1984

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THE DUTY TO WARN IN “TOXIC TORT” LITIGATION*

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I. INTRODUCTION

Subsequent to the landmark case of Greenman v. Yuba Power Products, Inc., the American judicial system has become encumbered by a staggering number of products liability actions. At present, the overwhelming majority of jurisdictions have adopted some form of strict prod-

* As this Article was being prepared for publication, the United States Court of Appeals for the Sixth Circuit decided Adams v. Union Carbide Corporation, Case No. 83-3239, Slip Op. (6th Cir. July 2, 1984) in a manner consistent with the position taken in this Article. An employee of General Motors Corporation had been injured from exposure to the chemical toluene diisocynate (TDI) manufactured by the defendant. The majority opinion, interpreting Ohio law, held that the defendant’s warnings to General Motors regarding the dangers of exposure to TDI and its instructions on the proper safety procedures, “coupled with the fact that GMC itself had a duty to its employees to provide them with a safe place to work, supports the inescapable conclusion that it was reasonable for Union Carbide to rely upon GMC to convey the information about the hazardous propensities of TDI to its employees.” Slip Op. at 7. The majority relied upon Jones v. Hittle Service, Inc., 219 Kan. 627, 549 P.2d 1393 (1976); Younger v. Dow Chemical Corp., 202 Kan. 674, 451 P.2d 177 (1969); and Reed v. Pennwalt Corp., 22 Wash. App. 718, 591 P.2d 478, appeal dismissed, 93 Wash. 2d 5, 604 P.2d 614 (1979).

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ucts liability doctrine, many of them adopting section 402A of the Restatement (Second) of Torts. The courts justify the imposition of strict liability on three grounds. First, the manufacturer is in the best position to guard against possible defects of a product. Second, the manufacturer, either by obtaining insurance or by adjusting the price of the product, is better able to bear the cost of injuries than is an individual consumer. Third, it is often extremely difficult for the injured victim to discover and prove where the defect occurred, who caused the defect, and whether the act or omission creating the defect fell below the requisite standard of care.

Strict liability may arise from defects in the design, manufacture, or marketing and sales of a product. A design defect occurs when "the imperfection was introduced on the drafting board and the product comes out [sic] exactly as the manufacturer had intended." A manufacturing defect "takes place on the assembly line where some unintended error or malfunction occurs in the process of putting together the parts of a product." A marketing and sales defect arises from the "failure to provide adequate warning of danger or adequate directions and instructions for use of a product or both."

Commencing with the plethora of asbestos claims filed in the past decade, an increasing percentage of strict products liability cases have involved the hazardous chemical manufacturing industry. A significant

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6 Id. at 167-210; Special Project, An Analysis of the Legal, Social, and Political Issues Raised by Asbestos Litigation, 36 Vand. L. Rev. 573, 587-88 (1983). The text of § 402A states:

(1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if:
(a) the seller is engaged in the business of selling such a product, and
(b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.

(2) The rule stated in Subsection (1) applies although:
(a) the seller has exercised all possible care in the preparation and sale of his product, and
(b) the user or consumer has not bought the product from or entered into any contractual relations with the seller.

Restatement (Second) of Torts § 402A (1965).

4 J. Beasley, supra note 2, at 61.
5 Id.
6 Id.
7 Special Project, supra note 3, at 589.
8 J. Beasley, supra note 2, at 69.
9 Id.
10 Id. at 71.
11 In the interest of providing a broad, easy definition of the term "hazardous chemical,"
number of these cases involve allegations of inadequate or nonexistent warnings. Given society’s increasing reliance on chemical products, the potential for additional claims from accidental exposure to or improper use of toxic chemicals in the home, the workplace, and the environment is immense, notwithstanding the best efforts of the chemical industry to minimize the risk of injury. The result is a huge cost to manufacturers — both from paying damage claims and incurring legal expenses in resisting claims.

While burdening the chemical industry with these costs may be justified for the above stated social policy reasons, cost shifting is unfair and unreasonable if one or more of the asserted rationales are absent. The thrust of this article is that “duty to warn” concepts developed in the context of consumer and capital goods products should not be applied to chemical products without critical evaluation and analysis of the peculiar features of the chemical industry: the way in which the product is deliv-

the definition of “chemical substance as “any organic or inorganic substance of a particular molecular identity, including . . . any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature and . . . any element or uncombined radical” found in the Toxic Substances Control Act of 1976 (TSCA) is used. 15 U.S.C. § 2602(2)(A) (1982). The statutory definition expressly excludes mixtures, pesticides, tobacco, nuclear materials, food, food additives, drugs, and cosmetics. Id. § 2602(2)(B). For the purposes of this article, however, “chemical substance” shall include mixtures and pesticides. “Mixture” may be defined as:

[A]ny combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that such term does includes any combination which occurs, in whole or in part, as a result of a chemical reaction if none of the chemical substances comprising the combination is a new chemical substance [as determined by 40 C.F.R. § 710] and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined.

Id. § 2602(8). Finally, a chemical substance is hazardous if “the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance . . . or . . . any combination of such activities, presents or will present an unreasonable risk of injury to health.” Id. § 2605(a).

12 As the name implies, the chemical industry includes the manufacture, processing, distribution, or disposal of chemical substances either as raw material or as a finished product which is immediately ready for distribution to the general public. It does not include the processing of chemical substances as an ingredient in the manufacture of a finished product which does not possess the properties or propensities of the original chemical substance. The reason for this limitation is that otherwise a company using the chemical substance as an ingredient, as well as a company using the resultant product, would fall within the definition of a hazardous chemical substance manufacturer. Thus the initial manufacturer is potentially liable to the subsequent manufacturer. This article does not consider this possibility. It is confined solely to the liability of a hazardous chemical substance manufacturer to the ultimate user of that product (such as a consumer or an employee of another manufacturer who uses the hazardous chemical substance). See 1A L. Frumer & M. Friedman, Products Liability § 8.01 at 143 (1983).

13 See id. at 152.
erred to the buyer, the type of customer buying the product, the manner
in which the product is used, and the frequent inability of the manufac-
turer to communicate with the ultimate user.

