumigant claimed to have injured the ultimate users of the fumigants. See id. at 68–69. Rejecting the proposition that Shell had a nondelegable duty to warn ultimate users of the hazards of its products that were ingredients in different products made by other companies, the court stated that "labeling and packaging requirements necessarily differ depending upon the particular [end product] formulation and, thus, place the responsibility on the formulator for providing adequate warning to the public . . . ." Id. at 70. White v. Weiner, 562 A.2d 378 (Pa. Super. Ct. 1989), aff'd, 583 A.2d 789 (Pa. 1991), involved a suit brought against Eli Lilly & Co., a bulk supplier of pharmaceutical chemicals, for failure to provide warnings on the chemical compound protamine sulfate. The chemical compound was supplied in bulk to the Upjohn Co., who employed it as an ingredient in a prescription drug. See id. at 379. The Pennsylvania court held that Eli Lilly had no tort duty to warn the end user, inasmuch as the end product producer was in a superior position to assess risks and decide upon the form and content of adequate labeling and instructions. See id. at 385–86.

48. See Rivers v. AT & T Tech., Inc., 554 N.Y.S.2d 401, 403–05 (App. Div. 1990) (granting summary judgment in a products liability action for the supplier of dimethylformamide, or DMF, an ingredient in dataphone capacitors alleged to have caused or contributed to a woman's death).

49. See, e.g., Smith v. Walter C. Best, Inc., 927 F.2d 736, 741–42 (3d Cir. 1990) (recognizing, under Ohio law, a sophisticated purchaser defense to purchaser’s employees’ silicosis claims); Beale v. Hardy, 769 F.2d 213, 214–15 (4th Cir. 1985) (finding that
Accordingly, in many raw materials warnings cases, courts have held that a manufacturer either need not provide warnings to a buyer sophisticated in the risks of product use or in control of further processing, or may predicate such warnings as are provided upon reasonable expectations that the knowledgeable purchaser will act in ways consistent with his knowledge of product risks and handling.\(^{50}\) As the court stated in O'Neal v. Celanese Corp.,\(^{51}\) "if the danger . . . is clearly known to the purchaser/employer, then there will be no obligation to warn placed upon the supplier. . . . Stated another way, when the supplier has reason to believe that the purchaser . . . will recognize the danger associated with the product, no warnings are mandated."\(^{52}\) In Phillips v. A. P. Green Refractories Co.,\(^{53}\) involving silica, a Pennsylvania Superior Court held that under Pennsylvania law the sophisticated user defense was available in strict products liability actions as well as those brought in negligence.\(^{54}\) As applied to bulk sales, at least one court has interpreted the sophisticated purchaser rule as obliging the bulk seller to confine its sales to such knowledgeable buyers. The Tenth Circuit in Mason v. Texaco, Inc.,\(^{55}\) reversing a verdict for the plaintiff, stated that Kansas law:

imposes upon the bulk seller the obligation to sell only to knowledgeable and responsible distributors. [It] does not impose a duty on the bulk seller to warn the ultimate consumer, and specifically does not impose a duty on the

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50. See Prather v. Upjohn Co., 797 F.2d 923, 924 (11th Cir. 1986) ("The evidence at trial showed that Upjohn sold its polyurethane foam exclusively to knowledgeable industrial consumers. The warnings Upjohn issued concerning the potential hazards of burning the foam were therefore designed accordingly."); Hegna v. E.I. DuPont de Nemours & Co., 825 F. Supp. 880, 884 (D. Minn. 1993) ("It is now undisputed that Vitek [manufacturer of plaintiff's TMJ implants] knew both the properties of DuPont's PTFE and the scientific community's concerns regarding the use of PTFE-based materials to make implants such as the TMJ implant.").

51. 10 F.3d 249 (4th Cir. 1993).

52. Id. at 251 (quoting Kennedy v. Mobay Corp., 579 A.2d 1191, 1196 (Md. Ct. Spec. App. 1990)).


54. See id. at 882; see also Jackson v. Reliable Paste & Chem. Co., 483 N.E.2d 939, 942-43 (Ill. App. Ct. 1985) (finding that a supplier of methanol, an ingredient of manufacturer's finished product, owed no duty to warn of methanol's dangers as the manufacturer knew of the chemical's explosive and flammable propensities).

