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Reflections on Current Limits on Component and Raw Material Supplier Liability and the Proposed Third Restatement

BY EDWARD M. MANSFIELD*

INTRODUCTION

How far does product liability go? Can a corn supplier be found liable because a distillery used the supplier's corn to make whisky and then sold the whisky to a bar that served a patron who drove home drunk and injured someone? More realistically, can a manufacturer of a valve or a chain be held liable when that multi-use component causes another company's machine to operate unsafely?

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This Article argues that there is, in fact, a largely unarticulated rule that bars many product liability claims against multi-purpose raw material and component suppliers. Specifically, unless the raw material or component has a danger associated with most or all of its end-uses, its supplier cannot be sued on a design defect or failure to warn theory. In other words, if a multi-purpose raw material or component has been properly manufactured and 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 or component supplier. Although this limit on the liability of raw material and component suppliers has received little attention, it is nonetheless consistently applied to protect multi-use raw material and component suppliers from end-use-specific claims.

The first part of this Article discusses how prevalent — and powerful — this rule is.¹ Most significantly, it shields the raw material or component supplier from liability even if it could have “foreseen” a danger in the finished product. Part II of this Article explains why this rule is appropriate from a public policy and economic perspective.² Because multi-use raw materials and components can be put to so many different applications, the costs of collecting and disseminating warnings about specific applications can be high relative to the costs of manufacturing the raw material or component. Requiring the manufacturer to provide the information as a condition of selling the product — as product liability law customarily does for finished product manufacturers — may “price” the raw material or component out of the market. In short, an analysis based on information costs demonstrates that it would be unwise to hold the multi-use raw material or component supplier liable, even if the danger in the finished product is foreseeable.

The final part of this Article discusses the impact of the proposed Third Restatement of Torts: Products Liability on the rule.³ In its current tentative version, the proposed Third Restatement would arguably establish a uniform standard of liability for all products — raw materials, components, and finished products. This Article concludes that this is a bad idea, and urges that existing legal protections for multi-use raw material and component suppliers be expressly retained.⁴

¹ See *infra* notes 5-86 and accompanying text.

² See *infra* notes 87-116 and accompanying text.

³ See *infra* notes 117-57 and accompanying text.

⁴ See *infra* note 158 and accompanying text.

I. THE BASIC LIMIT ON WARNING AND DESIGN CLAIMS
AGAINST RAW MATERIAL AND COMPONENT SUPPLIERS

A. *The Limit Illustrated: The Childress and Crossfield Decisions*

Courts and legislatures have often decreed that components are “products” for product liability purposes.⁵ But this does not mean that component and raw material suppliers are subject to the same liability standards as finished product manufacturers. One who sells a chassis does not have the same liability to an end-user as one who sells a truck.⁶ Yet, apart from recognizing that the standards are different, commentators have often had difficulty explaining what those standards are.⁷

Many times, the potential liability of raw material and component suppliers does not arise. By law, finished product manufacturers are responsible for the safety of the products they sell, including components and raw materials.⁸ The issue of component and raw material suppliers’ liability usually arises only when there is an indemnification or contribution claim,⁹ the finished product manufacturer employed the injured plaintiff,¹⁰ the finished product manufacturer is insol-

⁵ See generally 1A LOUIS R. FRUMER & MELVIN I. FRIEDMAN, *PRODUCTS LIABILITY* § 5.06, at 5-36 to 5-37 (1991).

⁶ See *infra* note 80.

⁷ For example, one annotation sets forth no clear rules on when a component supplier has a duty to warn about the use of that component in another company’s finished product, but merely outlines a number of factors which courts consider when making such decisions. These factors include: 1) the degree of danger associated with the raw material or component itself; 2) the component manufacturer’s knowledge of that danger; 3) the foreseeability of such danger; 4) the user’s knowledge of the danger; and 5) the obviousness of the danger. Andrea G. Nadel, Annotation, *Products Liability: Duty of Manufacturer or Seller of Component Part Incorporated in Another Product to Warn of Dangers*, 39 A.L.R.4th 6, 13-14 (1985). The same approach is taken in AMERICAN LAW OF PRODUCTS LIABILITY 3d § 8:13, at 22-25 (Timothy E. Travers et al. eds., 3d ed. 1987), which contains a similar list of factors.

One of the few published commentaries on this subject, Scott G. Night, Comment, *Products Liability: Component Part Manufacturer’s Liability for Design and Warning Defects*, 54 J. AIR L. & COM. 215 (1988), characterizes the issue as “conceptually difficult.” *Id.* at 225, 239.

⁸ See, e.g., *Walton v. Avco Corp.*, 610 A.2d 454, 458-59 (Pa. 1992) (holding the manufacturer of a helicopter responsible for the defective engine incorporated therein).

⁹ See, e.g., *Hill v. Wilmington Chem. Corp.*, 156 N.W.2d 898, 900-01 (Minn. 1968) (pertaining to an indemnity claim by a water repellent manufacturer against the supplier of a flammable ingredient that caused the water repellent to ignite).

¹⁰ See, e.g., *Kellar v. Inductotherm Corp.*, 498 F. Supp. 172, 176 (E.D. Tenn. 1978) (involving a claim brought by a foundry worker against the supplier of a channel furnace

vent,¹¹ or the finished product manufacturer was not named as a defendant before the statute of limitations ran out.¹² Even then, rules such as the bulk supplier/sophisticated purchaser rule¹³ may limit the liability of raw material suppliers.¹⁴

Some rules pertaining to component and raw material suppliers are clear. When a component has been manufactured improperly, the supplier may be sued for injuries caused by that manufacturing defect.¹⁵ When a "component" supplier is actually the designer of the finished product, the supplier may be responsible for flaws in the finished product.¹⁶ But

component to the foundry for injuries sustained on the job), *aff'd*, 633 F.2d 216 (6th Cir. 1980).

¹¹ See, e.g., *Bond v. E.I. du Pont de Nemours & Co.*, 868 P.2d 1114, 1117 (Colo. Ct. App. 1993) (involving a suit against a supplier of Teflon® raw materials to a medical device manufacturer that later went bankrupt).

¹² See, e.g., *White v. Weiner*, 562 A.2d 378, 379 n.1 (Pa. Super. Ct. 1989) (granting summary judgment in favor of a bulk supplier of ingredients used to make a prescription drug and finding a claim against the prescription drug manufacturer itself to be time-barred), *aff'd*, 583 A.2d 789 (Pa. 1991).

¹³ The bulk supplier/sophisticated purchaser rule states that a supplier is not liable for failing to warn remote users where its product is shipped in bulk and subsequently repackaged or reprocessed by a knowledgeable intermediary. *Higgins v. E.I. du Pont de Nemours, Inc.*, 671 F. Supp. 1055, 1058 (D. Md. 1987); see also cases cited *infra* note 94.

¹⁴ See, e.g., *Higgins*, 671 F. Supp. at 1061 (granting summary judgment to paint manufacturer's bulk suppliers of glycol ether acetates stating: "There is no duty on product suppliers to warn ultimate users (whether employees or customers) of product-related hazards in products supplied in bulk to a knowledgeable user.").

¹⁵ *Zehring v. Wick Agri-Buildings*, 590 F. Supp. 138, 143 (N.D. Ohio 1984) (purlin "not of the grade and quality called for by the standards"); *Brizendine v. Visador Co.*, 305 F. Supp. 157, 160-61 (D. Or. 1969) (finding that a glass pane was too thin and did not meet specifications), *aff'd*, 437 F.2d 822 (9th Cir. 1970); *Housman v. C.A. Dawson & Co.*, 245 N.E.2d 886, 887 (Ill. App. Ct. 1969) (board with "knot cluster"); *Penn v. Inferno Mfg. Corp.*, 199 So. 2d 210, 218 (La. Ct. App. 1967) (bubbles in sight glass); *Magnuson by Mabe v. Kelsey-Hayes Co.*, 844 S.W.2d 448, 455 (Mo. Ct. App. 1992) (wheel containing brittle steel); *Velez v. Craine & Clark Lumber Corp.*, 305 N.E.2d 750, 751 (N.Y. 1973) (rotted and split lumber plank); *Herman v. General Irrig. Co.*, 247 N.W.2d 472, 478 (N.D. 1976) (oversized pistons); *Walton v. Avco Corp.*, 610 A.2d 454, 462 (Pa. 1992) (defectively constructed helicopter engine); *Burbage v. Boiler Eng'g & Supply Co.*, 249 A.2d 563, 565 (Pa. 1969) (indentation in face of valve); *Haugen v. Minnesota Mining & Mfg. Co.*, 550 P.2d 71, 74 (Wash. Ct. App. 1976) (disc improperly "heat-cured" during manufacture), *superseded by statute on other grounds*, *Van Hout v. Celotex*, 853 P.2d 908 (Wash. 1993); *City of Franklin v. Badger Ford Truck Sales, Inc.*, 207 N.W.2d 866, 869-70 (Wis. 1973) (defectively manufactured wheel).

¹⁶ See *Miles v. Kohli & Kaliher Assocs.*, 917 F.2d 235, 245 (6th Cir. 1990) (stating that defendant provided blueprints for the assembly of the finished product); *DeSantis v. Parker Feeders, Inc.*, 547 F.2d 357, 361 (7th Cir. 1976) (finding liable a defendant who

what if the component or raw material was properly made, and the supplier did not design the finished product?

In two recent cases, *Childress v. Gresen Manufacturing Co.*,¹⁷ and *Crossfield v. Quality Control Equipment Co.*,¹⁸ federal appellate courts addressed this question. The plaintiff in *Childress* was seriously injured when his legs were trapped in a log-splitter. He sued the supplier of a multi-use valve used in the log-splitter, claiming that the valve enabled the log-splitter to operate in an unsafe fashion, i.e., to recycle automatically without a deadman's control. The district court granted summary judgment for the valve supplier, and the Sixth Circuit affirmed.¹⁹

The Sixth Circuit observed there was nothing "inherently dangerous about the . . . valve."²⁰ Indeed, it "had previously been supplied to manufacturers . . . in which no allegation of danger had surfaced."²¹ The plaintiff's claim, rather, was that it was dangerous as used in the log-splitter because it had been "misapplied."²² The court concluded that this claim was legally insufficient as against the valve supplier. In explanation, the court stated:

"The obligation that generates the duty to avoid injury to another which is reasonably foreseeable does not — at least yet — extend to the anticipation of how manufactured components not in and of themselves dangerous or defective can become potentially dangerous dependent upon the nature of their integration into a unit designed, assembled,

supplied all of the components for the feeder so that defendant was, in effect, the manufacturer of the feeder); *E.I. du Pont de Nemours & Co. v. McCain*, 414 F.2d 369, 373 (5th Cir. 1969) (holding liable a defendant who counseled and advised the finished product manufacturer concerning the proper formula to be used in its compound and performed quality control tests on it); *Sliman v. Aluminum Co. of Am.*, 731 P.2d 1267, 1268 (Idaho 1986), *cert. denied*, 486 U.S. 1031 (1988) (finding that defendant not only supplied a component, but also designed the overall bottle-capping system).

Related to the cases set forth above are those cases in which the defendant furnished a "raw material," but the plaintiff was injured handling that raw material, not another product made from it. In those cases the raw material is really the "finished product." *See, e.g., Hammond v. North Am. Asbestos Corp.*, 454 N.E.2d 210, 213 (Ill. 1983) (involving a plaintiff who was injured when he handled bags of raw asbestos while working in an insulation factory).

¹⁷ 888 F.2d 45 (6th Cir. 1989).

¹⁸ 1 F.3d 701 (8th Cir. 1993).

¹⁹ *Childress*, 888 F.2d at 48.

²⁰ *Id.*

²¹ *Id.* at 47 (explaining that the valve had been used in fork lift trucks and garbage bin dump trucks).

²² *Id.* at 49.

installed, and sold by another” Therefore, we agree with the district court that under Michigan law a component part supplier has no duty, independent of the completed product manufacturer, to analyze the design of the completed product which incorporates its nondefective component part.²³

The Eighth Circuit reached a similar result in *Crossfield*.²⁴ There the plaintiff, injured when she caught her gloved hand in the chain of a chitterling cleaning machine, sued the chain supplier. Like the plaintiff in *Childress*, she argued that the chain was dangerous as used in the machine.²⁵ The Eighth Circuit, however, reversed a jury verdict for the plaintiff. It noted that the component was not “in and of itself” defective and concluded that the defendant did not have a duty to verify the safety of finished products for which it supplied “non-defective component parts.”²⁶

Significantly, both defendants were exonerated in *Childress* and *Crossfield* even though, it appears, they should have known the hazards of their components as used in the other companies’ finished products. In *Childress*, the Sixth Circuit assumed that the valve supplier had “knowledge of its ultimate function in an allegedly dangerous finished product.”²⁷ In *Crossfield*, the chain supplier was not only aware of a potential danger, it had redesigned the chitterling cleaning machine itself to eliminate that hazard.²⁸ Nonetheless, the component suppliers obtained judgment as a matter of law — even on the negligence claims.²⁹

B. *The Limit Explained: The Multi-Use Component and Raw Material Rule*

What is the basis for these decisions? Several possible explanations that have appeared in court decisions and commentaries — “lack of defect,” “fitness for ordinary purposes,” and “lack of knowledge” — can be quickly rejected. It is simplistic and circular to say that the component

²³ *Id.* (citations omitted) (quoting *Jordan v. Whiting Corp.*, 212 N.W.2d 324, 328 (Mich. Ct. App. 1973), *rev'd in part on other grounds*, 240 N.W.2d 468 (Mich. 1976)).