Recognizing the competing policy goals of requiring adequate warnings
to avoid injuries to ultimate product users, while limiting the application
of strict liability for failure to warn only to circumstances where it is jus-
tified, courts ought to create an exception for chemical manufacturers
similar to the learned or responsible intermediary doctrine established for
the manufacturers of prescription drugs. Applying this doctrine in the
hazardous chemical context, the buyer purchases a hazardous chemical
for another's use where the seller has neither control over the product's
use nor access to the ultimate user. In this case, manufacturer satisfies its
duty to adequately warn of the potential dangers from improper use if it
adequately warns the buyer-intermediary.

This Article begins with a description of the general elements of an
adequate warning, utilizing the RESTATEMENT (SECOND) OF TORTS as a
guide. It then focuses upon the learned intermediary doctrine, an ex-
ception to the general rules concerning adequate warning, to determine if
its rationale permits application in other contexts. The discussion then
shifts to an analysis of the duty to warn under the Uniform Product Li-
ability Act (UPLA), drafted by the United States Department of Com-
merce, which suggests that the doctrine should be applied to hazardous
chemical manufacturers. Finally, an analysis of the pertinent case law
determines the parameters of this emerging doctrine and the extent to
which these parameters have mirrored the guidelines set forth in the
UPLA.

II. Adequate Warnings in a General Sense
Under section 402A of the Restatement (Second) of Torts, a duty to

14 Under the responsible intermediary doctrine:
A manufacturer of an unavoidably unsafe ethical (prescription) drug is not
strictly liable in tort to a consumer who has suffered injury as a result of ingesting
that drug where the manufacturer has provided adequate warning to the medical
profession of all potential adverse reactions inherent in the use of the drug of
which the manufacturer, being held to the standards of an expert in the field,
knew or should have known to exist at the time of marketing.
A manufacturer of ethical drugs satisfies its duty to warn of risks associated with
use of the product by providing adequate warnings to the medical profession and
not to the ultimate user.
15 See infra notes 20-30 and accompanying text.
16 See infra notes 34-51 and accompanying text.
18 See infra notes 52-69 and accompanying text.
19 See infra notes 70-117 and accompanying text.
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warn exists when products are both inherently dangerous no matter how carefully they are used, and when they are potentially dangerous, unless adequate warning and/or instructions regarding their proper use are provided. In both instances, the seller will not be held strictly liable if adequate warnings are given. As this duty to warn is directed to "the ultimate user or consumer," a warning may not be adequate unless it is designed to inform the ultimate user of "all risks inherent in the use of" the product.

Assuming that the seller does disseminate a warning, two issues must be addressed: (1) whether the contents of the warning are sufficient both to warn the ultimate user of the dangers involved in using the product and to instruct him in the proper use of the product; and (2) whether the procedure for disseminating the warning is sufficient to communicate the warning to the ultimate user. Both issues present questions of fact for the jury.

The elements included in the first issue are well defined in First National Bank in Albuquerque v. Nor-Am Agricultural Products., Inc. The court listed five requirements for the contents of a warning to be adequate. First, the warning must "adequately indicate the scope of the danger," i.e., a listing of all dangers and in particular all latent dangers which may cause serious injuries. Second, it must "reasonably communicate the extent or seriousness of harm that could result from the danger." This requirement is not satisfied if a warning "is unduly delayed,

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20 Comment k to § 402A, discussing unavoidably unsafe products, states:
The seller of such products... with the qualification that they are properly prepared and marketed, and proper warning is given, where the situation calls for it, is not to be held to strict liability for unfortunate consequences attending their use, merely because he has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk.

RESTATEMENT (SECOND) OF TORTS § 402A comment k (1965).

Comment j, which speaks to the other type of dangerous product, states that:
In order to prevent the product from being unreasonably dangerous, the seller may be required to give directions or warning, on the container, as to its use.

... Where warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if it is followed, is not in defective condition, nor is it unreasonably dangerous.

Id. comment j.

31 Jackson v. Coast Paint & Lacquer Co., 499 F.2d 809, 812-13 (9th Cir. 1974).
32 Soley, 67 Ohio St. 2d at 193, 423 N.E.2d at 834 (syllabus II).
35 Id. at 83, 537 P.2d at 691.
36 Id. at 83-84, 537 P.2d at 691-92 (quoting Note, The Manufacturer's Duty to Warn of
reluctant in tone or lacking in a sense of urgency." 27 Third, the physical aspects of the warnings such as its conspicuousness, prominence, placement, and relative size of print "must be adequate to alert the reasonably prudent person." 28 Fourth, there must be "some indication of consequences from failure to follow" the directions provided. 29 For example, a simple, directive warning, such as "do not use. . ." might be inadequate. Finally, any danger from waste products must be included in the warning. 30

While a consensus exists as to the elements of an adequate warning, there is disagreement about the second issue—the requirement that the warning must be communicated to the ultimate user. One area of conflict, and the major focus of this Article, is whether a seller of products to an intermediary can adequately warn the ultimate user by warning only the intermediary, and if so, under what circumstances this is possible. The comments accompanying section 402A do not discuss this point, nor for that matter, do they discuss the specifics of an adequate warning in any strict liability case. 31

Many courts have attempted to fill this void by applying the principles found in section 388 of the Restatement. 32 This provision outlines the liability of persons supplying goods for the use of others, when the suppliers fail to warn of the known dangers involved in the intended use. 33 Of

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26 Seley, 67 Ohio St. 2d at 198, 423 N.E.2d at 837. See also Bryant v. Technical Research Co., 654 F.2d 1337, 1346 (9th Cir. 1981) ("Misleading representations of safety accompanying a warning may render the warning inadequate.").