55. 862 F.2d 242 (10th Cir. 1988).
bulk seller to police the adequacy of warnings given by the distributor.56

C. Prior Decisions Involving Naturally Occurring Raw Materials

1. Generally—As suggested, the decisions declining to confer “product” status upon basic naturally occurring raw materials have hewn consistently to the logical proposition that the raw material seller is so distanced from knowledge of the product’s end uses or their attendant risks as to be unable to detect them, to avoid them, or to secure insurance to spread the risks.57 Representative of such decisions is one in which the basic raw material is in transit to the manufacturer in anticipation of product fabrication and an injury occurs during this intermediate stage. In Spellmeyer v. Weyerhaeuser Corp.,58 plaintiff, a

56.  Id. at 246; see also Jones v. Hittle Serv., Inc., 549 P.2d 1383, 1394 (Kan. 1976) (holding that the bulk seller “fulfills his duty to the ultimate consumer when he ascertains that the distributor to whom he sells is adequately trained, is familiar with the properties of the [propane] gas and safe methods of handling it, and is capable of passing on his knowledge to his customers”).

57.  See Tentative Draft No. 3, supra note 2, § 10 cmt. c. Comment c provides:

Raw materials. . . . The manufacturer of the integrated product has a significant comparative advantage regarding selection of materials to be used. Raw-materials sellers are accordingly 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 supplier has no control. Courts uniformly refuse to impose such an onerous duty to warn.

Id.

A seller’s efficient procurement of insurance turns upon its ability to anticipate risk with some level of reliability. See, e.g., 2 MADDEN, supra note 27, § 25.1:

In purchasing products liability insurance, the . . . seller seeks to exchange an uncertain risk, that of potential future actionable incidents involving its products, for a certain cost, that of annual premiums. . . . [T]he offering of insurance and the setting of premiums for liability insurance is based upon the carrier’s actuarial projection of what the insured’s overall losses may be expected to be. . . . For a risk to be insurable it must, therefore, be “specified or capable of identification,” and the duration of the risk must be fixed or determinable.

Id. (citation omitted).

longshoreman, brought a personal injury suit against a manufacturer alleging that it failed to prepare wood pulp bales properly for shipping, so that plaintiff was injured when struck by bales that fell from a disintegrating eight-bale module. The court granted Weyerhaeuser summary judgment on the strict liability count:

Imposition of strict liability is premised on the sound policy consideration that the manufacturer who markets his product for use and consumption by the general public is best able to bear the risk of loss resulting from a defective product. The thrust of Section 402A is, accordingly, to protect the "ultimate user or consumer" of the product. . . . In the instant case, Weyerhaeuser produced and packaged a raw material in an intermediate state, which was stored awaiting shipment to another processor. It did not harm or endanger any "ultimate user or consumer"; only expert loaders and expert carriers were required to deal with it. We therefore conclude that, because of the character of the "product" and the status of the plaintiff, the policy considerations which support imposition of strict liability in other contexts are too severely diluted here and dismissal was correct as to the strict liability theory.60

Seller incapacity to anticipate, and therefore to affect, end-use risks provided the basis for defendant's judgment in Pennwalt Corp. v. Superior Court. That suit arose from injuries an eighteen-year-old plaintiff suffered while attempting to compound chemicals at home to create fireworks. The raw materials at issue included sodium chlorate, aluminum powder, and sulphur. Plaintiff brought suit against the manufacturer, distributor, and retailer of each chemical.62 The California appeals 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.63 The court explained:

59. See id. at 108.
60. Id. at 109–10.
61. 218 Cal. Rptr. 675 (Ct. App. 1985).
62. See id. at 675.
63. See id. at 677.
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 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. 64

Another California case, Walker v. Stauffer Chemical Corp., 65 involved a plaintiff who was injured seriously by a drain cleaner explosion. The cleaner contained sulfuric acid. With respect to the supplier of the sulfuric acid, the court made this observation:

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. On the contrary this dearth of authority indicates to us a reluctance on the part of the bench and bar to consider such an extension necessary or desirable for the protection of the ultimate consumer. 66

The Walker court explained that no public policy interest could be found for imposing liability upon a supplier of a non-defective ingredient: "The ultimate product . . . can in no way be considered to be one and the same [as the] bulk sulfuric acid manufactured by Stauffer . . ." 67 The court further explained:

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

64. Id.
65. 96 Cal. Rptr. 803 (Ct. App. 1971).
66. Id. at 805–06.
67. Id. at 805.
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.68

2. Asbestos—The No Duty Rule in Action—Cases involving asbestos are not an exception to the “no duty” rule, but rather illustrate the application of the rule. In asbestos cases, the processor—not the mining company—is liable, because it is in the best position to warn of the hazards. For example, in Menna v. Johns-Manville Corp.,69 an asbestos personal injury suit, the district court concluded that even though asbestos was a product for purposes of strict liability, the person in the best position to warn of its hazards—in this case the processor who formed the asbestos into its end use product—had the duty to warn of its hazards.70 "Thus, as with the raw coffee beans in [Restatement (Second)] comment p, there is no justification for shifting responsibility for the harms of asbestos from defendant processors to Owens-Corning."71

Decisions like Menna may best be seen as consistent with the rule that suppliers of naturally occurring raw materials have no duty to warn processors of obvious dangers. If products such as asbestos always are considered dangerous, then the duty to warn is discharged best by the party who knows the end use and how best to convey the warning to the end user.

III. NATURALLY OCCURRING RAW MATERIALS UNDER THE RESTATEMENT (THIRD)

A. Generally

Section 2 of the Restatement (Third) Tentative Draft No. 2 establishes standards for determining product defectiveness. For purposes of determining the liability of a commercial seller or distributor for harm caused by defective products:

68. Id. at 806.
70. See id. at 1182.
71. Id. at 1183.
(a) a product contains a manufacturing defect when the product departs from its intended design even though all possible care was exercised in the preparation and marketing of the product;

(b) a product is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the alternative design renders the product not reasonably safe;

(c) a product is defective because of inadequate instructions or warnings when the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the instructions or warnings renders the product not reasonably safe.72

The language of section 2(b) itself militates against its application to naturally occurring raw materials. As a practical matter, a raw material such as iron, aluminum, or copper has demonstrated its utility through generations of application in uses that require its specific physical propensities, such as weight, strength, conductivity, or otherwise. The entire concept of a "design" alternative would be distorted into unrecognizability if it were imagined that availability of an altered product, such as one that is no longer iron, or copper, or aluminum, was a feasible design alternative within the meaning of section 2(b).

Concerning warnings and instructions, section 2(c)'s provision that warnings liability will arise where "the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller"73 does not apply to the commercial and production processes of naturally occurring raw materials. The Walker court's commentary, noting the futility of imposing upon raw materials suppliers an obligation to inform themselves of all possible end product uses, and to provide warnings concerning potentially hazardous uses, is illustrative.74

72. Tentative Draft No. 2, supra note 1, § 2.
73. Id.
74. See Walker, 96 Cal. Rptr. at 806.
Regarding sales to intermediaries, under the *Restatement (Third)* Tentative Draft No. 2, the conventional rule regarding a seller's informational obligation to remote—often workplace—users continues. In the Reporters' words:

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.75

The draft *Restatement's* preservation of the so-called "open and obvious" rule supports the proposal that a duty to warn does not attach to naturally occurring raw materials. As the Reporters state: "In general, no duty exists to warn or instruct regarding risks and risk avoidance measures that should be obvious to, or generally known by, foreseeable product users. . . . Warning of an obvious or generally known risk in most instances will not provide an effective additional measure of safety."76 Persons who buy the materials know of the risks, and they are aware of the relative conductivity of copper, the brittleness of iron, or the weight/load bearing qualities of aluminum.

**B. The Reporters and Raw Materials**

The Reporters' commentary provides support for practical and theoretical contentions that strict products liability is confined to manufactured, finished products. The Introductory Note to the *Restatement (Third)* Tentative Draft No. 2 signals a conforming interpretation in promising that "Topic 1 consists of seven sections and covers the general subject of product defect for the vast majority of manufactured products."77 Read in its totality, the Reporters' comment to section 1 bolsters that conclusion.