²⁴ 1 F.3d 701, 701 (8th Cir. 1993).

²⁵ *Id.* at 703.

²⁶ *Id.* at 705-06 (quoting *Childress v. Gresen Mfg. Co.*, 888 F.2d 45, 49 (6th Cir. 1989)).

²⁷ *Childress*, 888 F.2d at 48.

²⁸ *Crossfield*, 1 F.3d at 703.

²⁹ *Id.* at 706-07.

suppliers prevailed in *Childress* and *Crossfield* because their components were “nondefective.” Such an explanation does not account for the dismissal of the negligence claims, where “product defect” was not the issue. Moreover, a product can generally be considered “defective” for strict liability purposes when its manufacturer fails to warn about a danger associated with a foreseeable use.³⁰ In *Crossfield* the plaintiff argued precisely that.³¹ Thus, a better rationale for the holdings in *Childress* and *Crossfield* is needed.

It is also not quite accurate to say that the component supplier’s liability turns on whether the component is “fit” or “unfit” for its ordinary purposes.³² Even suppliers of components or raw materials that are “fit” for their ordinary purposes — such as ethyl mercaptan which performs its ordinary task of odorizing propane very well — can, nonetheless, be held liable for failing to warn.³³ “Fitness” is not the dispositive issue.

³⁰ In *Koonce v. Quaker Safety Prod. & Mfg. Co.*, 798 F.2d 700 (5th Cir. 1986), the Fifth Circuit noted this very point. In that case, the plaintiff’s decedent, a munitions worker, was killed in a flash fire when his safety suit failed to protect him from serious and ultimately fatal burns. His surviving spouse sued the manufacturer of the safety suit for failing to warn about the suit’s limitations. The suit manufacturer countered that it had no duty to warn because it was merely a supplier of a nondefective component (a safety suit), of a finished product (an overall safety system). On appeal, the Fifth Circuit rejected this argument and held that the lack of warning could itself be a defect. *Id.* at 715.

The “defective”-“nondefective” distinction has the same weakness when applied to design defect claims. Generally, a product that works well in some applications but not others can nonetheless be regarded as “defectively designed.” That is because the manufacturer may be responsible for a foreseeable, unreasonably dangerous misuse. Hence, to say that a design defect claim may not be pursued against a supplier of a component or raw material because the design of the component or raw material was not “defective” begs the question of what is a “defect.”

In any event, the outcome in *Koonce*, where the Fifth Circuit decided that the plaintiff’s claims against the suit manufacturer presented a jury question, was correct. The safety suit was not truly a component at all, and certainly not a multi-purpose component. It was, as the Fifth Circuit held, “a product with a discrete function.” *Id.* See *infra* notes 37-39 and accompanying text.

³¹ See *Crossfield*, 1 F.3d at 703 (“Plaintiff’s theory is that the chain was unreasonably dangerous for its reasonably anticipated uses (and thus defective) because it lacked a warning stating that it could be hazardous when used in a chitterling cleaning machine.”).

³² W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 100, at 705-06 (5th ed. 1984).

³³ For example, judgment for defendant, as a matter of law, was rejected in the following cases even though the component or raw material was “fit” for its ordinary purposes and the component or raw material was being used for such purposes: *Donahue v. Phillips Petroleum Co.*, 866 F.2d 1008, 1009 (8th Cir. 1989) (holding a supplier of ethyl mercaptan, used to odorize liquid propane gas, liable); *Beauchamp v. Russell*, 547

Finally, it is incorrect to say that liability is a function of "knowledge," i.e., whether the seller of the component had reason to know of its end-use in an unreasonably dangerous finished product.³⁴ *Childress* and *Crossfield* hold that component suppliers are not necessarily liable even for foreseeable misuses of their components by finished product manufacturers.

Rather, the critical distinction is this: whether the component or raw material presents a danger that accompanies most or all end-uses. If the component or raw material has such a danger, then the supplier may be required to guard against that danger, by designing around it or warning about it. If, however, the component or raw material has no such general use danger, because it is suitable for many end-products in which the danger does not arise, then the safe use of the component or raw material in the finished product becomes the finished product manufacturer's responsibility. This is true even if the danger is arguably "foreseeable" to the component or raw material supplier.

A recent decision by the Third Circuit, *Fleck v. KDI Sylvan Pools*,³⁵ captures the essential point. There, one of the defendants had manufactured a replacement liner for a swimming pool that lacked depth markers. The plaintiff, who became paralyzed when he dove into the pool without realizing its depth, sued the liner manufacturer. On appeal the manufac-

F. Supp. 1191, 1200 (N.D. Ga. 1982) (denying summary judgment to a supplier of an air valve used for pneumatically-driven machinery); *Giordano v. Ford Motor Co.*, 299 S.E.2d 897, 899 (Ga. Ct. App. 1983) (denying a motion for summary judgment filed by the supplier of a carburetor that was merchantable and reasonably suited to the general use intended); *Zacher v. Budd Co.*, 396 N.W.2d 122, 135-40 (S.D. 1986) (reversing a jury verdict for the supplier of a wheel rim due to improper jury instructions); *Rego Co. v. Brannon*, 682 S.W.2d 677, 682 (Tex. Ct. App. 1984) (affirming a jury verdict for the plaintiff against the supplier of a relief valve for a propane cylinder).

³⁴ KEETON ET AL., *supra* note 32, § 100, at 706. The two cases that the authors cite in support of this proposition are *Suchomajcz v. Hummel Chem. Co.*, 524 F.2d 19 (3d Cir. 1975) (applying Pennsylvania law), and *Rourke v. Garza*, 530 S.W.2d 794 (Tex. 1976).

Suchomajcz is an exceptional case which must be considered limited to its facts by later Pennsylvania decisions. In *Suchomajcz*, the critical facts, as set forth in the opening paragraph of the court's opinion, were that the chemical ingredient supplier knew that its customer (a fireworks manufacturer) was selling its fireworks kits illegally and in violation of a court injunction. *Suchomajcz*, 524 F.2d at 22. As the court stated, "the social utility of knowingly selling chemicals for illegal use is minimal . . ." *Id.* at 25. On this basis, the court reversed summary judgment for the ingredient supplier. See further discussion of *Suchomajcz*, *infra* note 59.

Rourke is not a component case at all, but involved scaffolding that was inherently defective because it lacked cleats. *Rourke*, 530 S.W.2d at 799.

³⁵ 981 F.2d 107 (3d Cir. 1992) (applying Pennsylvania law), *cert. denied*, 123 L.Ed.2d 267 (1993).

turer argued that it was merely a component part supplier and that the danger arose only after the liner was incorporated into the pool and the pool filled with water.³⁶

The Third Circuit, however, divided the Pennsylvania precedents into two categories: cases involving components which have “but one purpose” and cases in which the component parts are “generic.”³⁷ With a component in the former category, a duty to warn may arise. With a generic or multi-use component, however, “[i]t would be unreasonable and unwarranted to recognize liability in such a tenuous chain of responsibility.”³⁸ Thus, while the court affirmed the jury verdict against the swimming pool replacement liner because it was a single-use component, it distinguished other cases involving multi-use components such as a die set and a switch.³⁹

In other words, if a raw material or component is properly manufactured, liability may be imposed only when the alleged danger that caused the injury extends across *all* end-uses of the component or raw material — either because the component or raw material has only one end-use, like the swimming pool liner in *Fleck*,⁴⁰ or because it is toxic or

³⁶ *Id.* at 118.

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.* See *Jacobini v. V. & O. Press Co.*, 588 A.2d 476, 479-80 (Pa. 1991) (holding that a directed verdict should have been entered for the supplier of a component that “itself is not dangerous, and where the danger arises from the manner in which the component is utilized by the assembler of the final product”); *Wenrick v. Schloemann-Siemag Aktiengesellschaft*, 564 A.2d 1244, 1247-48 (Pa. 1989) (affirming a judgment notwithstanding the verdict for the supplier of a switch that was dangerous as used in another company’s electrical control system).

⁴⁰ See also *Estate of Carey v. Hy-Temp Mfg. Co.*, 929 F.2d 1229, 1231 (7th Cir. 1991) (specialized switch used in an energy-saving device for a furnace); *Donahue v. Phillips Petroleum Co.*, 866 F.2d 1000, 1009 (8th Cir. 1989) (ethyl mercaptan, used specifically to odorize liquid propane gas, with inherent danger of odor fade); *Koonce v. Quaker Safety Prod. & Mfg. Co.*, 798 F.2d 700, 715 (5th Cir. 1986) (safety suit for munitions worker); *Roy v. Star Chopper Co.*, 584 F.2d 1124, 1134 (1st Cir. 1978) (specialized electroplating machine), *cert. denied*, 440 U.S. 916 (1979); *Pan-Alaska Fisheries v. Marine Constr. & Design Co.*, 565 F.2d 1129, 1136-37 (9th Cir. 1977) (marine engine whose filters ruptured and cracked); *d’Hedouville v. Pioneer Hotel Co.*, 552 F.2d 886, 893 (9th Cir. 1977) (specialized fiber sold expressly for carpeting); *Braniff Airways, Inc. v. Curtis-Wright Corp.*, 411 F.2d 451, 453 (2d Cir.) (airplane engine that was prone to cylinder barrel separation), *cert. denied*, 396 U.S. 959 (1969); *Halter v. Waco Scaffolding & Equip. Co.*, 797 P.2d 790, 795 (Colo. Ct. App.) (clips used to secure visqueen in cold and windy weather, but had tendency to pop off in that weather), *cert. denied*, 1990 Colo. LEXIS 651 (Sept. 24, 1990); *Bradford v. Bendix-Westinghouse Co.*, 517 P.2d 406, 408 (Colo. Ct. App. 1973) (brake pedal assembly); *Giordano v. Ford Motor*

otherwise dangerous for normal handling.⁴¹ If a component or raw material has multiple uses and is not inherently dangerous, courts have consistently held that the raw material or component supplier cannot be held liable.⁴²

Another, and perhaps clearer, way of stating the rule is to break it down into a series of requirements.⁴³ Courts will not impose liability on a supplier of material — whether a raw material or a component — when the following four conditions are met. First, the material is not designed for use in a particular type of finished product or finished product system. Second, the material is a standard item that is generally safe as a “building block” for use in making a variety of finished products. Third, the material was adapted by another entity to manufacture a finished product. Fourth, any danger arises from the specialized end-use of the

Co., 299 S.E.2d 897, 899-90 (Ga. Ct. App. 1983) (carburetor with inherent dangers when primed); *Thomas v. Kaiser Agric. Chem.*, 407 N.E.2d 32, 37 (Ill. 1980) (adaptor intended for fertilizer applicator); *Smith v. Air Feeds, Inc.*, 519 N.W.2d 827, 831 (Iowa Ct. App. 1994) (feeder that was intended to be mated with a press); *Gryc v. Dayton-Hudson Corp.*, 297 N.W.2d 727, 730 (Minn.) (cotton flannelette used for children’s sleepwear), *cert. denied*, 449 U.S. 921 (1980); *Michalko v. Cooke Color & Chem. Corp.*, 451 A.2d 179, 185-86 (N.J. 1982) (specialized press); *Dougherty v. Edward J. Meloney, Inc.*, 661 A.2d 375, 378 (Pa. Super. Ct. 1995) (shut-off valve used specifically with boilers, where it had an inherent danger); *Zacher v. Budd Co.*, 396 N.W.2d 122, 135-40 (S.D. 1986) (multi-piece rim with inherent danger of mismatch); *Rego Co. v. Brannon*, 682 S.W.2d 677, 680 (Tex. Ct. App. 1984) (safety valve used for tanks of flammable gas; “dangers inherent” included that valve would release flammable gas as pressure built up); *Parkins v. Van Doren Sales, Inc.*, 724 P.2d 389, 392 (Wash. Ct. App. 1986) (conveyor parts that allegedly could be used only one way).

⁴¹ In the following cases, the component or raw material had more than one end-use, but the same inherent danger accompanied *all* end-uses. *See Whitehead v. Saint Joe Lead Co.*, 729 F.2d 238, 242 (3d Cir. 1984) (lead ingots); *Bryant v. Technical Research Co.*, 654 F.2d 1337, 1340 (9th Cir. 1981) (methyl butyl ketone, which causes degenerative nerve disease on contact); *Cimino v. Raymark Indus., Inc.*, 739 F. Supp. 328, 331 (E.D. Tex. 1990) (raw asbestos); *Johnston v. United States*, 568 F. Supp. 351, 359 (D. Kan. 1983) (aircraft instruments containing “deadly radium”); *Ray v. Upjohn Co.*, 851 S.W.2d 646, 655 (Mo. Ct. App. 1993) (isocyanate); *Macrie v. SDS Biotech Corp.*, 630 A.2d 805, 809-10 (N.J. Super. Ct. App. Div.) (ultra-hazardous fungicide), *cert. denied and appeal dismissed*, 636 A.2d 522 (N.J. 1993); *Nor-Am Agric. Prod., Inc. v. First Nat’l Bank*, 537 P.2d 682, 688 (N.M. Ct. App.) (highly toxic mercury-based fungicide), *cert. denied*, 536 P.2d 1085 (N.M. 1975); *see also Beauchamp v. Russell*, 547 F. Supp. 1191, 1197-98 (N.D. Ga. 1982) (involving an air valve that had “innumerable potential uses,” but the need to bleed compressed air is “applicable to all potential users of the valve”); *Union Supply Co. v. Pust*, 583 P.2d 276, 281-84 (Colo. 1978) (involving a conveyor with a nip point that had an inherent danger).