27 First Nat'l. Bank, 88 N.M. at 84, 537 P.2d at 692.

28 Id.

29 Id.

30 See RESTATEMENT (SECOND) OF TORTS § 402A comments j, k (1965).

31 See RESTATEMENT (SECOND) OF TORTS §§ 402A comments j, k (1965).


33 Section 388, entitled "Chattel Known to be Dangerous for Intended Use," states:

One who supplies directly or though a third person a chattel for another to use is subject to liability to those whom the supplier should expect to use the chattel with the consent of the other or to be endangered by its probable use, for physical harm caused by the use of the chattel in the manner for which and by a person for whose use it is supplied, if the supplier

(a) knows or has reason to know that the chattel is or is likely to be dangerous for the use for which it is supplied, and

(b) has no reason to believe that those for whose use the chattel is supplied will realize its dangerous condition, and

(c) fails to exercise reasonable care to inform them of its dangerous condition or of the facts which make it likely to be dangerous.

RESTATEMENT (SECOND) OF TORTS § 388 (1965). As the language indicates, all three conditions must be present for liability to exist. Satisfaction of the duty to warn, therefore, would
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particular relevance is comment n to section 388 which discusses warnings given to a person other than the ultimate user, and establishes an analytical framework that permits a seller to satisfy the duty to warn by communicating adequate warnings to an intermediary.

III. JUSTIFICATIONS FOR WARNINGS TO AN INTERMEDIARY

At the outset, comment n states that liability is not always relieved if an intermediary-vendee is supplied with all the information necessary to a product's safe use.34 An adequate method of warning must give "a reasonable assurance that the information will reach those whose safety depends [sic] upon their having it."35 While the comment declines to delineate a set of decisional rules, it does offer two major factors which are important in the determination of the adequacy of the method used.36

The first factor is the possibility that the warning will not be communicated by the purchaser-intermediary to the ultimate user. Thus, the method of warning should consider the "known or knowable character" of the intermediary.37 Although the seller is permitted "to rely to a certain extent on others doing what they normally do, particularly if it is their duty to do so," warning only the intermediary is insufficient if the person "is known to be careless or inconsiderate."38 The purpose of the product should also receive attention.

[I]f the purpose for which the chattel is to be used is to [the intermediary's] advantage and knowledge of the true character of the chattel is likely to prevent its being used and so to deprive him of this advantage. . . . the supplier of the chattel has reason to expect, or at least suspect, that the information will fail to reach those who are to use the chattel and whose safety depends upon their knowledge of its true character.39

Under comment n, liability should be imposed notwithstanding the fact that the supplier "has no practicable opportunity to give this information directly and in person" to the ultimate user.40

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preclude liability. See id. comment 1.

34 RESTATEMENT (SECOND) OF TORTS § 388 comment n (1965).
35 Id.
36 Id.
37 Id.
38 Id.
39 Id.
40 Id. This statement probably does not mean that a supplier will be held liable if no means exist for directly communicating a warning to the ultimate user, and communication through an intermediary is the only possibility. Although the seller may be liable when a face-to-face warning of the ultimate user is impracticable, this statement in comment n does not provide liability when face-to-face or other methods of direct warning are impossible. Instead, liability exists only if: (1) the seller communicates a warning to the ultimate user through an intermediary; (2) this method of communication is unreliable; and (3) even
The second factor in determining whether a warning is adequate is the magnitude of the risk involved if the product is used improperly. Comment n suggests that this element "is determined not only by the chance that some harm may result but also the serious or trivial character of the harm which is likely to result." If the harm is potentially slight, it is sufficient if the warning is given to a reliable intermediary. When a highly dangerous article is involved, however, the supplier assumes the risk that the information will not be communicated "unless he exercises reasonable care to ascertain the character of the [intermediary] or unless from previous experience with him or from the excellence of his reputation the supplier has positive reason to believe that he is careful." Finally, comment n implies that reliance on a third person to communicate the warning may be insufficient, and disclosure of the product's dangers directly to the ultimate user may be required if "the danger involved in the ignorant use of their true quality is great and such means of disclosure are practicable and not unduly burdensome."

The analytical difficulty involved with applying comment n to strict liability cases stems from the fact that section 388 addresses the supplier's duty to warn in negligence cases. As one court stated, and others have quoted with approval, a fundamental difference exists between determining the satisfaction of the duty to warn in negligence and strict liability cases:

In a strict liability case we are talking about the condition (dangerousness) of an article which is sold without any warning, while in negligence we are talking about the reasonableness of the manufacturer's actions in selling the article without a warning. The article can have a degree of dangerousness because of a lack of warning which the law of strict liability will not tolerate even though the actions of the seller were entirely reasonable in selling the article without a warning considering what he knew or should have known at the time he sold it."

though face-to-face communication with the ultimate user was impracticable, other types of direct communication existed.

1 Id.
2 Id.
3 Id.
44 E.g., Robbins v. Farmers Union Grain Terminal Ass'n, 552 F.2d 788, 795 n.15 (8th Cir. 1977) (quoting Phillips v. Kimwood Mach. Co., 269 Or. 485, 498, 525 P.2d 1033, 1039 (1974)). Other courts, however, have held that an action for failure to adequately warn can only be brought under the negligence theory. See, e.g., Overbee v. Van Waters & Rogers, 706 F.2d 768, 770 (6th Cir. 1983) (per curiam) (interpreting Ohio law); Smith v. E.R. Squibb & Sons, Inc., 405 Mich. 79, 90, 273 N.W.2d 476, 480 (1979) ("When liability turns on the adequacy of a warning, the issue is one of reasonable care, regardless of whether the theory pled is negligence, implied warranty or strict liability in tort."). Accord UNIFORM PRODUCT LIABILITY ACT § 104(C) analysis (1979), reprinted in 44 Fed. Reg. 62,724 (1979). Since a separate article is required to determine whether any difference exists between duty to warn cases
Thus, under strict liability theory, it is irrelevant that the supplier knew or should have known that the product was likely to be dangerous for its intended use, that he had no reason to believe that the ultimate user would not realize its dangers, or that he exercised reasonable care to make the dangers known. The only issues are: (1) whether the product is dangerous for its intended use; (2) whether the ultimate user does not know of the dangers; and (3) whether the supplier did, in fact, communicate the danger to the ultimate user.

In view of these distinctions between strict liability and negligence cases involving goods, one commentator discussing the duty to warn under comment n argued that:

Once a duty is found to exist, the ease with which a warning may be affixed to the product should outweigh counterveiling considerations in negligence cases. The policy behind strict liability countenances even less justification for warning only intermediaries. Nevertheless, some courts continue to slight the policy in this regard.