75. Tentative Draft No. 2, supra note 1, § 2 cmt. h.
76. Id. § 2 cmt. i.
77. Id. at xxvii (emphasis added).
Although the Reporters recognize that "[m]ost courts treat raw materials as products for the purposes of strict products liability in tort, provided that the injury resulted from an identifiable defect in the raw material," they make this comment:

**Raw Materials.** Product components include raw materials. . . . Thus, when raw materials are contaminated or otherwise defective . . . the seller of the raw materials is subject to liability for harm caused by such defects. . . . A basic raw material such as sand, gravel, or kerosine cannot be defectively designed. If there is an inappropriate decision in the use of such materials, the failing is not attributable to the supplier of the raw materials, but rather to the fabricator that put them to use. The manufacturer of the integrated product has a significant comparative advantage regarding selection of materials to be used. Raw-materials sellers are accordingly 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 supplier has no control.79

In an illustration to section 10 of the *Restatement (Third) Tentative Draft No. 3* the Reporters hypothesize:

LMN Sand Co. sells sand in bulk. ABC Construction Co. purchases sand to use in mixing cement. LMN is aware that the improper mixture of its sand with other ingredients can cause cement containing the sand to crack. ABC utilizes LMN's sand to form a supporting column in a building. As a result of improper mixture the cement column cracks and gives way during a mild earthquake and causes injury to the building's occupants. LMN is not liable to the injured occupants. The sand sold by LMN is not defective in itself. . . . LMN has no duty to warn ABC about improperly mixing sand for use in cement. LMN does not participate in ABC's design of the cement and is not subject to liability for harm caused by the sand as integrated into the cement. . . .80

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78. *Id.* § 4 reporter's note cmt. b, at 148 (emphasis added).
80. *Id.* § 10 cmt. c, illus. 6.
The rationale of this illustration is that liability attaches only where the "raw material" supplier has engaged in conduct that went beyond the normal activity of a raw material supplier, i.e., has participated in the design of the cement. The illustration lends support for a "no duty" rule for suppliers of merchantable naturally occurring raw materials.

IV. MODERN RATIONALES FOR THE NATURALLY OCCURRING RAW MATERIAL NO DUTY RULE

The question remains: Can a no duty rule for naturally occurring raw materials be harmonized with the goals of modern products liability law? While there are expressions without number of what these goals are, one effective expression was made by the California Supreme Court in Brown v. Superior Court. In that decision, the California court, the founding court of modern strict products liability, identified the "fundamental reasons" for the application of modern products liability: "to deter manufacturers from marketing products that are unsafe, and to spread the cost of injury from the plaintiff to the consuming public, which will pay a higher price for the product to reflect the increased expense of insurance to the manufacturer resulting from its greater exposure to liability."

Consistent with the language of Brown, legal commentators have developed rationales of "deterrence" and "efficiency" as important, although not exclusive, rationales for modern

81. 751 P.2d 470 (Cal. 1988).
82. See Greenman v. Yuba Power Prods., Inc., 377 P.2d 897 (Cal. 1962); see also supra notes 21–26 and accompanying text.
84. See M. Stuart Madden, The Vital Common Law: Its Role in a Statutory Age, 18 U. ARK. LITTLE ROCK L.J. 555, 584–85 (1996) (quoting various commentators); see also O.W. HOLMES, JR., THE COMMON LAW 144 (1881) ("The true explanation of the reference of liability to a moral standard . . . [is] that it is to give a man a fair chance to avoid doing the harm before he is held responsible for it.").
85. See Guido Calabresi & A. Douglas Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089, 1096–97 (1972) (suggesting that in "particular contexts like accidents or pollution [costs should be placed] on the party or activity which can most cheaply avoid them"). The Calabresi and Melamed approach influenced the Ninth Circuit in Union Oil Co. v. Oppen, 501 F.2d 558 (9th Cir. 1974), an oil pollution case. The court stated: "In determining whether the cost of an accident should be borne by the injured party or be shifted, in whole or in part, this [efficiency] approach requires the court to fix the identity of the party who can avoid the costs most cheaply." Id. at 569.
products liability. Even assuming that each of these tort rationales enjoy a robust following today, a Restatement (Third) “no duty” rule would represent sound policy. If those who mined copper or 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 “open skies” 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. It is seen that the risk distribution rationale mentioned in Brown belies the imposition of products liability on suppliers of raw materials.