⁴² *See, e.g., supra* notes 17-29 and accompanying text.

⁴³ The author is indebted to Ross Schmucki for this conceptualization.

material, not the normal handling and use of the material before it is incorporated into the particular type of finished product.

Most raw materials meet these four conditions. A raw material by definition is of value to society precisely because it can be adapted to a wide variety of applications. Wood, steel, gravel, stone, and cotton are valuable because of their many applications, not because they have only one use. That does not mean that they are "safe" in all applications; no material is. But only when the raw material is dangerous in normal handling and use, such as radium, methyl butyl ketone, or raw asbestos fibers,⁴⁴ will the raw material supplier typically be unable to satisfy these four conditions.

A component will less frequently meet these four conditions because many components are tailored to specific end products. For example, a swimming pool liner is not a "building block," but rather a specialized component intended for a specific use. Nonetheless, one can conceive of many components, such as the valve and chain in *Crossfield* and *Childress*, that satisfy all four conditions.

C. Applications of the Limit on Liability

Applying this rule, courts have exonerated as a matter of law suppliers of such multi-purpose components and raw materials as steel rods,⁴⁵ switches,⁴⁶ standardized motors,⁴⁷ drilling rig parts,⁴⁸ conveyor parts,⁴⁹ pulleys,⁵⁰ tower legs,⁵¹ chassis,⁵² lenses,⁵³ roofing compounds,⁵⁴ lumber,⁵⁵ Kevlar® fibers,⁵⁶ and raw ore.⁵⁷ These opinions typically have

⁴⁴ See cases cited *supra* note 41.

⁴⁵ *McWaters v. Steel Serv. Co.*, 597 F.2d 79, 80 (6th Cir. 1979).

⁴⁶ *Dahlbeck v. DICO Co.*, 355 N.W.2d 157, 163 (Minn. Ct. App. 1984); *Wenrick v. Schloemann-Siemag Aktiengesellschaft*, 564 A.2d 1244, 1247-48 (Pa. 1989).

⁴⁷ *Willis v. National Equip. Design Co.*, 868 F. Supp. 725, 732-33 (E.D. Pa. 1994), *aff'd*, 66 F.3d 314 (3d Cir. 1995); *Lee v. Butcher Boy*, 215 Cal. Rptr. 195, 198-202 (Ct. App. 1985).

⁴⁸ *Davis v. Dresser Indus.*, 800 S.W.2d 369, 370-71 (Tex. Ct. App. 1990); *Noonan v. Texaco*, 713 P.2d 160, 164 (Wyo. 1986).

⁴⁹ *Willis*, 868 F. Supp. at 728-32; *Searls v. Doe*, 505 N.E.2d 287, 289-90 (Ohio Ct. App. 1986); *Moor v. Iowa Mfg. Co.*, 320 N.W.2d 927, 928 (S.D. 1982).

⁵⁰ *Haupt v. Atwood Oceanics, Inc.*, 681 F.2d 1058, 1060 (5th Cir. 1982).

⁵¹ *Loos v. American Energy Savers, Inc.*, 522 N.E.2d 841, 845 (Ill. App. Ct. 1988).

⁵² *Verge v. Ford Motor Co.*, 581 F.2d 384, 389 (3d Cir. 1978); *Shaw v. General Motors Corp.*, 727 P.2d 387, 389-90 (Colo. Ct. App. 1986).

⁵³ *Hall v. Scott U.S.A., Ltd.*, 400 S.E.2d 700, 703-04 (Ga. Ct. App. 1990), *cert. denied*, 1991 Ga. LEXIS 451 (Jan. 31, 1991).

⁵⁴ *Standhardt v. Flintkote Co.*, 508 P.2d 1283, 1289-90 (N.M. 1973).

⁵⁵ *Parker v. Warren*, 503 S.W.2d 938, 945 (Tenn. Ct. App. 1973).

⁵⁶ *House v. Armour of Am., Inc.*, 886 P.2d 542, 553-54 (Utah App. 1994).

⁵⁷ *Cothrun v. Schwartz*, 752 P.2d 1045, 1048 (Ariz. Ct. App. 1988) (raw asbestos)

emphasized the many possible end-uses of the component or raw material.⁵⁸ It is difficult, in fact, to find any reported cases where a

ore). *See also* Sperry v. Bauermeister, Inc., 4 F.3d 596, 598-99 (8th Cir. 1993) (machine components); Spangler v. Kranco, Inc., 481 F.2d 373, 375 (4th Cir. 1973) (crane as a component of a factory); Travelers Ins. Co. v. Chrysler Corp., 845 F. Supp. 1122, 1126 (M.D.N.C. 1994) (component parts of a mobile food service vehicle); Sperry v. Bauermeister, Inc., 786 F. Supp. 1512, 1517-18 (E.D. Mo. 1992) (airlock); Wright v. Federal Mach. Co., 535 F. Supp. 645, 649-50 (E.D. Pa. 1982) (rollers); Cropper v. Rego Distrib. Ctr., Inc., 542 F. Supp. 1142, 1156 (D. Del. 1982) (valve); Mayberry v. Akron Rubber Mach. Corp., 483 F. Supp. 407, 413 (N.D. Okla. 1979) (mill parts); Kellar v. Inductotherm Corp., 498 F. Supp. 172, 175 (E.D. Tenn. 1978) (furnace and deck), *aff'd*, 633 F.2d 216 (6th Cir. 1980); Blackwell v. Phelps Dodge Corp., 203 Cal. Rptr. 706, 710 (Ct. App. 1984) (acid); Walker v. Stauffer Chem. Corp., 96 Cal. Rptr. 803, 806 (Ct. App. 1971) (acid); Shelton v. Wisconsin Motor Corp., 382 So. 2d 1270, 1271 (Fla. Dist. Ct. App.) (engine), *petition denied*, 389 So. 2d 1111 (Fla. 1980); Curry v. Louis Allis Co., 427 N.E.2d 254, 258 (Ill. App. Ct. 1981) (motor); Shanks v. A.F.E. Indus., Inc., 416 N.E.2d 833, 837-38 (Ind. 1981) (grain dryer); Champion v. Panel Era Mfg. Co., 410 So. 2d 1230, 1241-42 (La. Ct. App.) (fire-retardant paper), *cert. denied*, 414 So. 2d 389 (La. 1982); Mitchell v. Sky Climber, Inc., 487 N.E.2d 1374, 1376 (Mass. 1986) (lift motor); Welsh v. Bowling Elec. Mach., Inc., 875 S.W.2d 569, 573-75 (Mo. Ct. App. 1994) (tram components); Erickson v. Monarch Indus., Inc., 347 N.W.2d 99, 109-10 (Neb. 1984) (transformer); Brennaman v. R.M.I. Co., 639 N.E.2d 425, 431 (Ohio) (valve), *clarified and amended*, 643 N.E.2d 138 (Ohio 1994); Kremer v. Duriron Co., 532 N.E.2d 165, 167 (Ohio Ct. App. 1987) (valve); Jacobini v. V. & O. Press Co., 588 A.2d 476, 479-80 (Pa. 1991) (die set); Molina v. Kelco Tool & Die, Inc., 904 S.W.2d 857, 861-62 (Tex. Ct. App. 1995) (die); Featherall v. Firestone Tire & Rubber Co., 252 S.E.2d 358, 367 (Va. 1979) (lid); Shawver v. Roberts Corp., 280 N.W.2d 226, 233 (Wis. 1979) (conveyor).

One treatise which appears to have recognized the controlling principles is M. STUART MADDEN, PRODUCTS LIABILITY § 3.22, at 86 (2d ed. 1988):

Where the final assembled product to which the component part manufacturer has contributed is dangerously defective, the component manufacturer's liability does not necessarily follow. While the supplier of an otherwise innocuous constituent part or element of a final product to be assembled by another has been occasionally held to have a duty of due care, or even a duty to warn, of foreseeable harmful uses, the component manufacturer more often has been held to have no strict liability exposure where its part of nondefective construction or formulation is later assembled by a third party into a final product without due care, or without adequate warnings.

Id. (citations omitted).

⁵⁸ *See, e.g.*, McWaters v. Steel Serv. Co., 597 F.2d 79, 80 (6th Cir. 1979) (recognizing that the rods involved in the case were "basic construction materials"); Willis v. National Equip. Design Co., 868 F. Supp. 725, 732 (E.D. Pa. 1994) (recognizing that

claim against a supplier of a properly manufactured multi-use component or raw material that was not dangerous in normal handling was found to present even a jury question.⁵⁹

the motor had “a wide variety of applications”), *aff’d*, 66 F.3d 314 (3d Cir. 1995); *Sperry*, 786 F. Supp. at 1518 (recognizing that the airlock involved was “usable in a variety of machinery”); *Lee v. Butcher Boy*, 215 Cal. Rptr. 195, 199 (Ct. App. 1985) (recognizing that the motors were “ordinary, off-the-shelf motors”); *Shaw v. General Motors Corp.*, 727 P.2d 387, 389 (Colo. Ct. App. 1986) (“The record here shows that the GM cab and chassis could be equipped for numerous different uses”); *Curry*, 427 N.E.2d at 255 (“a general purpose drive motor . . . commonly used in hundreds of varied applications”); *Shanks*, 416 N.E.2d at 838 (stating that “the dryer could be incorporated into a variety of grain handling systems”); *Dahlbeck v. DICO Co.*, 355 N.W.2d 157, 163 (Minn. Ct. App. 1984) (“[A] purchaser of multi-use equipment knows best the dangers associated with its particular use, and so it should determine the degree of safety provided.”) (quoting *Wagner v. International Harvester Co.*, 611 F.2d 224, 231 (8th Cir. 1979)).

⁵⁹ Some possible examples are *Suchomajcz v. Hummel Chem. Co.*, 524 F.2d 19, 29 (3d Cir. 1975) (holding that the grant of summary judgment in favor of a firework component supplier was improper); *States Steamship Co. v. Stone Manganese Marine, Ltd.*, 371 F. Supp. 500, 505 (D.N.J. 1973) (denying summary judgment to the supplier of a defective alloy used in ship propellers); *Seegers Grain Co. v. U.S. Steel Corp.*, 577 N.E.2d 1364, 1369 (Ill. App. Ct.) (affirming a jury verdict against a steel plate manufacturer), *appeal denied*, 584 N.E.2d 140 (Ill. 1991); *Oak Grove Investors v. Bell & Gossett Co.*, 668 P.2d 1075, 1080 (Nev. 1983), *appeal after remand*, 843 P.2d 351 (Nev. 1992) (recognizing that a supplier of pipe fittings owed a duty to warn about the inappropriateness of fittings for an open-loop system). Yet, apart from *Suchomajcz*, which involved very exceptional facts, i.e., the component supplier allegedly knew or had reason to know of illegal conduct on the part of the manufacturer, *Suchomajcz*, 524 F.2d at 22, it is not even clear that these cases are exceptions. The court in *States Steamship* recognized that the alloy was “defective” without explaining why; it may have been inherently defective for all possible end-uses or may have been designed specifically for ship propellers. *States Steamship Co.*, 371 F. Supp. at 502. The steel plate in *Seegers Grain* appears to have been inherently defective because it could not be used in cold temperatures. *Seegers*, 577 N.E.2d at 1368. The pipe fittings in the *Oak Grove* case may have been specialized equipment that had a very limited number of end-uses. *Oak Grove*, 668 P.2d at 1077.

Another arguably close case is *Cross v. Cummins Engine Co.*, 993 F.2d 112 (5th Cir. 1993). There, the defendant furnished a diesel engine without an air intake shutoff valve to prevent “overspeeding,” a situation which results when combustible fumes from the outside environment enter the engine. While such a valve is not necessary for all diesel engines, the defendant did sell it separately. *Id.* at 114. The court vacated summary judgment for the defendant because it had not presented adequate evidence on

Furthermore, this principle applies whether the claim against the supplier is for improper design or for failure to warn. In pursuing design defect claims against multi-use component suppliers, plaintiffs typically argue that the component lacked a "safety device" needed for its use in the specific finished product.⁶⁰ In failure to warn claims, plaintiffs often argue that the defendant should have warned that its component or raw material would be dangerous as used in the finished product.⁶¹ In many

whether trade customs, relative expertise, and practicality supported the design and warning claims against the engine supplier. *Id.* at 116. The court's decision appears to have been of a procedural nature based merely on the fact that the record was not sufficiently developed.

In the recent multidistrict litigation rulings granting summary judgment to suppliers of raw materials used in temporomandibular joint ("TMJ") implants and breast implants respectively, *see infra* notes 73-78, the courts pointed out that *Suchomajcz* was the only case cited by the plaintiffs where a supplier of a multi-purpose, not-inherently dangerous raw material did not obtain judgment as a matter of law. *In re Silicone Gel Breast Implants*, 887 F. Supp. 1463, 1467 (N.D. Ala. 1995); *In re TMJ Implants*, 872 F. Supp. 1019, 1028 (D. Minn. 1995). While this Article argues that "foreseeability" of the hazards of the finished product is irrelevant to the liability of multi-use component and raw material suppliers, *Suchomajcz* suggests otherwise when the extreme circumstance of actual knowledge of an illegal use is present. Other courts have implied the same thing. *See, e.g., Veil v. Vitek, Inc.*, 803 F. Supp. 229, 232-33 (D.N.D. 1992) (suggesting that a raw material supplier could be held liable if it concealed independent conclusive knowledge of the inappropriateness of its raw material for use in another company's finished product). Under such circumstances, other tort doctrines, such as intentional torts, would be available to the plaintiff. For *product liability* purposes, it is clear that "foreseeability" as traditionally used in the product liability field is insufficient to impose liability on a supplier of a multi-purpose raw material or component that is not dangerous in general handling and use.