To support this argument, the commentator noted that the only recognized exception to the rule that the supplier has a duty to warn the ultimate consumer is for "prescription drugs prescribed by a consumer's personal physician" where a warning by the physician-intermediary is sufficient.

Assuming that the alleged distinction between negligence and strict liability actions is proper, warning an intermediary should constitute a justifiable exception to the duty to warn the ultimate user. While there may be fewer permissible instances where warning an intermediary is adequate in strict liability actions as opposed to negligence actions, such warnings may be appropriate in certain situations. These situations occur when one or more of the major policy reasons justifying strict liabil-

under negligence and strict liability theories, it is assumed, for the purposes of this article, that a strict liability action for failure to warn does exist.

" J. Beasley, supra note 2, at 442.
" Id. at 442, 487.
" The minority view asserts that foreseeability of danger and reasonableness in communicating warnings are not elements of strict liability actions. See, e.g., Special Project, supra note 3, at 590-91 & n.71. Comment j to § 402A seems to mandate including these elements in a strict liability action. It provides in pertinent part:

Where . . . the product contains an ingredient to which a substantial number of the population are allergic, and the ingredient is one whose danger is not generally known, or if known is one which the consumer would reasonably not expect to find in the product, the seller is required to give warning against it, if he has knowledge, or by the application of reasonable, developed human skill and foresight should have knowledge, of the presence of the ingredient and the danger.

Restatement (Second) of Torts § 402A comment j (1965) (emphasis added).
ity do not exist or are substantially mitigated by the surrounding facts and circumstances of a particular case. To insure that justice is done for both the user and the supplier, the flexibility in finding that warning an intermediary satisfies the supplier's duty to warn, is necessary.

In a general sense, the plaintiff-user has less burdensome evidentiary problems in a products liability case when the issue involves a failure to warn. As one authority on products liability stated: "[C]ases seeking to hold a defendant liable because of failure to warn of the dangerous characteristics of a product are among the least difficult of products liability cases to try. . . ." This results because:

[T]he plaintiff can often prove his case without the necessity and expense of expert testimony, and without preserving the physical evidence as is necessary in proving defects in manufacture and design, where there may be a problem of proof simply because the product was damaged or destroyed in the accident. Furthermore, there is usually no difficulty in connecting the product with the defendant sued. The enigma of intervening cause rarely presents itself, and contributory negligence can rarely be a defense except in the exceptional case. Moreover, the jury more easily grasps the crux of the case in the need for better warnings or directions, rather than being obliged to understand a claimed deficiency of a complex design or manufacturing process.

Since duty to warn actions do not present the same difficulties of proof found in other products liability cases, it is quite appropriate to require the plaintiff to prove at least some degree of foreseeability and apply the responsible intermediary doctrine.

The responsible intermediary doctrine, rather than an aberration in prescription drug cases, brings the essential aspect of fairness to the chemical manufacturer in a duty to warn case. The reasoning behind the doctrine is apparent from the following discussion:

Ordinarily in the case of prescription drugs warning to the prescribing physician is sufficient. In such cases the choice involved is essentially a medical one involving an assessment of medical risks in the light of the physician's knowledge of his patient's needs and susceptibilities. Further it is difficult under such circumstances for the manufacturer, by label or direct communication, to reach the consumer with a warning. A warning to the medical profession is in such cases the only effective means by

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48 See supra notes 4-6 and accompanying text.
50 Id.
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which a warning could help the patient.51

It therefore appears that there are at least four bases upon which the application of the responsible intermediary doctrine is justified in cases involving prescription drugs. First, communication of the risks to the physician is the most practicable and effective means of warning the public. Second, the physician-intermediary has greater control over the product's ultimate use than the supplier (the drug manufacturer). Third, the distribution of the product is such that the ultimate user will most likely come into contact with the intermediary so that a means of communication exists between the intermediary and user. Fourth, and perhaps most important, the supplier is not in the best position to prevent the risk from occurring since it is not aware of the circumstances of the intended use. As such, one of the major policies behind the imposition of strict liability, that the supplier is in the best position to prevent occurrence of risks, is nonexistent in these products liability cases.

IV. THE UNIFORM PRODUCT LIABILITY ACT: BROADER APPLICATION OF THE RESPONSIBLE INTERMEDIARY DOCTRINE

The Uniform Product Liability Act was drafted by the Department of Commerce in 1979 in an attempt to control serious problems arising out of existing product liability law.52 It states that "Sharply rising product liability insurance premiums have created serious problems in commerce resulting in . . . [d]isincentives for innovation and for the development of high-risk but potentially beneficial products . . . ."53 A finding of the Department of Commerce which was incorporated into the Act indicates that "[o]ne cause of these problems is that product liability law . . . sometimes reflects an imbalanced [sic] consideration of the interest it affects."54 The Department drafted the UPLA in order to deal with this problem by providing "a fair balance of the interests of both product

51 Davis v. Wyeth Laboratories, Inc., 399 F.2d 121, 130 (9th Cir. 1968) (dictum) (footnotes omitted). Another court, also discussing a products liability case involving prescription drugs, has set forth additional reasons for the doctrine. In Hawkins v. Richardson-Merrell, Inc., 147 Ga. App. 481, 483, 249 S.E. 2d 286, 288 (1978), the court stated:

   Prescription drugs are likely to be complex medicines, esoteric in formula and varied in effect. As a medical expert, the prescribing physician can take into account the propensities of the drug, as well as the susceptibilities of his patient. His is the task of weighing the benefits of any medication against its potential dangers. The choice he makes is an informed one, an individualized medical judgment bottomed on a knowledge of both patient and palliative.

   Id. (quoting Reyes v. Wyeth Laboratories, 498 F.2d 1264, 1276 (5th Cir. 1974)).