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.

86. 751 P.2d 470 (Cal. 1988).
But deterrence only works if behavior exists that can be encouraged or prevented.\textsuperscript{87} 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 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 draft \textit{Restatement} requires manufacturers to warn about them, unless they involve hazards that everybody knows about.\textsuperscript{88}

Deterrence works best when it is selective and focused. This essential products liability rationale supports limiting the obligations of suppliers of raw materials to what they are equipped and motivated to do best, and places responsibility for product risks finally and clearly upon the manufacturers of the product that caused the harm.

Criticisms of the proposed \textit{Restatement (Third)} provisions pertaining to liability of suppliers of raw materials have ranged from those who say it extends too far to others claiming that it does not go far enough to limit liability. Professor Mark McLaughlin Hager appears to criticize any rule that would limit duty to reasonably foreseeable dangers,\textsuperscript{89} and states, “There should be no defense of unforeseeable use if the harm in question would also arise from foreseeable use.”\textsuperscript{90}

In contrast, Edward M. Mansfield, a practitioner who has studied this particular area of law, observes that even “if a

\textsuperscript{87} See HOLMES, supra note 84, at 144. The goal of deterrence has seemingly been tort law's perpetual and faithful companion. As early as 1890 an academic author 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 future.” William Schofield, Davies v. Mann: Theory of Contributory Negligence, 3 HARV. L. REV. 263, 269 (1890).

\textsuperscript{88} See Tentative Draft No. 2, supra note 1, § 2 cmt. i (“In general, no duty exists to warn or instruct regarding risks or risk avoidance measures that should be obvious to, or generally known by, foreseeable product users.”).

\textsuperscript{89} See Mark McLaughlin Hager, \textit{Don't Say I Didn't Warn You (Even Though I Didn't): Why the Pro-Defendant Consensus on Warning Law is Wrong}, 61 TENN. L. REV. 1125, 1134–49 (1994).

\textsuperscript{90} Id. at 1149.
multi-purpose raw material . . . is hazardous only as used in a particular type of finished product, legal responsibility rests with the finished product manufacturer and not with the raw material . . . supplier."91 He believes the draft Restatement would be improved if "existing legal protections for multi-use raw material and component suppliers" were "expressly retained" in the proposed Restatement (Third).92

Another expert on raw material liability law, Charles E. Erway, III, has supported this view.93 He writes that no liability should attach to the supplier of non-defective raw materials with a range of end uses over which the initial supplier has no control.94 In particular, Erway focuses on the temporomandibular joint disorder (TMJ) litigation involving DuPont polymers, sold under the trade name Teflon®.95 He reports that in ten of the twelve reported TMJ decisions, DuPont was dismissed from the suit on the basis, at least in part, that Teflon® is not hazardous.96 In one suit summary judgment was granted in part and denied in part because the court found no factual issue existed as to whether DuPont satisfied the "bulk supplier" defense.97 In the last of the twelve reported suits, the Eighth Circuit affirmed a jury verdict for DuPont.98

Likewise, in ten cases against raw material suppliers involving toxic, flammable, or otherwise hazardous substances, Erway's research revealed that six courts dismissed all claims,99 one reversed summary judgment on the basis of a potential issue of fact,100 one affirmed a trial court denying manufacturer's

91. Mansfield, supra note 42, at 222.
92. Id.
93. See Erway, supra note 13, at 270.
94. See id.
95. See generally id. at 275–79.
100. See Bryant v. Technical Research Co., 654 F.2d 1337, 1349 (9th Cir. 1981) (methyl butyl ketone).
motion for a new trial as to the liability of raw material supplier,\textsuperscript{101} and one reversed a plaintiff's verdict.\textsuperscript{102} Erway concludes:

The decisions on point generally have indicated that seeking to impose . . . liability [upon ingredient suppliers] is ill founded, because the duty to properly design, manufacture, and test a product, and in turn to provide appropriate warnings, are responsibilities of the product manufacturer. . . . The manufacturer is almost invariably knowledgeable regarding its product and is the only one in a position to provide appropriate product warnings.\textsuperscript{103}

Another important cost to society of open-ended liability rules regarding suppliers of raw materials is huge litigation costs. Although the raw material supplier wins its cases, the costs of successfully defending invariably are passed along to the consumer. But the DuPont TMJ implant cases illustrate an even greater cost to society: The raw material supplier might decide not to sell its products to manufacturers of medical devices. This in turn means that people who need the devices will not have them or that the manufacturers of such devices will have to turn to raw material suppliers who have no place of business in the United States. Foreign suppliers can unreasonably raise prices and also may supply raw materials that are not of merchantable quality.

A virtual consensus of scholarly and decisional deliberation concludes that sellers of raw materials are not circumstanced as to make them properly liable in products liability claims. The Reporters to the new Restatement agree, stating sellers of raw materials "are not subject to liability for harm caused by defective design of the end-product. The same considerations apply

\textsuperscript{101} See Hill v. Wilmington Chem. Corp., 156 N.W.2d 898, 902 (Minn. 1968) (solvent).


to failure-to-warn claims against sellers of raw materials."\textsuperscript{104}
Mansfield, in turn, identifies a "largely unarticulated rule that bars many product liability claims against multi-purpose raw material . . . suppliers."\textsuperscript{105} In sum, Erway also identifies "a strong case for the nonliability of ingredient suppliers in litigation regarding end products."\textsuperscript{106}

**CONCLUSION**

Why is a categorical or de jure immunity for merchantable, naturally occurring raw materials preferable to a more complicated de facto immunity? Consider this hypothetical: In the jurisdiction of one state, the rule of evidence states that only competent witnesses shall testify. No corollary that children beneath a certain age, such as the age of three years, shall be presumptively incompetent to testify exists. Over a period of fifty years, hundreds of children less than three years in age are proffered as potential witnesses. They are examined preliminarily by the court, and none is permitted to testify. Some are excluded because they are unable to convince the court that they know the difference between truth and untruth, and others because they have insufficient narrative skills, or because they have insufficient cognitive skills, to be competent witnesses.

Is this country's administration of justice best served by having a single pole star rule (only competent witnesses shall testify) followed by individualized de facto determinations of competence even for classes of potential witnesses who are invariably found unsuited to testify? Or would the justice system be better served by making an experience-based de jure rule that children under the age of three are conclusively presumed to be incompetent to testify? Raw materials suppliers are not three-year-olds, but the rationale for limiting their duty is as strong as it is for precluding young children from wasting the time of our legal system by placing them on the witness stand.

This Article has attempted to show that in the setting of design obligations or warning duties for naturally occurring raw materials, the Reporters' comments should state that the

\textsuperscript{104} Tentative Draft No. 3, *supra* note 2, § 10 cmt. c.
\textsuperscript{105} Mansfield, *supra* note 42, at 222.
\textsuperscript{106} Erway, *supra* note 13, at 297.
ordinary rules of products liability are presumptively inapplicable. Accordingly, the new draft Restatement should be clear in this regard and provide language to this effect:

Products liability design and warning duties should not ordinarily apply to bulk sales of merchantable, naturally occurring raw materials, or the ordinary alloys of such raw materials, absent a showing of a defect in the product itself that poses an unreasonable risk of personal physical injury. The rationale for precluding application of products liability to such materials is that in their unchanged form, naturally occurring raw materials are not "products" as to which the prevailing design and warnings obligations may be efficiently or practically applied.

A rule characterizing producers of non-defective naturally occurring raw materials as excluded from potential products liability would focus like a laser beam on design and warning responsibilities upon the parties truly able to discharge those duties—the manufacturers of the end-use products. The rule would also be in harmony with three principal goals of products liability law: deterrence, risk spreading, and efficiency. The benefits to society are the elimination of needless litigation costs and the assurance that non-defective raw materials are available for desirable products.