⁶⁰ *See, e.g., Kellar v. Inductotherm Corp.*, 498 F. Supp. 172, 175 (E.D. Tenn. 1978) (involving a claim that a furnace/deck should have been designed to protect foundry workers from the danger of the pit at all times), *aff'd*, 633 F.2d 216 (6th Cir. 1980).

⁶¹ *See, e.g., Crossfield v. Quality Control Equip. Co.*, 1 F.3d 701, 703 (8th Cir. 1993) (claiming that defendant should have warned that its chain was dangerous as used in the chitterling cleaning machine); *McWaters v. Steel Serv. Co.*, 597 F.2d 79, 80 (6th Cir. 1979) (claiming that defendant should have warned of the dangers of using construction rods without guy wires); *Dahlbeck v. DICO Co.*, 355 N.W.2d 157, 163 (Minn. Ct. App. 1984) (claiming that a switch manufacturer should have warned of the hazards of using this kind of switch); *Searls v. Doe*, 505 N.E.2d 287, 289-90 (Ohio Ct. App. 1986) (alleging that suppliers of conveyor components should have warned of a dangerous conveyor system).

instances, plaintiffs raise both arguments.⁶² Regardless, both claims have been consistently rejected by the courts.⁶³

It is important to understand the distinction between these multi-use component/raw material principles and the "contract specifications" defense. The contract specifications defense applies to specialized, single-use components, and holds that the component supplier is not liable for negligent design if the component conforms to specifications unless the specifications are obviously dangerous.⁶⁴ The principles discussed in this Article apply to both design and warning claims, and have no exception based on the alleged foreseeability of the risk in the finished product.

The TMJ cases that were filed against E.I. du Pont de Nemours & Company represent a recent application of these principles.⁶⁵ Between 1983 and 1988 a medical device manufacturer named Vitek, Inc. sold thousands of implants for the temporomandibular joint ("TMJ") or "jaw joint." Vitek's TMJ implants were fabricated in part from inert Teflon® fluoropolymers made by DuPont.⁶⁶ DuPont, however, had no role in the

⁶² See, e.g., *Wright v. Federal Mach. Co.*, 535 F. Supp. 645, 649 (E.D. Pa. 1982) (claiming that defendant did not provide a guard or warn about the risk of not having a guard); *Mayberry v. Akron Rubber Mach. Corp.*, 483 F. Supp. 407, 412-14 (N.D. Okla. 1979) (involving a claim that mill parts lacked adequate safety devices and that defendant should have warned about their dangers when used in a rubber mixing mill); *Lee*, 215 Cal. Rptr. at 198-202 (involving a claim that the motor should have had a brake or clutch and that defendant should have warned about hazards); *Shaw*, 727 P.2d at 389 (involving a claim that defendant should either have installed a backup buzzer or warned about the need for one); *Loos v. American Energy Savers, Inc.*, 522 N.E.2d 841, 843 (Ill. App. Ct. 1988) (involving a claim that tower legs were of inadequate strength and that defendant should have warned of the inadequacy); *Shanks v. A.F.E. Indus., Inc.*, 416 N.E.2d 833, 837-38 (Ind. 1981) (involving a claim that defendant should have warned or equipped warning devices); *Davis v. Dresser Indus., Inc.*, 800 S.W.2d 369, 370 (Tex. Ct. App. 1990) (involving a claim that drilling rig parts should have been designed so that they could not be used without a guard or that defendants should have warned about the need for such a guard).

⁶³ See, e.g., *Crossfield*, 1 F.3d at 703-06 (ruling as a matter of law that component manufacturer was not liable); *Kellar*, 498 F. Supp. at 175-76 (granting defendant's motion notwithstanding the verdict).

⁶⁴ See, e.g., *Estate of Carey*, 929 F.2d 1229, 1234-35 (7th Cir. 1990) (reversing directed verdict because specifications were obviously dangerous); *Collins v. Newman Mach. Co.*, 380 S.E.2d 314, 317 (Ga. Ct. App. 1989) (ruling that a contract specifications defense is inapplicable where defendant should have realized that its specialized components were dangerously unsafe when incorporated into the finished product).

⁶⁵ As previously noted, the author of this Article has been one of the attorneys representing DuPont in these cases since 1992.

⁶⁶ Other ingredients used by Vitek in the fabrication of the implants included salt and

design, manufacture or sale of these implants apart from selling raw materials to Vitek. Although initial clinical experience with the implants was positive, it has been reported more recently that the implants fragment over time and cause injury. Lawsuits have been filed against Vitek, which petitioned for bankruptcy in 1990.⁶⁷ Plaintiffs have also sought to pursue DuPont on the theory that DuPont allegedly "knew or should have known" its Teflon® fluoropolymer raw materials were unsuitable for use in the TMJ.

In case after case, DuPont has been granted summary judgment against the plaintiff's claims under this theory.⁶⁸ In addition, DuPont has prevailed in every appeal to date.⁶⁹ Both failure to warn⁷⁰ and design

aluminum oxide. Vitek combined Teflon® fluoropolymers, aluminum oxide, and salt in a patented process to make "Proplast®," a Vitek-patented material, to which Vitek then laminated fluoropolymers. Vitek sold the implant as a prescription-only device to replace the natural cartilaginous "meniscus," or disc, in the TMJ when it was damaged or displaced. *See* Klem v. E.I. du Pont de Nemours & Co., 19 F.3d 997, 999-1000 (5th Cir. 1994); Hoyt v. Vitek, Inc., 894 P.2d 1225, 1228 (Or. Ct. App. 1995); Westphal v. E.I. du Pont de Nemours & Co., 531 N.W.2d 386, 388 (Wis. Ct. App.), *review denied*, 537 N.W.2d 571 (Wis. 1995).

⁶⁷ *Hegna v. E.I. du Pont de Nemours & Co.*, 825 F. Supp. 880, 882 n.1 (D. Minn. 1993), *aff'd*, 27 F.3d 571 (8th Cir. 1994).

⁶⁸ *See, e.g., In re TMJ Implants*, 872 F. Supp. 1019 (D. Minn. 1995); *Kalinowski v. E.I. du Pont de Nemours & Co.*, 851 F. Supp. 149 (E.D. Pa. 1994); *Kealoha v. E.I. du Pont de Nemours & Co.*, 844 F. Supp. 590 (D. Haw. 1994); *LaMontagne v. E.I. du Pont de Nemours & Co.*, 834 F. Supp. 576 (D. Conn. 1993), *aff'd*, 41 F.3d 846 (2d Cir. 1994); *Nowak v. E.I. du Pont de Nemours & Co.*, 827 F. Supp. 1334 (W.D. Mich. 1993); *Hegna v. E.I. du Pont de Nemours & Co.*, 825 F. Supp. 880 (D. Minn. 1993), *aff'd*, 27 F.3d 571 (8th Cir. 1994); *Forest v. Vitek, Inc.*, 884 F. Supp. 378 (D. Nev. 1993), *aff'd sub nom. Coulter v. E.I. du Pont de Nemours & Co.*, 46 F.3d 1139 (9th Cir. 1995); *Miller v. E.I. du Pont de Nemours & Co.*, 811 F. Supp. 1286 (E.D. Tenn. 1992); *Anguiano v. E.I. du Pont de Nemours & Co.*, 808 F. Supp. 719 (D. Ariz. 1992), *aff'd*, 44 F.3d 806 (9th Cir. 1995); *Veil v. Vitek, Inc.*, 803 F. Supp. 229 (D.N.D. 1992).

⁶⁹ *See, e.g., Jacobs v. E.I. du Pont de Nemours & Co.*, Nos. 93-4144/93-5978/93-6561, 1995 U.S. App. LEXIS 29436 (6th Cir. Oct. 19, 1995); *Anguiano v. E.I. du Pont de Nemours & Co.*, 44 F.3d 806 (9th Cir. 1995); *LaMontagne v. E.I. du Pont de Nemours & Co.*, 41 F.3d 846 (2d Cir. 1994); *Apperson v. E.I. du Pont de Nemours & Co.*, 41 F.3d 1103 (7th Cir. 1994); *Klem v. E.I. du Pont de Nemours & Co.*, 19 F.3d 997 (5th Cir. 1994); *Rynders v. E.I. du Pont de Nemours & Co.*, 21 F.3d 835 (8th Cir. 1994); *Bond v. E.I. du Pont de Nemours & Co.*, 868 P.2d 1114 (Colo. Ct. App. 1993), *cert. denied*, 1994 Colo. Lexis 203 (Colo. Feb. 28, 1994); *Longo v. E.I. du Pont de Nemours & Co.*, 632 So. 2d 1193 (La. Ct. App.), *cert. denied*, 637 So. 2d 464 (La. 1994); *Hoyt v. Vitek, Inc.*, 894 P.2d 1225 (Or. Ct. App. 1995); *Westphal v. E.I. du Pont de Nemours & Co.*, 531 N.W.2d 386 (Wis. Ct. App.), *review denied*, 537 N.W.2d 571 (Wis. 1995).

⁷⁰ *Jacobs*, 1995 U.S. App. LEXIS 29436, at *52-60; *Klem*, 19 F.3d at 1001-03; *Kalinowski*, 851 F. Supp. at 156-57; *Kealoha*, 844 F. Supp. at 595; *Bond*, 868 P.2d at

defect⁷¹ claims against DuPont have been rejected. While DuPont has prevailed on several independent legal grounds, courts have often followed the rule set forth in this Article: a supplier of a component or ingredient, which has multiple uses and is not inherently dangerous, cannot be liable for another company's finished product.⁷² Indeed, after the remaining federal cases against DuPont from approximately twenty-eight different states were consolidated in a single judicial district,⁷³ the transferee court granted summary judgment in every case, holding that "the great weight of authority" compelled this result and that the principles discussed in this Article would be "followed in every jurisdiction."⁷⁴ The court used the phrase "raw material supplier defense" to describe these principles, while acknowledging that they apply equally to certain kinds of components as well.⁷⁵

Even more recently, the court presiding over the multidistrict breast implant litigation granted summary judgment to Scotfoam Corporation, a bulk supplier of multi-purpose polyurethane foam used in breast implants.⁷⁶ Emphasizing the many applications of the foam, and that the foam is not inherently dangerous, the court exonerated Scotfoam despite

1120; *Longo*, 632 So. 2d at 1197; *Hoyt*, 894 P.2d at 1230.

⁷¹ *Jacobs*, 1995 U.S. App. LEXIS 29436, at *70-75; *Apperson*, 41 F.3d at 1107; *Klem*, 19 F.3d at 1003; *Bond*, 868 P.2d at 1119; *Longo*, 632 So. 2d at 1197; *Hoyt*, 894 P.2d at 1230.

⁷² *See, e.g., Apperson*, 41 F.3d at 1106 ("Teflon[®] is [a product] with many safe uses; it only became dangerous when Vitek incorporated it into a highly specialized medical device . . ."); *Klem*, 19 F.3d at 1002 (stating that "the Louisiana courts have never held that the manufacturer of a component part of a finished product has a duty to the ultimate consumer to test the suitability of the component for its use in the finished product"); *Rynders*, 21 F.3d at 842 ("It would be unreasonable and impractical to place the burden of testing and developing all devices that incorporate Teflon[®] as a component on DuPont."); *In re TMJ Implants*, 872 F. Supp. at 1028 (holding that DuPont was entitled to summary judgment because it supplied "multi-use materials that were not inherently dangerous"); *Kalinowski*, 851 F. Supp. at 158 (recognizing DuPont as "a supplier of a multi-use raw material"); *Nowak*, 827 F. Supp. at 1336-37 (recognizing that Teflon® has a "variety of safe uses"); *Veil*, 803 F. Supp. at 235 ("There is no showing that Teflon[®] is inherently defective or dangerous. The alleged danger associated with [T]eflon[®] here is its use in the manufacture of a prosthesis implant."); *Bond*, 868 P.2d at 1119 ("[P]laintiffs do not contest that Teflon[®] is safe for multiple uses."); *Hoyt*, 894 P.2d at 1231 ("It is indisputable that Teflon[®] is safe for a wide variety of uses.").

⁷³ *In re TMJ Implants*, 844 F. Supp. 1553 (J.P.M.L. 1994).

⁷⁴ *In re TMJ Implants*, 872 F. Supp. at 1028.

⁷⁵ *Id.* at 1025 (citing *Crossfield v. Quality Control Equip. Co.*, 1 F.3d 701 (8th Cir. 1993) and *Childress v. Gresen Mfg. Co.*, 888 F.2d 45 (6th Cir. 1989)).

⁷⁶ *In re Silicone Gel Breast Implants*, 887 F. Supp. 1463 (N.D. Ala. 1995).

allegations that the foam caused injury and that Scotfoam knew of the hazards.⁷⁷ The court cited *Crossfield, Fleck*, and five of the DuPont TMJ decisions in holding that Scotfoam could not be liable under the law of any of the thirty-nine jurisdictions where it had been sued.⁷⁸

To give one more illustration, it is worth comparing two categories of motor vehicle component cases — tire rim cases and chassis cases. With tires and tire rims, which always present the danger of explosion from a mismatch of tires or rim parts, courts have usually held that the component supplier can be liable for failing to warn about that inherent danger.⁷⁹ On the other hand, courts have generally rejected claims that suppliers of multi-purpose vehicle chassis should have warned about risks arising from specialized end-uses of those chassis, even when plaintiffs have argued that those uses and the accompanying risks were foreseeable.⁸⁰

⁷⁷ *Id.* at 1466-69.