54 Id. § 101(B).
users and sellers." This balance is achieved by placing "the incentive for loss prevention on the party or parties who are best able to accomplish that goal." This balancing of interests can be seen in section 104 of the Act which discusses the manufacturer's liability for providing defective warnings. Although a manufacturer may be liable if "at the time of manufacture . . . the manufacturer should and could have provided the instructions or warnings which claimant alleges would have been adequate," one type of evidence that is "especially probative" of this ability is "[t]he technological and practical feasibility of providing adequate warnings and instructions." The Department of Commerce included this language recognizing that "in some situations, it may not be feasible as a practical technological matter to provide a warning or the type of warning that the claimant suggests should have been provided." Thus, a manufacturer conceivably may not be held liable if it feasibly could not warn the ultimate user of the dangers involved in using the product. By making the manufacturer's ability to provide warnings a relevant factor, the UPLA incorporates one of the underlying justifications for the responsible intermediary doctrine and expands its application to include all failure to warn cases. It recognizes that the balancing of interests may sometimes favor the manufacturer if no practicable means exist for disseminating warnings to the ultimate user.

The feasibility of warnings takes on controlling significance under the Act in certain instances. Section 104 indicates one situation in which the communication of warnings to the ultimate user is not required:

A manufacturer is under an obligation to provide adequate warnings or instructions to the actual product user unless the manufacturer provided such warnings to a person who may be reasonably expected to assure that action is taken to avoid the harm, or that the risk of the harm is explained to the actual product.

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66 Id. Preamble.
67 Id. Introduction, reprinted in 44 Fed. Reg. 62,715 (1979). This concern with loss prevention is significant since it demonstrates that the UPLA is consistent with the policies underlying strict liability. See supra notes 4-6 and accompanying text.
68 Section 104, entitled "Basic Standards of Responsibility for Manufacturers," provides in pertinent part: A product manufacturer is subject to liability to a claimant who proves by a preponderance of the evidence that the UPLA is consistent with the policies underlying strict liability. See supra notes 4-6 and accompanying text.
70 See supra text accompanying note 51.
This provision is designed to cover those instances when communication of warnings to the ultimate user "is impossible or impracticable." § 104 analysis, reprinted in 44 Fed. Reg. 62,725 (1979). Beyond that specific example, however, it is difficult to imagine very many substances produced by hazardous chemical substance manufacturers that are illegal to use without expert supervision.

The Department of Commerce analysis of this example does endorse an application of this provision beyond instances involving prescription drugs and uses radioactive materials as an example. Id. § 104 analysis, reprinted in 44 Fed. Reg. 62,725 (1979). The second illustration, however, makes it clear that, in an employment context, the doctrine is applicable to the manufacturer of hazardous chemicals. Under its guidance, a supplier of products in bulk which are to be used in the workplace, may satisfy its duty by warning the ultimate user's employer. In recognizing the interests of the ultimate user, the provision does not establish a "bulk supplier" exception to the duty to warn the ultimate user. Instead, it permits warnings to an inter-
mediary-employer only "if there is no practical and feasible means of transmitting them to the employee."\textsuperscript{66}

The second provision, like other parts of the UPLA, is consistent with the justification underlying the responsible intermediary doctrine;\textsuperscript{67} it does not apply unless communication to the intermediary is the only practicable and effective means to warn. Since the employer-intermediary has greater control than the supplier over the product's ultimate use and has direct contact with the ultimate user-employee, the intermediary is in the best position to prevent the risk of danger. As a result, the UPLA does not expand the scope of the responsible intermediary doctrine, but merely applies it in a different context. In other words, it does not make the requirements for permissible warnings to an intermediary less stringent; the UPLA merely takes those requirements and logically applies them to a fact pattern which shares characteristics with the area where the doctrine has been traditionally applied.

Given this reading, the UPLA may relieve hazardous chemical manufacturers from the obligation to directly warn the ultimate user under certain circumstances. Two provisions of the Act, one general\textsuperscript{68} and one specific,\textsuperscript{69} both discussed previously, support the assertion that the doctrine applies outside of the prescription drug field. Since they arguably relate to hazardous chemical manufacturers, the provisions offer an alternate means by which the manufacturer can warn the user.

V. ELEMENTS OF THE RESPONSIBLE INTERMEDIARY DOCTRINE IN HAZARDOUS CHEMICAL SUBSTANCE CASES

Although few courts have specifically referred to the UPLA in duty to warn cases, many decisions involving bulk sellers of hazardous chemical substances seem to employ the Act's standard of warning. Those cases containing facts which allow application of the responsible intermediary doctrine recognize that, in certain instances, bulk sellers can satisfy their duty to warn the ultimate user by conveying those warnings to an intermediary. They allow such warning under circumstances where the UPLA allows warning the intermediary. However, other decisions have expanded this role to allow warnings to an intermediary in instances that the UPLA's "bulk seller" doctrine might not permit.

This section reviews some of these cases in order to determine when courts have allowed a hazardous chemical substance manufacturer to avoid liability by warning a responsible intermediary. Factors that appear

\textsuperscript{66} Id.

\textsuperscript{67} See supra text accompanying note 51.


\textsuperscript{69} Id. § 104(C)(5).
to be significant are the manner of shipping the chemical product, the manufacturer's ability to contact the ultimate user, the type of person who will ultimately use the product, the place where the product will be used, and the reliability of the intermediary to pass on the warning.

A. Manner of Shipment

The manner of shipment and delivery of toxic chemicals is a critical element in the analysis of the applicability of the responsible intermediary doctrine. So far, courts have held that warnings to an intermediary satisfy the hazardous chemical manufacturer's duty to warn, when the product is shipped in bulk, such as by rail car or tank truck, and is then combined with the intermediary's previous supply in a single storage area. Warning the intermediary has also been sufficient when a chemical product, though not shipped in bulk, is subsequently distributed to the ultimate user in a different container than that in which it was shipped.

A manufacturer of caustic soda was not held liable in Reed v. Pennwalt Corp. after an employee in a potato processing plant that used the soda was injured after coming into contact with the chemical. In Reed, the manufacturer had delivered the chemical to the plaintiff's employer in railroad tank cars or tank truckloads. The employer subsequently transferred the chemical to its own bulk holding tanks and piped it through a sealed system to a food processing line where it was applied to potatoes in order to loosen their skins. Contact with the chemical was unintentional as the employees did not handle the potatoes until after they were washed in water and the soda had been theoretically removed. Although the manufacturer did not warn the plaintiff about the use and handling of caustic soda, the court held that the manufacturer had satisfied its duty to warn when it informed plaintiff's employer of the dangers of exposure to the caustic soda.

Bulk delivery also affected a manufacturer's duty to warn in Jones v.
The Hittle court focused upon the fact that in bulk delivery of propane gas, the manufacturer did not supply a container upon which a warning to the ultimate user could be adhered. When the chemical finally reached the ultimate user, it was either in a container supplied by the intermediary or, as in Reed, no container at all. Since the manufacturer could not communicate a warning directly to the ultimate user, the court found that warning the intermediary, a retail propane distributor, was sufficient. The intermediary could convey a warning to the user through either a label placed upon its own container or by communications with the ultimate user.

Permission to give warnings solely to a responsible intermediary is not limited to bulk sellers. Courts have reached the same result where the chemical substance is transferred from a container supplied by the manufacturer to another container before it reaches the ultimate user. In Harngis v. Doe, a flammable solvent manufacturer was not liable for failing to warn an employee of an auto transmission repair company who was injured when the solvent ignited. Although the manufacturer sold the solvent in fifty-five gallon drums which could have contained a warning but did not, liability was precluded because the employee had never seen the drums. The employer-intermediary had transferred the solvent from the drums to a vat used by the plaintiff.

Parkinson v. California Co. represents a more unusual case where the second container actually caused the injury. In Parkinson, propane gas sold by the manufacturer in bulk was transferred to the retailer's steel storage tanks. The steel tanks however, eliminated the odorant which is added to the propant in order to warn of a gas leak. The manufacturer was not held liable when an explosion was caused by an undetected gas leak. There was no duty to warn the plaintiff users of the dangers of putting propane gas in a steel container partly because the gas was not purchased from the retailer in its original container.

The rationale behind these two holdings is readily apparent. Even the most comprehensive warning is worthless if the ultimate user will never have the opportunity to read it. Both situations are effectively the same. In one instance, a warning cannot be affixed to a container. In the other,

80 Id. at 637-38, 549 P.2d at 1393-94.
81 Id. at 639, 549 P.2d at 1394.
82 Id.
84 Id. at 38, 443 N.E.2d at 1011.
85 Id.
86 255 F.2d 265 (10th Cir. 1958).
87 Id. at 267. Because propane is both odorless and colorless, an odorant is added so that it can be detected. It is this additive, and not the gas itself, that gives propane its distinctive aroma of rotten eggs. Id. at 267 n.3.
88 Id. at 269.
the original container is not likely to be used or seen by the ultimate user. In either case, the manufacturer's duty was satisfied by a warning to the responsible intermediary. 98

B. The Manufacturer's Ability to Reach the Ultimate User

A second factor in determining the permissibility of warnings to an intermediary is the ability of the manufacturer to communicate its warnings directly to the ultimate user. The courts have found two issues to be dispositive. The first is whether it is feasible for the manufacturer to have its warnings accompany the chemical substance directly to the ultimate user. Assuming this is answered in the negative, the courts then determine whether the intermediary exercises "exclusive control" over the area where the chemical substance is used.

The manner in which the manufacturer ships the chemical substance, including any subsequent repackaging, bears significantly upon the resolution of the first issue. In fact, the manner of shipment directly reflects the manufacturer's ability to reach the ultimate user. Although it may be difficult for a manufacturer to have its warnings accompany a product sold in bulk, this difficulty does not exist when the product reaches the ultimate consumer in its original container.

The Ninth Circuit Court of Appeals recognized this distinction in Jackson v. Coast Paint & Lacquer Co. 50 The plaintiff, a painter, was injured when the spray paint he was using ignited. The manufacturer had not labeled its spray paint cans with a warning about the highly flammable propensities of the paint vapors. Discussing the manufacturer's duty to warn in this situation, the court noted: "There are important distinctions between products [sold in bulk] and the paint involved here. Paint. . . is a

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98 Although one case appears to present an exception, closer analysis reveals that it is consistent with the cases cited in the text. In Shell Oil Co. v. Gutierrez, 119 Ariz. 426, 581 p.2d 271 (App. 1978), a liquid xylene manufacturer was liable to the plaintiff employees of a company that purchased the xylene from a distributor. Liability was imposed because the manufacturer failed to warn the plaintiffs of the xylene's flammability even though the product was sold in bulk to the distributor and subsequently transferred it 55 gallon drums. Id. at 279. This result appears to contradict the rule indicated by the cases in the text, that a bulk supplier that does not furnish containers to the vendee does not have a duty to directly warn the ultimate user. The result in Shell Oil is not an exception because the manufacturer was also a major seller of drums to the distributor. The manufacturer did not fit within the "second container" situation as the plaintiffs came into contact with the substance when it was still within its original container. Neither fact pattern that warrants communication of warnings solely to an intermediary existed, and the manufacturer was properly liable for failing to warn the ultimate user. Furthermore, since the manufacturer failed to give adequate warnings to its vendee, the intermediary, it was liable regardless of the failure to provide warnings on its drums and the responsible intermediary doctrine did not apply. Id. at 279. Hence, the court's analysis of the adequacy of direct warnings to the user was dicta.