⁷⁸ *Id.* at 1467.

⁷⁹ *See, e.g.,* *Griggs v. Firestone Tire & Rubber Co.*, 513 F.2d 851, 857-60 (8th Cir.) (recognizing that the supplier of a multi-piece rim had a duty to warn of the danger of mismatch), *cert. denied*, 423 U.S. 865 (1975); *Zacher v. Budd Co.*, 396 N.W.2d 122, 135-40 (S.D. 1986) (recognizing that the supplier of a multi-piece rim had a duty to warn of the danger of mismatch); *Ilosky v. Michelin Tire Corp.*, 307 S.E.2d 603, 609-10 (W. Va. 1983) (ruling that a radial tire supplier had a duty to warn about the dangers of mismatch with conventional tires).

⁸⁰ *See, e.g.,* *Verge v. Ford Motor Co.*, 581 F.2d 384, 389 (3d Cir. 1978) (“Since Ford manufactures the F-700 for a variety of uses and Leach’s conversion business is solely concerned with garbage trucks, it seems much more practical for Leach to install the warning device.”); *Watts v. TI, Inc.*, 561 So. 2d 1057, 1058-59 (Ala. 1990) (rejecting product liability claims against supplier of cab and chassis); *Fierro v. International Harvester Co.*, 179 Cal. Rptr. 923, 925-26 (Ct. App. 1982) (rejecting warning and design defect claims against supplier of skeleton vehicle); *Shaw v. General Motors Corp.*, 727 P.2d 387, 390 (Colo. Ct. App. 1987) (“The burden of guarding against the injury suffered here should appropriately be placed upon the entity that designed the final product, arranged for acquisition of all the component parts, and directed their assembly.”); *Ruegger v. International Harvester Co.*, 576 N.E.2d 288, 290-91 (Ill. App. Ct. 1991) (“The vehicle at issue was a standard cab-chassis used for many different purposes”); *Paul v. Ford Motor Co.*, 607 N.Y.S.2d 90, 92 (App. Div.) (affirming summary judgment for the manufacturer and distributor of a chassis-cab), *appeal denied*, 639 N.E.2d 415 (N.Y. 1994); *Elliott v. Century Chevrolet, Inc.*, 597 S.W.2d 563, 565 (Tex. Civ. App. 1980) (affirming trial court’s grant of summary judgment because the supplier was “not in the business of selling a truck chassis for any specific use”); *cf. Uloth v. City Tank Corp.*, 384 N.E.2d 1188, 1194 (Mass. 1978) (recognizing that a supplier of an upper component — garbage truck refuse body — can be held liable); *Fernandez v. Ford Motor Co.*, 879 P.2d 101, 111-12 (N.M. Ct. App. 1994) (holding that manufacturers of tractor and trailer could be liable where both were registered vehicles and device could be installed for all uses). *But see* *Ogletree v. Navistar Int’l Transp. Corp.*, 390 S.E.2d 61, 68

To sum up: if the alleged “danger” or “defect” in a component or raw material is simply its unsuitability for another company’s finished product, the responsibility for that “danger” or “defect” must rest with the finished product manufacturer. That is true even if the risk in the finished product is foreseeable to the component or raw material supplier.⁸¹ The relevant question is not whether the component or raw material is inert or innocuous by itself, as are many specialized components such as the swimming pool liner in *Fleck*.⁸² It is whether the danger arises from a specific end-use of the component or raw material or from a danger that extends across all end-uses.

While few courts have expressly adopted a standard that distinguishes between inherent dangers and end-use-specific dangers, some courts come close to adopting this approach. For example, some courts have focused on whether the danger in the finished product resulted from a “dangerous propensity” in the component.⁸³ Others have considered whether liability should be placed on the component supplier or the finished product manufacturer based upon trade custom, relative expertise, and practicality.⁸⁴ Still others have asked whether the defect was in the design of the

(Ga. Ct. App. 1989) (holding that summary judgment should not be granted to chassis supplier), *cert. denied*, 1990 Ga. Lexis 667 (Ga. Mar. 13, 1990).

⁸¹ In addition to *Childress* and *Crossfield*, see the following cases: *Kealoha v. E.I. du Pont de Nemours & Co.*, 844 F. Supp. 590, 594 (D. Haw. 1994) (foreseeability irrelevant); *Kellar v. Inductotherm Corp.*, 498 F. Supp. 172, 175 (E.D. Tenn. 1978) (“Plaintiffs argue that defendant should be held liable here because it could foresee the danger of the unguarded pit and could have eliminated the danger. . . . If a manufacturer could be held liable for injury merely because it foresaw a danger created by another party, there would literally be no end of potential liability. To sustain such a theory would be to cast manufacturers into the role of insurers of products manufactured by others.”), *aff’d*, 633 F.2d 216 (6th Cir. 1980); *Standhardt v. Flintkote Co.*, 508 P.2d 1283, 1289 (N.M. 1973) (finding that defendant had knowledge of the unsuitable end-use); *Searls v. Doe*, 505 N.E.2d 287, 289-90 (Ohio Ct. App. 1986) (affirming summary judgment for component suppliers; expert affidavit that they should have foreseen danger in the finished product failed to create a genuine issue of fact); *Wenrick v. Schloemann-Siemag Aktiengesellschaft*, 564 A.2d 1244, 1248 (Pa. 1989) (“mere knowledge of a dangerous situation” did not impose upon the component supplier a duty to act); *Davis v. Dresser Indus., Inc.*, 800 S.W.2d 369, 371 (Tex. Ct. App. 1990) (quoting the foregoing language from *Wenrick*).

⁸² *Fleck v. KDI Sylvan Pools*, 981 F.2d 107, 119 (3d Cir. 1992), *cert. denied*, 113 S. Ct. 1645 (1993).

⁸³ *Komanekin v. Inland Truck Parts*, 819 F. Supp. 802, 809-11 (E.D. Wis. 1993) (involving a suit against the manufacturer of drive shaft component parts).

⁸⁴ This test originated with Judge Higginbotham’s opinion in *Verge*, 581 F.2d at 386-88, and has been followed in other decisions. See, e.g., *Cross v. Cummins Engine Co.*, 993 F.2d 112, 115 (5th Cir. 1993); *Powell v. E.W. Bliss Co.*, 529 F. Supp. 48, 51 (E.D.

component or in the design of the finished product.⁸⁵ Yet another approach, discussed further below, is to ask whether the component supplier "created" the risk.⁸⁶

Usually, these standards should lead to the same result as the "multi-use component or raw material" approach; however, they are more vague and therefore more difficult to apply. For example, to borrow the *Childress* facts, if a valve has many applications and is dangerous only when another company uses it in a log-splitter, then it is difficult to argue that the valve supplier "created" the risk; rather, it appears that the manufacturer of the log-splitter did. However, murky concepts like "creating a risk" are an invitation to endless debate. A standard that divides components and raw materials into those which have multiple safe end-uses and those which have a danger accompanying all end-uses is easiest to apply and best explains the existing limits on component and raw material supplier liability.

II. REASONS BEHIND THE LIMIT ON WARNING AND DESIGN CLAIMS

A. *Reasons Given in the Past*

Courts have generally given two policy reasons for why multi-use component and raw material suppliers should not have to assure the safety of their materials as used in other companies' finished products. First, as stated by the *Childress* court, that would require suppliers to "retain an expert in the client's field of business to determine whether the client intends to develop a safe product."⁸⁷ Simply put, it is one thing

Pa. 1981), *aff'd without opinion*, 681 F.2d 808 (3d Cir. 1982); *Mayberry v. Akron Rubber Mach. Corp.*, 483 F. Supp. 407, 412 (N.D. Okla. 1979); *Mott v. Callahan AMS Mach. Co.*, 416 A.2d 57, 60-61 (N.J. Super. Ct. App. Div. 1980).

⁸⁵ *Union Supply Co. v. Pust*, 583 P.2d 276, 282 (Colo. 1978).

⁸⁶ *DeLeon v. Commercial Mfg. & Supply Co.*, 195 Cal. Rptr. 867, 871-75 (Ct. App. 1983) (holding that summary judgment should not have been granted to the supplier of a custom-made bin that was specially designed for a factory because the bin arguably created the risk of harm).

⁸⁷ *Childress v. Gresen Mfg. Co.*, 888 F.2d 45, 49 (6th Cir. 1989) (quoting the district court opinion at 690 F. Supp. 587, 592 n.1 (E.D. Mich. 1988)). Other courts have expressed the same view. *See, e.g.*, *Crossfield v. Quality Control Equip. Co.*, 1 F.3d 701, 704 (8th Cir. 1993) (recognizing that "suppliers would be required to hire machine design experts to scrutinize machine systems that the supplier had no role in developing"); *In re TMJ Implants*, 872 F. Supp. 1019, 1025 (D. Minn. 1995) (recognizing that imposing liability on the raw material supplier would require it to retain experts in "a huge variety

to require a supplier of a single-use or inherently dangerous component or raw material to warn about a danger that accompanies all end-uses; it would be quite another to require the supplier of a versatile, multi-use component or raw material to monitor the safety of innumerable end-products and issue end-use-specific warnings. Where the risk is specific to the finished product, rather than general to the component or raw material, common sense dictates that the finished product manufacturer — not the supplier — should bear it. Valve suppliers should not have to become experts on log-splitters, and sellers of fluoropolymer raw materials should not have to become experts on TMJ implants.

Courts have also made a related, even more intuitive point: finished product manufacturers know exactly what they intend to do with a component or raw material and therefore are in a better position to guarantee that the component or raw material is suitable for their particular applications.⁸⁸

Significantly, neither of these related arguments requires that the risk in the finished product be unforeseeable to the supplier. Even if the supplier could anticipate a potential danger in the other company's end product, it would not necessarily be in a reasonable position to take

of areas in order to determine the possible risks associated with each potential use"); *Kealoha v. E.I. du Pont de Nemours & Co.*, 844 F. Supp. 590, 594 (D. Haw. 1994) ("[I]mposing such a duty would force the supplier to retain an expert in every finished product manufacturer's line of business and second-guess the finished product manufacturer whenever any of its employees received any information about any potential problems."); *Wright v. Federal Mach. Co.*, 535 F. Supp. 645, 650 (E.D. Pa. 1982) (recognizing that "the law does not impose a duty on the seller of replacement parts to undertake an independent safety investigation of their intended use"); *Searls v. Doe*, 505 N.E.2d 287, 289 (Ohio Ct. App. 1986) (recognizing that the defendants were not required to procure plans of the entire system, review those plans, and independently determine whether their respective component parts would function in a safe fashion); *see also* *Orion Ins. Co. v. United Technologies Corp.*, 502 F. Supp. 173, 178 (E.D. Pa. 1980) (making the same point in a case involving specialized parts).

⁸⁸ *Apperson v. E.I. du Pont de Nemours & Co.*, 41 F.3d 1103, 1107 (7th Cir. 1994) ("The manufacturer of a finished product knows the precise use it intends to make of the raw material or component part, and is in a far better position than the manufacturer of raw materials to determine whether it is safe for that purpose."); *Kealoha*, 844 F. Supp. at 594-95 (recognizing that "the finished product manufacturer knows the specific end-use it intends to make of the material or component part and is in a far better position to evaluate its safety for that particular end use"); *Lockett v. General Elec. Co.*, 376 F. Supp. 1201, 1212 (E.D. Pa. 1974), *aff'd without opinion*, 511 F.2d 1393, 1394 (3d Cir. 1975) (stating that a final assembler of the gears had more reason to know of the dangers presented by operation of the gears in the finished product); *Lee v. Butcher Boy*, 215 Cal. Rptr. 195, 202 (Ct. App. 1985); *Shaw v. General Motors Corp.*, 727 P.2d 387, 390-91 (Colo. Ct. App. 1986).

preventive action. The supplier would still have to examine the other company's studies, testing, and manufacturing methods to determine whether the risk actually exists, whether there are countervailing benefits, and whether the finished product manufacturer has taken appropriate measures regarding the risk. In short, the supplier would still have to become an expert in the other company's line of business.⁸⁹ Hence, even when the risk is "foreseeable," the multi-use component or raw material supplier would face major obstacles in protecting against it through appropriate warnings or design modifications. And, in fact, as this Article has already noted, the law does not require the supplier to do so.

Both related arguments, however, appear to assume a critical point — that the finished product manufacturer has more knowledge than the component/raw material supplier about the safety of the component or raw material as used in its finished product. Although that should usually be the case, probably was the case in *Childress*,⁹⁰ and undoubtedly was the case in the TMJ litigation,⁹¹ one can conceive of situations where that might not be true. In *Crossfield*, for example, the chain supplier also manufactured chitterling cleaning machines and thus possessed considerable knowledge about their dangers.⁹² If the plaintiff could demonstrate that the component or raw material supplier already had greater knowledge about the risks of the component or raw material as used in the finished product, then arguably the two premises of these arguments (that the supplier is being required to become an "expert" in another company's business and that the finished product manufacturer is in the "best position" to evaluate and eliminate risk) would fail.

This leads to another possibility: the component/raw material supplier should be required to tell the finished product manufacturer everything it knows about the manufacturer's intended end-use of its raw material or component, but nothing more. Such a requirement would insure that the finished product manufacturer has knowledge at least equal to the supplier. Finished product manufacturers have to give end-use-specific warnings; why not raw material and component suppliers as well? For instance, should the chain supplier in *Crossfield* have been required to tell

⁸⁹ See, e.g., *Kealoha*, 844 F. Supp. at 594.

⁹⁰ *Childress*, 888 F.2d at 49.

⁹¹ *Apperson v. E.I. du Pont de Nemours & Co.*, 41 F.3d 1103, 1108 (7th Cir. 1994); *In re TMJ Implants*, 872 F. Supp. at 1025; *Hegna v. E.I. du Pont de Nemours & Co.*, 825 F. Supp. 880, 884 (D. Minn. 1993), *aff'd sub nom. Abrams v. E.I. du Pont de Nemours & Co.*, 27 F.3d 571 (8th Cir. 1994).

⁹² *Crossfield v. Quality Control Equip. Co.*, 1 F.3d 701, 703 (8th Cir. 1993).

the machine manufacturer what the supplier knew about the dangers of unguarded chains from its experience building chitterling cleaning machines itself?⁹³

In fact, courts require *some* raw material and component suppliers to give warnings to finished product manufacturers. This is the bulk supplier/sophisticated purchaser rule, which exempts bulk suppliers from warning remote users so long as a responsible intermediary has been apprised of the danger.⁹⁴ The rule has been applied not only to bulk-supplied finished products, but also to inherently dangerous raw materials such as glycol ether acetates, dimethylformamide, and naphtha ingredients.⁹⁵ These cases require the raw ingredient or component supplier to warn its immediate customer; but if it does so, it is absolved from liability.⁹⁶

B. *A Better Reason: Information Costs*

Yet courts have not required multi-use component or raw material suppliers to provide such warnings, nor should they. A better explanation for the results that have emerged in the case law focuses on information costs. The supplier of a multi-use raw material or component actually has

⁹³ Presumably, this warning would also shield the supplier from design defect claims, since the finished product manufacturer's design decisions would be fully informed.

⁹⁴ See generally *Smith v. Walter C. Best, Inc.*, 927 F.2d 736 (3d Cir. 1990) (holding that bulk suppliers of silica sand to a knowledgeable purchaser owed no duty to warn the end-user); *Goodbar v. Whitehead Bros.*, 591 F. Supp. 552 (W.D. Va. 1984), *aff'd sub nom. Beale v. Hardy*, 769 F.2d 213 (4th Cir. 1985) (holding that bulk suppliers of silica sand to a knowledgeable purchaser owed no duty to warn the end-user); *Jones v. Hittle Serv., Inc.*, 549 P.2d 1383 (Kan. 1976) (holding that bulk suppliers of liquid propane gas to a knowledgeable purchaser owed no duty to warn end-users); Carole A. Cheney, *Not Just for Doctors: Applying the Learned Intermediary Doctrine to the Relationship Between Chemical Manufacturers, Industrial Employers, and Employees*, 85 NW. U. L. REV. 562 (1991); Kenneth M. Willner, Note, *Failures to Warn and the Sophisticated User Defense*, 74 VA. L. REV. 579 (1988).

⁹⁵ See, e.g., *Higgins v. E.I. du Pont de Nemours & Co.*, 671 F. Supp. 1055, 1061 (D. Md. 1987); *Rivers v. AT&T Technologies, Inc.*, 554 N.Y.S.2d 401, 403-05 (Sup. Ct. 1990); *Whitehead v. Dycho Co.*, 775 S.W.2d 593, 598-600 (Tenn. 1989); see also *Sara Lee Corp. v. Homasote Co.*, 719 F. Supp. 417, 424 (D. Md. 1989) (flammable beads); *Hill v. Wilmington Chem. Corp.*, 156 N.W.2d 898, 902, 904 (Minn. 1968) (flammable solvent).

⁹⁶ The touchstone of this rule is whether the finished product manufacturer was knowledgeable about the alleged risk, either because of a warning from its vendor or from its own independent knowledge (in which case a warning would be superfluous). See *Sara Lee Corp.*, 719 F. Supp. at 424; *Higgins*, 671 F. Supp. at 1062; *Hill*, 156 N.W.2d at 902, 904; *Rivers*, 554 N.Y.S.2d at 405; *Whitehead*, 775 S.W.2d at 598.

two potential “products” — the material or component itself and information about that material or component. It has been theorized that product liability law would be unnecessary if information markets worked well.⁹⁷ Consumers would buy the amount of safety information they need to attain the level of safety they desire.⁹⁸ However, information markets do not work well. They are beset by free-rider problems and other difficulties in valuing and charging for information.⁹⁹ Hence, according to this theory, without product liability law, there would be a chronic shortage of consumer safety information. Therefore, legislatures and courts require “forced” or “tied” sales of products and information. To sell a product, one must *also* sell information about the product — i.e., warnings. The customer, in other words, is required to buy both the product and the warnings. Product liability law enforces this coupling of product and information sales.

All this makes sense in the context of a finished product manufacturer and a finished product user. But the tables are turned when one is selling a component or raw material to a finished product manufacturer. Where the component or raw material has multiple end-uses and no inherent danger, it may be very expensive for its supplier to gather and disseminate accurate information about potential end-use-specific risks. Stated otherwise, the “information” may be costly relative to the “product” itself. Requiring the supplier to provide both may eliminate the market for the product, because customers (i.e., finished product manufacturers) are not willing to pay for both. At the same time, the imperfections in the information market that justified “tying” the two products together in the consumer context do not exist.

For example, suppose one sells a multi-purpose valve, as in the *Childress* case. The “product” itself, being a mass-produced commodity, is inexpensive to make. But for the very same reason, comprehensive and accurate “information” about it is costly to gather, because the valve has many end-uses. Requiring the valve supplier to keep abreast of all end-use risks and dangers of using the valve as a condition of selling it would greatly increase the cost of the valve, perhaps to a prohibitive level. Furthermore, while it is difficult for consumers to buy information separately, it is far easier for finished product manufacturers like log-

⁹⁷ RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 136 (2d ed. 1977).

⁹⁸ *Id.*

⁹⁹ See James A. Henderson & Aaron D. Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U. L. REV. 265, 298 (1990) (“Markets rarely exist in which risk information and the effects of such information on behavior are routinely priced.”).

splitter assemblers to do so. Finished product manufacturers can target the specific information they need, for example, by hiring experts or commissioning studies, knowing the costs of acquiring that information can be recouped over a number of sales. To put the matter another way: commodity-type raw material and component suppliers have difficulty selling products *with* information; consumers have trouble buying information *without* also buying products; and only finished product manufacturers can readily and economically bridge the gap.

In one of the most thoughtful forays into the subject of component part supplier liability,¹⁰⁰ one commentator has urged the adoption of a “cheapest cost avoider” analysis that would impose liability on the component supplier if it can more easily detect and correct the defect than the finished product manufacturer. According to this line of analysis, “cheapest cost avoider” has two facets — who can more cheaply detect the defect, and who can more cheaply correct it?¹⁰¹ Assuming, as will usually be the case, that the finished product manufacturer has lower correction or control costs, attention then shifts to the relative “detection” costs.¹⁰² If the component supplier has lower detection costs, according to this analysis, it may still avoid liability if it provides the finished product manufacturer with a full warning of the detected dangers.

Elegant in the abstract, these concepts would be exceedingly difficult to apply in practice. Although Cunningham contends otherwise, “cheapest cost avoider” is an ambiguous, unfamiliar term; it is not a concept regularly encountered by judges and juries. Moreover, the component supplier would have to determine beforehand whether it is a “cheaper cost avoider” than its finished product manufacturer-customer.¹⁰³ The supplier could hardly do this without examining the risk or “cost” itself. Of course, the supplier could avoid making such a determination by simply providing a prophylactic “full” warning to its customer. One suspects that most suppliers would choose this alternative. Thus, in practical effect, this legal standard would resemble the bulk supplier/sophisticated purchaser rule: the component supplier would have to make full disclosure to its customer, the finished product manufacturer; having done so it would have no liability to the end-user.

¹⁰⁰ Richard D. Cunningham, Comment, *Apportionment Between Partmakers and Assemblers in Strict Liability*, 49 U. CHI. L. REV. 544 (1982).

¹⁰¹ *Id.* at 549-59.

¹⁰² *Id.*

¹⁰³ Cunningham acknowledges as much, but says that this determination would only have to be a “crude approximation.” *Id.* at 556. But crude approximation or not, the burden on the supplier would remain the same.

But, as noted, the costs of full disclosure would be high. The supplier would have to collect, evaluate, and disseminate information, running the risk that its actions could be second-guessed by a factfinder. With the benefit of hindsight, one can often find *something* — some anecdote, report or memorandum — that an employee of the supplier “knew” about and that the supplier nonetheless did not disclose to the finished product manufacturer. In short, Cunningham’s approach would still require a “forced sale” of information — albeit on different terms. The disproportionate burden of forced gathering, interpreting, and transmitting of information would remain.¹⁰⁴ Hence, his solution does not appear workable. A better approach is to apply the existing law that allows multi-use component and raw material suppliers to sell their products without also having to provide information about end-use-specific applications.

The analysis in this Article also explains an apparent paradox concerning the “contract specifications” defense. Although the multi-use component and raw material principles discussed in this Article are far-reaching, the “contract specifications” defense available to other kinds of component suppliers is a relatively weak defense. At first glance, it would seem that a component supplier who sells to specifications ought to have as much legal protection as one who sells off-the-shelf. However, a supplier who makes to-specification components is generally in a better position both to gather information and to charge for it. Such a supplier not only knows its customer’s end-use, but can charge for information regarding that end-use. Thus, it is logical for the “contract specifications” defense to be narrower than the protection for multi-use component and raw material suppliers.¹⁰⁵

¹⁰⁴ One occasionally sees the statement in judicial opinions that the added cost of providing a warning is negligible. *See, e.g.*, *Ross Lab. v. Thies*, 725 P.2d 1076, 1079 (Alaska 1986) (“i.e., adding more printing to a label”); *Macrie v. S.D.S. Biotech Corp.*, 630 A.2d 805, 810 (N.J. Super. Ct. App. Div.) (stating that since costs are usually negligible, warnings should be required even if only a moderate gain is received by society), *cert. denied*, 636 A.2d 52 (N.J. 1993). As several commentators have pointed out, these statements are far too simplistic. “Overwarning” has costs, both because it crowds out legitimate warnings, causing users to disregard them, and because it deters some safe and proper uses of the product. Henderson & Twerski, *supra* note 99, at 296-97. More generally, the real costs of warning are those of gathering information to determine when, whether, and how to warn — so that “overwarning” does not occur.

¹⁰⁵ Of course, there can be times when the contract specifications call for a multi-purpose component or raw material, as in *Childress v. Gresen Mfg. Co.*, 888 F.2d 45, 48 (6th Cir. 1989). Under these circumstances, the supplier should be entitled to the benefits of both defenses.

The notion that a multi-use component or raw material supplier need not warn of a "foreseeable" danger may seem troubling. But our economy depends upon the availability of affordable basic components and raw materials, unburdened by end-use specific warning requirements. To paraphrase an observation that has been made about product liability warning law in a different context, requiring end-use-specific warnings from suppliers would "preclude a sensible division of labor" between suppliers and finished product manufacturers.¹⁰⁶ Our case law is replete with examples (many of them framed as "duty" cases) where a party is not required to act even in the face of foreseeable harm.¹⁰⁷

This policy discussion has been based on a law and economics model of product liability law. Not surprisingly, however, the multi-use raw material and component principles can also be justified under the more philosophical "representational" theory of product liability warning law. The representational theory holds that the mere sale of a product includes implied representations about its safety.¹⁰⁸ Warnings are therefore necessary to correct any false impressions.¹⁰⁹ However, when the raw material or component is a commodity with many different applications, it is difficult to conceive that the mere sale of that commodity includes representations about its utility in a particular finished product. A seller of a multi-use raw material or component arguably represents that it will be safe to handle and hold, but not that it works well in a medical implant or a log-splitter.

¹⁰⁶ In RICHARD A. EPSTEIN, *MODERN PRODUCTS LIABILITY LAW* 99 (1976), the author makes this point about the deficiencies of a "simple foresight test" in determining when suppliers of toxic, inherently dangerous chemicals should have a duty to warn remote users of the same chemicals.

¹⁰⁷ There is a whole body of case law on rescuers. Generally, tort law holds that there is no duty to rescue, even if a minimal rescue effort would prevent a serious injury. See POSNER, *supra* note 97, 131-33. According to Judge Posner, this rule can be justified economically because parties would otherwise avoid situations (such as beaches) where they might become rescuers. *Id.* at 132-33.

¹⁰⁸ See, e.g., *Greenman v. Yuba Power Prods., Inc.*, 377 P.2d 897, 901 (Cal. 1962) ("Implicit in the machine's presence on the market . . . was a representation that it would safely do the jobs for which it was built.").

¹⁰⁹ This theory is discussed, for example, in EPSTEIN, *supra* note 106, at 49; David G. Owen, *Products Liability: Principles of Justice for the 21st Century*, 11 PACE L. REV. 63, 77-78 (1990) (stating that manufacturers should inform consumers about "predictable risks from predictable uses"); Michael A. Pittenger, Note, *Reformulating the Strict Liability Failure to Warn*, 49 WASH. & LEE L. REV. 1509, 1530-32 (1992) (explaining that "consumer autonomy" is possible where the consumer is certain he is fully aware of all risks).