50 499 F.2d 809 (9th Cir. 1974).
product so dispensed that warning to the ultimate consumer can readily be given."91

Whether an intermediary has "exclusive control" has been answered in various ways by the courts.92 The key feature, however, is that the intermediary's established production operating procedures are such that the manufacturer is unable to communicate warnings directly to the ultimate users and unable to verify whether any warnings to the intermediary have been followed. In Reed v. Pennwalt Corp.,93 for example, the employer-intermediary had exclusive control over the design, operation, purchase, repair, and replacement of food processing equipment in which the chemical was used. The manufacturer possessed no specific knowledge concerning either the operation of the employer's processing system or whether the employees would ever be exposed to the chemical.94 Similarly, in Parkinson v. California Co.,95 the propane gas was delivered in a bulk to the distributor, and was subsequently placed in the storage tanks. The gas was then shipped and placed in the ultimate user's own tanks. The manufacturer did not know the identity of, and had no contact with the ultimate user.96

When the issue has been raised,97 courts have rejected the argument

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91 Id. at 813-14.
92 See Bryant v. Technical Research Co., 654 F.2d 1337, 1347 (9th Cir. 1981) ("The employer has complete control over the working environment, and there is little a manufacturer can do to enforce compliance with suggested precautionary measures."); Jacobson v. Colorado Fuel & Iron Corp., 409 F.2d 1263, 1273 (9th Cir. 1969) (product's use is to be directed by technicians and engineers and ultimate user simply follows their directions); Parkinson v. California Co., 255 F.2d 265, 269 (10th Cir. 1958) (manufacturer did not know who the ultimate users would be); Wilhelm v. Globe Solvent Co., 373 A.2d 218, 223 (Del. Super. Ct. 1977) (manufacturer had no control over the product's use or the surrounding work space), aff'd in part and rev'd in part, 411 A.2d 611 (Del. 1979); Hargis v. Doe, 3 Ohio App. 3d 36, 38, 443 N.E.2d 1008, 1011 (1981) (manufacturer had no control over the work area where the product was used).
94 Id. at 719, 591 P.2d at 479.
95 255 F.2d 265 (10th Cir. 1958).
96 Id. at 269.
97 The court in Shell Oil Co. stated that "Shell did not require as a condition to sale that any labels be placed on these drums, and did not follow up after sale to see what, if any, labels were actually used." 119 Ariz. at 431, 581 P.2d at 276. However, the manufacturer's omission was never mentioned as constituting a breach of its duty to warn. Nevertheless, Gutierrez has been cited for the proposition that "a bulk seller or manufacturer is not relieved from its duty to warn later purchasers merely because it warned the immediate seller." Bryant v. Technical Research Co., 654 F.2d 1337, 1347 (9th Cir. 1981). This statement is an inaccurate description of what actually happened in Gutierrez as the facts clearly demonstrated that the intermediary was not adequately warned. See Gutierrez, 119 Ariz. at 431, 581 P.2d at 276. The manufacturer breached its duty to warn, not because it had failed to ensure that the intermediary relayed the warning to the ultimate user, but simply because it had never given sufficient warnings to the intermediary.
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that the manufacturer should impose greater controls over the intermediary’s use of the chemical substance. In Reed the court reasoned: “We must look at the realities of the situation. The law does not require this extreme position. We doubt any manufacturer could or would try to exert such commercial pressure on a prospective customer.”98 Similarly, the court in Groll v. Shell Oil Co.,99 stated: “To hold otherwise, would impose an onerous burden on the bulk sales manufacturer to inspect the subsequent labeling of the packaged product. In addition the manufacturer would have severe enforcement problems if the bulk product purchaser failed to adhere to the recommended warnings.”100

C. Type of Ultimate User

Although the UPLA and most courts applying the responsible intermediary doctrine seem to limit the “bulk seller” rule to an intermediary-employer who purchases goods for use by employees, other courts have shown a willingness to apply the doctrine when the ultimate user is a consumer.101 The manufacturer of stove and lantern fuel in Groll v. Shell Oil Co.,102 was not liable for burns suffered by a sixteen year old who attempted to use the fuel to light a wood-burning fireplace in his home. The manufacturer had sold the fuel in bulk (6,000 gallons minimum) to distributors who subsequently packaged the fuel and sold it to the general public.103 Discussing the factors that should be present before the manufacturer had a duty to warn the ultimate user, the court indicated that the manufacturer “did not have control over the subsequent packaging and marketing” of the fuel.104 It added:

Appellant asks respondent to bear a tremendous burden if it is to be responsible for warning the ultimate consumer. Cases which have imposed a duty on the manufacturer to warn the ultimate consumer have typically involved tangible items that could be labeled, or sent into the chain of commerce with the manufacturer’s instructions . . . . Other cases have imposed such a duty when the manufacturer controlled the means to communicate the warning to the consumer, i.e. by packaging or labeling the ultimate

98 22 Wash. App. at 723, 591 P.2d at 481.
100 Id. at 449, 196 Cal. Rptr. at 55.
101 This is not to say that the responsible intermediary doctrine under the UPLA completely excludes sales to consumers. The Act’s “bulk seller” provisions merely describe general language found in the same subsection. See supra note 64 and accompanying text. This more general language is clearly broad enough to permit application of the responsible intermediary doctrine to consumers. See Uniform Product Liability Act § 104(c) (1979), reprinted in 44 Fed. Reg. 62,721 (1979).
103 Id. at 447, 196 Cal. Rptr. at 53.
104 Id. at 449, 196 Cal. Rptr. at 55.
This analysis of when the manufacturer has a duty to warn and is therefore liable to the consumer is identical to the analysis of the manufacturer's duty when the ultimate user is an employee of the intermediary.\footnote{105 Id. (citations omitted).}

D. Reliability of the Intermediary

The final factor considered by the courts is the intermediary's reliability in passing on warnings to the ultimate user.\footnote{106 See supra notes 74-100 and accompanying text.} There exists reasonable justification for this requirement. As indicated earlier, the responsible intermediary doctrine is not really an exception to the requirement that the ultimate user be warned of a product's danger and instructed on its proper use; it is actually an alternative method of warning the ultimate user when the more traditional method—direct warning—is unavailable.\footnote{107 See, e.g., Parkinson v. California Co., 255 F.2d 265, 269 (10th Cir. 1958).} In the end, however, both methods are intended to warn and instruct the ultimate user since a warning to an intermediary that is not passed on is effectively no warning at all. To enhance the possibility that an intermediary will warn the ultimate user, the courts have imposed a duty upon the manufacturer to determine the intermediary's reliability to communicate the warnings.