As has been noted, the academic literature suggests that theoretical moorings for the existing limits on component and raw material supplier liability are needed. For example, a recent article discusses the increasing number of cases being brought against such suppliers.¹¹⁰ The article urges the recognition of an “ingredient supplier defense” that would exonerate such suppliers as a matter of law.¹¹¹ The article correctly distinguishes this defense from the existing bulk supplier/sophisticated purchaser rules, which focus on repackaging of the product rather than its conversion into a finished product by another company.¹¹² Yet the author of that article never satisfactorily explains *which* ingredient suppliers should be entitled to this defense,¹¹³ or why this defense is appropriate.¹¹⁴ To address these matters, some consideration of the character of the ingredient (i.e., whether it is multi-purpose and safe for normal handling or not) and of the problem of information costs is necessary.

Taking a different view, another recent article criticizes the results in the TMJ litigation and asks courts to apply a three-part test to upstream supplier liability, focusing on the supplier’s knowledge of the danger, the length of the market chain between the supplier and the finished product user, and the degree of alteration of the raw material or component.¹¹⁵ Yet, apart from the fact that such a balancing test would provide little practical guidance to judges and juries, Professor Hager never gives a

¹¹⁰ Charles E. Erway, III, *The Ingredient Supplier Defense*, 16 J. PRODS. & TOXICS LIAB. 269 (1994).

¹¹¹ *Id.* at 269.

¹¹² *Id.* at 290-91.

¹¹³ Erway does say at one point that an exception to his “ingredient supplier defense” might exist if the ingredient “was not a standard commodity, but a very specialized substance produced specifically for a particular end-product use.” *Id.* at 294.

¹¹⁴ Erway argues that the finished product “manufacturer is almost invariably knowledgeable regarding its product and is the only one in a position to provide appropriate product warnings.” *Id.* at 297. However, as noted earlier, one can imagine circumstances where that might not be true.

¹¹⁵ Mark M. Hager, *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, 1168-72 (1994). In his critique of the TMJ litigation, Professor Hager contends it was inappropriate for DuPont to supply standard Teflon® raw materials to a medical implant manufacturer given that the implant was not “provably safe” and that DuPont had not undertaken its own medical research. *Id.* at 1128. He criticizes the succession of courts that have ruled for DuPont as having done little to deter “future DuPonts.” *Id.* To a large extent, Hager appears to have misunderstood the facts in the TMJ litigation. He relies heavily on an old unpublished Washington state court decision, whose “facts” have been discredited and found to be unsupported in more recent published decisions. *Id.* at 1161-62.

convincing explanation for why his standard should be adopted, other than his subjective belief that existing law is too "pro-defendant."¹⁶ Hence, his article as well fails to confront the problem of information costs.

This Article will turn now to the interaction between the multi-use raw material and component principles, the Second Restatement of Torts, and the proposed Third Restatement.

III. THE INTERACTION BETWEEN THE LIMIT ON WARNING AND DESIGN CLAIMS AND THE RESTATEMENT OF TORTS

A. *The Second Restatement*

While the Second Restatement of Torts did not expressly adopt the multi-use component/raw material principles, the principles flow implicitly from section 402A comment p, the so-called "substantial change" comment. According to that comment, "[t]he question [of liability] 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."¹⁷ Indeed, comment p's contrast between pigiron, which is "capable of a wide variety of uses," and inherently

¹⁶ One suspects that few would share Professor Hager's subjective beliefs. Teflon® fluoropolymers have been used by medical device manufacturers to fabricate a host of life-saving medical implants from vascular grafts to artificial heart valves. *See* Klem v. E.I. du Pont de Nemours & Co., 19 F.3d 997, 999 (5th Cir. 1994); *In re TMJ Implants*, 872 F. Supp. 1019 (D. Minn. 1995); Hoyt v. Vitek, Inc., 894 P.2d 1225, 1231 (Or. Ct. App. 1995). According to Hager, before DuPont or any other company could supply standard, off-the-shelf raw materials to a manufacturer of a medical device, the supplier would have to determine that the device was "provably safe." Such an approach would virtually dictate the end of sales to medical device manufacturers since (a) devices are small, (b) the revenue derived from sales of raw materials to device manufacturers is minuscule, and (c) determining the safety of another company's medical device would be a very time-consuming, expensive process. The irony is that, despite the succession of rulings in DuPont's favor, the sheer transaction costs of the TMJ litigation have had the effect desired by Hager: raw material suppliers have stopped selling to the medical device industry. *See* Barnaby J. Feder, *Implant Industry Is Facing Cutback by Top Suppliers*, N.Y. TIMES, Apr. 25, 1994, at A4, D3; Elyse Tanouye, *Medical-Implant Firms May Face Supply Shortages*, WALL ST. J., Apr. 26, 1995, at B5; Pierre M. Galletti, *Embargo on Biomaterials*, 264 SCIENCE 1065 (1994).

¹⁷ RESTATEMENT (SECOND) OF TORTS § 402A cmt. p. (1965).

dangerous raw coffee beans that have been contaminated with arsenic, is precisely the point of this Article.¹¹⁸ Some courts have even quoted comment p in exonerating multi-use component or raw material suppliers.¹¹⁹ They have done so, moreover, without finding a physical or chemical change, despite the fact that “substantial change” is the ostensible subject of comment p.¹²⁰

Meanwhile, nothing in the negligence portions of the Restatement is to the contrary. Section 388 of the Second Restatement of Torts is often cited as the underpinning for negligence claims by finished product users against raw material and component suppliers. These claims, however, overlook the plain language of section 388: “One who supplies directly or through a third person a chattel for another to use”¹²¹ When a raw material or component is being fabricated into something else, it is not supplied directly or through a third person for another to use, rather, it is supplied to a finished product manufacturer that makes a new product. Thus, by its terms, section 388 of the Restatement was intended to cover redistributed and repackaged chattels — not raw materials and components converted into finished products before they reached the plaintiff.¹²² Indeed, the only examples given in the comments and illustrations to section 388 are sales of finished products. Although a number of courts have applied section 388 to component and raw material suppliers,¹²³ there is logic and precedent to the contrary.¹²⁴

¹¹⁸ Contrasting the two, comment p says that the pigiron supplier “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.” *Id.*

¹¹⁹ *See, e.g.*, *Rynders v. E.I. du Pont de Nemours & Co.*, 21 F.3d 835, 842 (8th Cir. 1994); *In re Silicone Gel Breast Implants*, 887 F. Supp. 1463, 1467 (N.D. Ala. 1995); *In re TMJ Implants*, 872 F. Supp. 1019, 1025-26 (D. Minn. 1995); *Cothrun v. Schwartz*, 752 P.2d 1045, 1048 (Ariz. Ct. App. 1988); *Hoyt v. Vitek, Inc.*, 894 P.2d 1224, 1231 (Or. Ct. App. 1995).

¹²⁰ The title of comment p is actually, “Further processing *or* substantial change.” RESTATEMENT (SECOND) OF TORTS § 402A cmt. p (1965) (emphasis added).

¹²¹ *Id.* § 388.

¹²² Erway makes this point in his article. Erway, *supra* note 110, at 288 (§ 388 is not particularly applicable to an ingredient supplier where the intermediary is not a mere conduit).

¹²³ *See, e.g.*, *Donahue v. Phillips Petroleum Co.*, 866 F.2d 1008, 1012 (8th Cir. 1989) (ethyl mercaptan); *Adams v. Union Carbide Corp.*, 737 F.2d 1453, 1457 (6th Cir.), *cert. denied*, 469 U.S. 1062 (1984) (toluene diisocyanate); *Sara Lee Corp. v. Homasote*, 719 F. Supp. 417, 420-21 (D. Md. 1989) (expandable polystyrene beads); *Higgins v. E.I. du Pont de Nemours, Inc.*, 671 F. Supp. 1055, 1059-60 (D. Md. 1987) (glycol ether acetate).

¹²⁴ *In re TMJ Implants*, 872 F. Supp. 1019, 1019 (D. Minn. 1995); *Veil v. Vitek, Inc.*, 803 F. Supp. 229, 233 (D.N.D. 1992) (raw materials are not equivalent to “chattels”). *See also Square D Co. v. Hayson*, 621 So. 2d 1373, 1377 (Fla. Dist. Ct. App. 1993)

Perhaps most telling, section 388 and its comments are largely a replica of the version of section 388 and comments thereto that appeared in the 1934 First Restatement.¹²⁵ It is difficult to believe that, at such an early date in the development of tort law, the authors of the First Restatement intended to endorse downstream warning liability for component and raw material suppliers.¹²⁶

B. *The Proposed Third Restatement*

Unfortunately, the current version of the proposed Third Restatement of Torts: Products Liability, promulgated as "Tentative Draft No. 2" on March 13, 1995, threatens to undermine this *modus vivendi*. While in design defect and failure to warn cases it adopts a negligence-type standard favored by defendants,¹²⁷ it also omits any equivalent of Second Restatement of Torts section 402A comment p or any recognition of the limits on liability of suppliers of multi-use raw materials and component parts. "Substantial change" would thus be subsumed in the questions of defect, causation, and plaintiff misuse.¹²⁸

These omissions are bad enough, but the potential news for component and raw material suppliers gets even worse. Tentative Draft No. 2 of the proposed Restatement suggests that component parts and raw materials are subject to the same liability rules and standards of "defect" as finished products:

Component parts are products Raw materials are products
Frequently, plaintiffs join sellers of raw materials in actions against those who subsequently combined those materials to create defective products. Unless the raw materials are defective when sold under the rules stated in §§ 1 and 2 [i.e., rules for finished products] the sellers thereof are not liable.¹²⁹

(suggesting that § 388 is limited to inherently dangerous instrumentalities).

¹²⁵ RESTATEMENT OF TORTS § 388 (1934).

¹²⁶ The comments to §§ 395 and 396 in both the First and the Second Restatements expressly provide that sellers of negligently manufactured raw materials or components can be liable to finished product users. *See* RESTATEMENT (SECOND) OF TORTS §§ 395 cmt. m, 396 cmt. c (1965); RESTATEMENT OF TORTS §§ 395 cmt. f, 396 cmt. c (1934). This is the current law as to defectively manufactured components/raw materials. However, none of the comments to § 388 in either Restatement say anything about either raw material or component supplier liability.

¹²⁷ RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(b), (c) (Tentative Draft No. 2, 1995).

¹²⁸ *Id.* cmt. o; *id.* § 4, cmt. b, reporter's note.

¹²⁹ *Id.* § 4 cmt. b.

This assertion is followed by a survey of case law in the reporter's note that can only be described as selective and misleading.¹³⁰ For example, the survey does not mention *Childress*, *Crossfield*, or *Fleck*. It does not cite any of the nineteen published decisions holding DuPont, as a supplier of multi-purpose fluoropolymer raw materials, not liable as a matter of law to the users of TMJ implants containing those raw materials.¹³¹ Instead, the survey relies predominantly upon cases from the 1960s and 1970s involving defectively manufactured components or raw materials,¹³² inherently dangerous materials,¹³³ or single-use components.¹³⁴ To support its claim that "[c]ourts have also held manufacturers of such raw materials as sheet metal or plastics strictly liable for any defects therein," the survey cites mostly decisions that found for the defendant.¹³⁵

¹³⁰ *Id.* reporter's note.

¹³¹ The only TMJ case cited in Tentative Draft No. 2 is an early denial of DuPont's summary judgment motion that was later overruled. *Hegna v. E.I. du Pont de Nemours & Co.*, 806 F. Supp. 822 (D. Minn. 1992), *modified to grant summary judgment on all claims*, 825 F. Supp. 880 (D. Minn. 1993), *aff'd*, 27 F.3d 571 (8th Cir. 1994) (per curiam), *cited in* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. h, reporter's note (Tentative Draft No. 2, 1995).

¹³² *See Housman v. C.A. Dawson & Co.*, 245 N.E.2d 886, 887 (Ill. App. Ct. 1969) (board contained "knot cluster"); *Velez v. Craine & Clark Lumber Corp.*, 305 N.E.2d 750, 753 (N.Y. 1973) (rotted and split lumber plank); *Burbage v. Boiler Eng'g & Supply Co.*, 249 A.2d 563, 566-67 (Pa. 1969) (indentation in face of valve); *see also supra* note 15 and accompanying text.

¹³³ *See Union Supply Co. v. Post*, 583 P.2d 276, 282 (Colo. 1978) (conveyor with nip point had inherent danger); *First Nat'l Bank v. Nor-Am Agric. Prod., Inc.*, 537 P.2d 682, 687 (N.M. Ct. App.), *cert. denied sub nom.* *New Mexico Mill & Elevator Co.*, 536 P.2d 1085 (N.M. 1975) (highly toxic mercury-based fungicide); *see also supra* note 41 and accompanying text.

¹³⁴ *See Roy v. Star Chopper Co.*, 584 F.2d 1124, 1128 (1st Cir. 1978), *cert. denied*, 440 U.S. 916 (1979) (specialized electroplating machine); *Bradford v. Bendix-Westinghouse*, 517 P.2d 406, 409-10 (Colo. Ct. App. 1973) (brake pedal assembly); *see also supra* note 40 and accompanying text.

¹³⁵ *See Prather v. Upjohn Co.*, 797 F.2d 923, 927 (11th Cir. 1986) (affirming directed verdict for supplier of polyurethane foam); *Smith v. Borg-Warner Corp.*, 626 F.2d 384, 386 (5th Cir. 1980) (affirming jury verdict for supplier of thermoplastic raw material); *Davis v. Wells Aluminum Southeast, Inc.*, 323 S.E.2d 215, 216 (Ga. Ct. App. 1984) (affirming summary judgment on the ground that defendant did not manufacture the aluminum strip). The other two cases cited by the reporter's note are *Hastings v. Dis Tran Prod., Inc.*, 389 F. Supp. 1352, 1355-56 (W.D. La. 1975) (considering the availability of a contributory negligence defense in a products liability case, not whether the defendant's strap was a "product"); and *Seegers Grain v. U.S. Steel Corp.*, 577 N.E.2d 1364, 1365-66 (Ill. App. Ct.), *appeal denied*, 584 N.E.2d 140 (Ill. 1991) (involving an inherently defective steel plate); *see also supra* note 59 and accompanying text.