The manufacturer's duty, however, should not be construed too broadly. The manufacturer need determine that the intermediary is reliable enough to communicate the warnings. It is not required to ensure that the intermediary actually communicates warnings to the ultimate user. Consequently, numerous courts have found that the manufacturer satisfied its duty to warn and was not liable, even though the ultimate user received no warnings from the intermediary.\footnote{108 See supra notes 34-51 and accompanying text.}

This qualification upon the manufacturer's duty is necessary for the doctrine to have any meaning. The doctrine is designed to protect a manufacturer having no control over whether the ultimate user will be warned as long as it does everything realistically within its power to convey a warning. Imposing liability upon a manufacturer solely because the intermediary fails to warn the ultimate user conflicts with the very purpose of the rule. Only intermediaries have control over whether the warning will be communicated to the ultimate user. Thus, the manufacturer's duty is

limited to determining the reliability of the intermediary since that investigation essentially constitutes the limit of its control.

A factor to be considered in determining an intermediary's reliability is whether sufficient information has been received in order to constitute an adequate warning. In Weeks v. Michigan Chrome & Chemical Co.,\textsuperscript{110} The plaintiff who worked for a chrome plating company developed chloracne after coming into contact with chlorinated wax. The plaintiff's employer had obtained the wax from an intermediary, a distributor which received shipments of the product from a packager and repackaged it into smaller containers.\textsuperscript{111} In finding the original packager liable for failure to satisfy its duty to warn, the court held:

> the [original packager] was required to exercise reasonable care to . . . reasonably assure itself that its immediate vendee and distributor was so informed as to be able and likely to transmit to those who would purchase and use this wax knowledge of its dangers and of the needed precautions . . . . if it was thus delinquent, it could not rely on [the intermediary] to supply the needed warnings and precautionary instructions.\textsuperscript{112}

Another factor is the manner in which the warnings are conveyed to the intermediary. A manufacturer must use a method that will adequately communicate the warning to the intermediary. In Russell v. G.A.F. Corp.,\textsuperscript{113} for example, the court discussed whether a manufacturer of asbestos sheets had sufficiently communicated a warning that its sheets could not support the weight of a human being to intermediary-distributors. The warning was contained in a brochure that accompanied each stack of asbestos sheets, and it was usually placed between the top two sheets. Testimony showed that the brochure would normally remain between the top two sheets and was never read by the intermediary before it shipped the sheets to a construction site. The court indicated that this evidence tending to show that the intermediary never received a warning was sufficient to withstand a motion for a directed verdict against the plaintiff-user.\textsuperscript{114}

The final significant indicator of reliability is the procedure that exists for conveying the warnings to the ultimate users. In a workplace setting, reliability appears to exist if the manufacturer has reason to believe that the intermediary conducts a comprehensive safety program for its employees or possesses some established line of communication to disseminate the warnings. For instance, in Reed v. Pennwalt Corp.,\textsuperscript{115} the court

\textsuperscript{110} 352 P.2d 603 (6th Cir. 1965).
\textsuperscript{111} Id. at 604-605.
\textsuperscript{112} Id. at 607.
\textsuperscript{113} 422 A.2d 989 (D.C. 1980) (per curiam).
\textsuperscript{114} Id. at 990-92.
\textsuperscript{115} 22 Wash. App. 718, 591 P.2d 478, appeal dismissed, 93 Wash. 2d 5, 604 P.2d 164
held that it was not necessary for the manufacturer of caustic soda to conduct safety seminars for the intermediary's employees, the ultimate users. Instead, seminars for the management, supervisory personnel, and crew foremen were sufficient. The employer-intermediary had previously conducted inspections of the system and concluded that its employee's attendance was not necessary since chemical tests showed little, if any, chance of exposure to the caustic soda. The court concluded that the manufacturer, in warning the intermediary's supervisory personnel, had satisfied its duty to warn since "it is reasonable to expect that the [intermediary] has a safety program and that it will communicate whatever is necessary to the ultimate user."  

VI. CONCLUSION

The courts should impose strict liability against manufacturers only when the rationale for its application will be effectuated. When the policies traditionally set forth as justifying the imposition of strict liability are satisfied without imposing strict liability, its imposition upon chemical manufacturers is an unreasonable burden. An alternative must then be employed which fairly allocates the risk of injury among the manufacturer, distributor, and ultimate user.

The liability imposed upon the manufacturers of hazardous chemical substances sold in bulk for failure to adequately warn the ultimate users of the dangers from improper use, is a case in point. The assertion that it is difficult for the victim to prove negligence in product defect cases in order to justify application of strict liability is less valid in failure to warn cases, the easiest of all product defect cases to prove. Although the manufacturer is usually in the best position to guard against product defects, such is not the case when the manufacturer sells its products in bulk to an intermediary. In these transactions, the manufacturer is unable to communicate warnings to the ultimate user by attaching a warning to a package: either one does not exist, or the ultimate user will never see it. The problem is further exacerbated when the intermediary has exclusive control over the area where the product is used preventing the manufacturer from distributing warnings directly to the ultimate user or insuring their conveyance.

Some courts have attempted to deal with the problem by imposing strict liability against manufacturers in all duty to warn cases. Others conclude that the manufacturer's duty to warn the ultimate user is satis-
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fied by communicating adequate warnings to a responsible intermediary. While the responsible intermediary doctrine was first applied in prescription drug cases the courts have since expanded the doctrine and applied it in hazardous chemical substance cases if: (1) the product is sold to the intermediary either in bulk or in containers different from those which will reach the ultimate user; (2) the manufacturer is unable to communicate warnings directly to the ultimate user; and (3) the manufacturer has ensured that the intermediary is reliable enough to convey its warnings to the ultimate user.

This approach demonstrates a balance between the interests of both the chemical manufacturer and the ultimate user. The ultimate user's interest in being warned of the dangers from improper use of a chemical product is furthered by requiring the manufacturer to ensure the reliability of the intermediary. Furthermore, the doctrine will not be applied if the manufacturer is able to communicate warnings directly to the ultimate user. The chemical manufacturer's interests are considered since it is not held accountable for those actions which are beyond its control and is not required to warn the ultimate user directly when it has no means to do so.

The responsible intermediary doctrine, as applied to the manufacturers of hazardous chemical substances, represents a well-tailored and analytically sound rule of law. By addressing itself to the interests of the manufacturer and the ultimate user, this rule attempts to reach a just and reasonable result. Its qualities have been recognized by some courts and ought to be recognized by more.