Thus, by disregarding the entire line of multi-use component and raw material cases, and overstating the holdings of the cases that it does cite, Tentative Draft No. 2 could enshrine the erroneous principle that component and raw material suppliers *generally* have duties to design and warn product end-users. That may be the outcome desired by the authors of the draft, but it is certainly not an accurate statement of current law.

Typical of the approach taken by Tentative Draft No. 2 of the proposed Restatement is its treatment of *Menna v. Johns-Manville Corp.*,¹³⁶ a New Jersey decision denying summary judgment to suppliers of raw asbestos fibers. While the reporter's note cites *Menna*, it ignores the court's analysis. In *Menna*, the court relied on Second Restatement of Torts section 402A comment p to conclude that the defendants' fibers more closely resembled raw coffee beans contaminated with arsenic than pigiron, because mined and milled asbestos remains hazardous to the user *regardless* of the degree of processing to which it is subjected.¹³⁷ Thus, *Menna* in no way supports the view that raw material and component suppliers should be subject to the same liability standards as finished product manufacturers; to the contrary, it draws the same distinction as this Article has made between suppliers of raw materials and components that have many safe end-uses and suppliers of raw materials and components that are dangerous for their ordinary uses.

At the May 1995 meeting of the American Law Institute Council, some dissatisfaction was expressed with Tentative Draft No. 2's treatment of raw material suppliers. Apparently, a revision is being considered for 1996, with some scholars advocating that the concepts of section 402A comment p be retained. In any event, before the new product liability Restatement provisions are enacted in final form, much more serious attention needs to be given to the question of component part and raw material supplier liability. In cases like *Childress* and *Crossfield*, courts have been reaching the right results. It would be unfortunate if the Third Restatement undid that.

It is probably not a coincidence that the principal drafters of the new Restatement have also written a critique of product liability warning law that overlooks the thorny issues of component and raw material supplier liability.¹³⁸ In their landmark article, Professors Henderson and Twerski

¹³⁶ 585 F. Supp. 1178 (D.N.J. 1984), *aff'd without opinion*, 772 F.2d 895 (3d Cir. 1985).

¹³⁷ *Id.* at 1182-83.

¹³⁸ Henderson & Twerski, *supra* note 99, at 298. Professors Henderson and Twerski's

first condemn existing warning law for deviating too far from a negligence standard.¹³⁹ Insisting that even a negligence standard is too favorable to plaintiffs, the authors urge the courts to adopt additional reforms.¹⁴⁰ The additional "reforms," however, largely amount to having courts vigorously enforce a negligence approach.¹⁴¹

But, as this Article has noted, there are times when even a negligence standard, i.e., one that balances likelihood and severity of harm against prevention costs, can be inadequate. Henderson and Twerski concede this, although they offer no concrete alternative. For example, they say that for a manufacturer to be liable, not only must the manufacturer be negligent but its product "must in some sense of the word, 'create' the risk."¹⁴² What Henderson and Twerski mean by this terminology is not entirely clear. One could interpret their language to mean that multi-use components and raw materials do not "create the risk" when another company uses them to fabricate a defective finished product. It would be clearer, though, simply to follow the existing law that focuses on whether the component or raw material is inherently dangerous or defective or not. If

more recent article proposing a specific revision of § 402A suffers from the same problems. James A. Henderson & Aaron D. Twerski, *A Proposed Revision of Section 402A of The Restatement (Second) of Torts*, 77 CORNELL L. REV. 1512 (1992). In that article, the authors relegate the issues of "misuse, modification, and alteration" to a single paragraph, arguing that they can simply be treated as questions of "proximate cause." *Id.* at 1545-46. It is ironic that Henderson and Twerski, who are generally advocates of greater certainty and predictability in tort law and of greater judicial assertiveness, want to sweep the questions of "misuse, modification, and alteration," for which some specific legal standards have developed, into the jury closet of "proximate cause."

¹³⁹ Henderson & Twerski, *supra* note 99, at 271-89.

¹⁴⁰ *Id.* at 311-26.

¹⁴¹ Much of what Henderson and Twerski say in the last section of their article is simply a pep talk for judges. For example, they ask judges to "rethink older patterns of decisionmaking," *id.* at 313, to "direct[] verdicts more readily in unworthy cases," *id.*, to "begin adopting a hardheaded attitude," *id.* at 314, to develop a "judicial mind-set . . . that does not allow sending such marginal claims into the relatively unfettered hands of a jury," *id.* at 317, to "approach [specificity-of-warning] cases with healthy skepticism," *id.* at 319, and to "engage more aggressively in both lawmaking and law-applying." *Id.* at 326. Their only remaining suggestions relate to increased deference to agencies and experts. *Id.* at 319-25. Thus, apart from the universal adoption of a negligence standard in product liability failure-to-warn cases advocated in the first part of the article, the authors really have no doctrinal solutions to the problems raised in their article.

In Michael S. Jacobs, *Toward a Process-Based Approach to Failure-to-Warn Law*, 71 N.C. L. REV. 121, 166-72 (1992), the author also criticizes the Henderson and Twerski article. While Professor Jacobs' focus is somewhat different from that of this Article, he too concludes that their proposals are ultimately unsatisfying.

¹⁴² Henderson & Twerski, *supra* note 99, at 284.

courts have not been sufficiently "hard-headed" in applying a negligence standard, as Henderson and Twerski suggest, then perhaps the solution lies in a different legal standard that enables courts to be "hard-headed."

The real problem may not be the negligence standard itself, but a difficulty in incorporating information costs into that standard. A true "negligence" standard that took into account the costs of acquiring, evaluating, and passing on information would probably lead to socially appropriate outcomes. If courts and juries really could consider what it costs a supplier of a versatile raw material or component to gather and process the information necessary to provide appropriate end-use-specific warnings for all uses of the material, and then weigh those costs against the social utility of access to affordable raw materials, they would not require suppliers to warn. Too often, however, courts and juries act as if the costs of obtaining information are nonexistent and as if the only relevant cost is that of taking the precaution.¹⁴³ As at least one commentator has pointed out, "the incentive to exercise care may be socially excessive."¹⁴⁴ In practical terms, it means that the availability of multi-use components and raw materials would unduly decline if their suppliers were subjected to a conventional negligence standard as it has been customarily applied.¹⁴⁵ If a substitute for negligence liability exists that will lead to predictable, fair, and socially appropriate results, it should be used. The multi-use component/raw material principles are such a proxy.

While there was much academic criticism of the negligence standard during the 1960s, it now appears to be enjoying a revival.¹⁴⁶ If all approaches to tort law are imperfect, at least "fault" has a moral

¹⁴³ Otherwise stated, factfinders often take a two-step approach to negligence problems. First, they determine whether the defendant "knew" or "should have known" the risk or danger. Then, if the answer to the first inquiry is yes, they determine whether the costs of inaction in the face of this risk or danger outweighed the costs of action. If so, the defendant is liable. The problem with this two-step approach is that the second calculation includes all the costs to others of the risk, but only part of the defendant's costs of eliminating the risk. The costs of obtaining *actual* knowledge, of translating "should have known" into "known," are omitted.

¹⁴⁴ Steven Shavell, *Liability and the Incentive to Obtain Information About Risk*, 21 J. LEGAL STUD. 259, 269 (1992). As Professor Shavell points out, one can really conceive of several different "negligence" standards, each of which takes a different approach to information costs. *Id.* at 260-61.

¹⁴⁵ See Barnaby J. Feder, *Implant Industry Is Facing Cutback by Top Suppliers*, N.Y. TIMES, Apr. 25, 1994, at A1, D3.

¹⁴⁶ In addition to Henderson and Twerski's writings, see David G. Owen, *The Fault Pit*, 26 GA. L. REV. 703, 710, 723 (1992) (arguing that strict liability is an "experiment" that has failed and is in decline, and for the inevitability of a fault-based standard).

resonance to it.¹⁴⁷ Yet it should be remembered that strict liability was originally justified in part as a shortcut to proving negligence.¹⁴⁸ Under this view, negligence may have been regarded as an appropriate universal standard in an ideal world, but strict liability was needed because sometimes negligence could not be proved. However, the opposite is also true: at times the burden of proof in a negligence case is too easily met — i.e., when the true costs of obtaining and analyzing information are undervalued. In these circumstances, shortcuts to *non-liability*, such as the multi-use component and raw material rule, are also appropriate.

Courts have grappled with section 402A for a generation. Deciding real-life cases, they have in many instances arrived at satisfactory outcomes. As this section of the Article has tried to demonstrate, the wholesale revision of section 402A in Tentative Draft No. 2 of the proposed Third Restatement may have at least one unintended consequence; it may muddy some previously clear waters in the area of component and raw material supplier liability. It would be far better, in this author's view, to limit the scope of change to those areas where the authors of the Third Restatement have proved their case.¹⁴⁹ At a minimum, either comment p, or something similar, should be retained in the Third Restatement. Preferably, limits on component and raw material supplier liability should be expressly recognized.

On November 15, 1995, as this Article was being finalized for publication, the American Law Institute issued an internal "Council Draft" which proposes the addition of a new comment on component and raw material supplier liability.¹⁵⁰ The comment would provide that components are not defectively designed when the component seller did not have "substantial control over the design of the final, assembled product."¹⁵¹ The comment would also provide that component sellers

¹⁴⁷ *Id.* at 718-19.

¹⁴⁸ *See, e.g.,* Cronin v. J.B.E. Olson Corp., 501 P.2d 1153, 1162 (Cal. 1972) (explaining that the purpose of California's pioneering efforts in the field of strict liability was to relieve a plaintiff from problems of proof inherent in pursuing negligence).

¹⁴⁹ For example, the need for proof of an alternative design in design defect cases and the elimination of the "hindsight" rule in warning cases. Even here, one can make a good case that the Third Restatement would simply codify the rule that prevails in most jurisdictions. *See, e.g.,* Anita Bernstein, *A Model of Products Liability Reform*, 27 VAL. U. L. REV. 637, 659 (1993) (pointing out that the "state-of-the-art defense is the law in the United States").

¹⁵⁰ RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2, cmt. o (Council Draft No. 3, 1995).

¹⁵¹ *Id.*

do not "ordinarily" have a duty to warn end-users.¹⁵² Regarding raw materials, the comment takes an even stronger position. It states that viable defective design and warning claims against raw material suppliers should be even rarer because of the "large comparative advantage" possessed by finished product manufacturers in design and warning matters.¹⁵³ This comment is followed by illustrations which appear to be loosely based on the *Crossfield*,¹⁵⁴ *In re Silicone Gel Breast Implants*,¹⁵⁵ and *Fleck* decisions,¹⁵⁶ and by a reporter's note which, for the first time, includes citations to many of the multi-use component/raw material cases.

While this Council Draft represents a vast improvement over Tentative Draft No. 2 of the proposed Restatement, further room for improvement remains. The new comment tries to retain the position that raw material and component suppliers are subject to the same liability standards as finished product manufacturers, even as much of its analysis undercuts that view. Thus, unlike comment p to section 402A of the Second Restatement, the new comment does not reach the underlying rule of law. Moreover, one of the new comment's illustrations suggests that, contrary to the case law and the information costs analysis in this Article, holding a multi-purpose raw material supplier liable for failing to warn about an end-use-specific danger may be appropriate under some circumstances.¹⁵⁷

In early December 1995, the American Law Institute discussed this Council Draft and, it has been reported, considered further changes to clarify the existing protections for raw material and component suppliers. This development is encouraging.

CONCLUSION

Through the concepts of "duty" and "proximate cause," the law of torts has always limited the number of potential defendants that can be

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Crossfield v. Quality Control Equip. Co.*, 1 F.3d 701 (8th Cir. 1993). See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. o, illus. 1 (Council Draft No. 3, 1995).

¹⁵⁵ 887 F. Supp. 1463 (N.D. Ala. 1995). See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. o, illus. 2 (Council Draft No. 3, 1995).

¹⁵⁶ *Fleck v. KDI Sylvan Pools*, 981 F.2d 107 (3d Cir. 1992), *cert. denied*, 123 L.Ed.2d 267 (1993). See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. o, illus. 4 (Council Draft No. 3, 1995).

¹⁵⁷ See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. o, illus. 3 (Council Draft No. 3, 1995).

held liable for an injury. To paraphrase the most famous example of these limits, a railroad is not liable for debris that falls on a passenger because one of its employees negligently pushed another employee causing another passenger's package of fireworks to drop.¹⁵⁸ That chain of events is simply too attenuated, and allowing recovery in such circumstances would deter too much activity.

The point of this Article is that similar limits must exist — and do exist — within the compact world of a single finished product. Most products are comprised of many components and raw materials, which in turn are comprised of other raw materials and components. Hence, one can imagine a potentially indefinite chain of liability descending to the most basic materials used to formulate a finished product. To forestall this possibility, courts have uniformly held that suppliers of raw materials and components should not be liable to users of other companies' finished products, unless the raw material or component presents a danger for most or all end-uses. This largely unstated rule has worked well, and should be preserved in any revision of product liability law.

¹⁵⁸ *Palsgraf v. Long Island R.R. Co.*, 162 N.E. 99, 99 (N.Y. 1928).