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## DES AND A PROPOSED THEORY OF ENTERPRISE LIABILITY

#### I. INTRODUCTION

Diethylstilbestrol (DES) is a man-made estrogen,<sup>1</sup> first approved by the Federal Drug Administration (FDA) in 1947 for use in complications during pregnancy—specifically, to prevent miscarriages.<sup>2</sup> Between the years 1947

1. Estrogen is a female sex hormone, first isolated for medical use in 1923. It was found useful in the treatment of women whose disorders were believed to stem from low natural levels of estrogen. DES was first synthesized in England in 1938, but was never patented. Its use represented a major advance over that of natural estrogens because DES was cheaper and could be administered orally and less painfully. Defendants' Joint Brief in Support of Their Joint Motion for Partial Summary Judgment at 2-3, Abel v. Eli Lilly & Co., No. 74-030-070 NP (Mich. Cir. Ct. May 16, 1977) (motion granted) [hereinafter cited as *Abel*, Defendants' Brief].

2. Id. at 4. Two medical sources in the 1940's were primarily responsible for the belief that DES would significantly reduce the incidence of threatened abortions, namely Karnaky, The Use of Stilbestrol for the Treatment of Threatened and Habitual Abortion and Premature Labor: A Preliminary Report, 35 S. Med. J. 838 (1942), and Smith, Diethylstilbestrol in the Prevention and Treatment of Complications of Pregnancy, 56 Am. J. Obstet. & Gynec. 821 (1948). Both of these studies were soon criticized for their lack of adequate controls, and subsequent controlled studies failed to substantiate these earlier claims of effectiveness. See, e.g., Davis & Fugo, Steroids in the Treatment of Early Pregnancy Complications, 142 J.A.M.A. 778 (1950); Dieckmann, Davis, Rynkiewicz & Pottinger, Does the Administration of Diethylstilbestrol During Pregnancy Have Therapeutic Value?, 66 Am. J. Obstet. & Gynec. 1062 (1953); Robinson & Shettles, The Use of Diethylstilbestrol in Threatened Abortion, 63 Am. J. Obstet. & Gynec. 1330 (1952). Nevertheless, DES continued to be manufactured and prescribed for the prevention of abortions until 1971. See notes 11-12 infra and accompanying text.

The drug is still marketed in the United States for a wide variety of other purposes. It is used in the treatment of women for menopausal disturbances, senile vaginitis, and the relief of breast engorgement during lactation suppression. Men are treated with it for cancer of the prostate. A. Osol & R. Pratt, The United States Dispensatory 420-21 (27th ed. 1973); Physicians' Desk Reference 951 (31st ed. 1977). DES is also an ingredient of the "morning-after" pill used to prevent pregnancy. M. Dixon, Drug Product Liability § 11.27 (1977).

DES is also used in animal feed and drugs as a growth promoter. As early as 1959, the FDA withdrew approval of the use of DES in chicken feed on the ground that it was a known carcinogen. This FDA order was approved by the courts. See Bell v. Goddard, 366 F.2d 177 (7th Cir. 1966). DES, however, has continued to be used in animal drugs and feed. See Environmental Carcinogenesis: Regulation on the Frontiers of Science, 7 Envt'l L. 83, 101 (1976) [hereinafter cited as Environmental Carcinogenesis]. This situation has arisen because of an exception to the Delaney Amendment, which in general bans the use of unsafe food additives and specifically of carcinogens. 21 U.S.C. § 348(c)(3)(A) (1970). A clause added to this section in 1962, known as the "DES clause," allows such additives in animal feed if no residue of the additive can be found in the animal tissues. Id.; see Hess & Clark v. FDA, 495 F.2d 975, 979 (D.C. Cir. 1974). Although DES was excluded from the reach of the Delaney Amendment by this clause at the time it was added, by the early 1970's new and more sensitive tests were able to detect the presence of DES in the tissue of animals that had ingested it. Id. Nevertheless, because of procedural irregularities, the court in Hess & Clark set aside a 1972 attempt to ban the use of DES in animal drugs. Id. at 994-95. Rather than report back to the court for further action, the FDA has chosen to wait for the results of experiments on the threshold level of DES. Environmental Carcinogenesis, supra at 101. For discussion of the threshold level of DES, see Gass, A Discussion

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and 1971, DES was manufactured by hundreds of drug companies<sup>3</sup> and popularly prescribed for millions of pregnant women.<sup>4</sup> In 1971, the medical literature reported a statistically significant association between the use of DES, or of chemically similar synthetic estrogens manufactured during the same period, and the subsequent development of cancer in the users' daughters, exposed to the drug in utero.<sup>5</sup> A small percentage of the estimated

of Assay Sensitivity Methodology and Carcinogenic Potential, 30 Food Drug Cosm. L.J. 111 (1975); Schmidt, The Benefit-Risk Equation, FDA Consumer, May 1974, at 27, 29-30. Unlike the United States, by 1973 twenty-three countries had banned DES in cattlefeed pending further testing. Drugs-DES Revisited, 9-10 Trial Magazine, Mar./Apr. 1973, at 44.

3. No one is certain of exactly which companies manufactured DES for use in pregnancy, or of how many companies were involved. In one DES case, defendants mentioned 300 companies. See Abel, Defendants' Brief, supra note 1, at 51. An attorney connected with the DES litigation explained that the 300 companies include distributors and packagers of DES as well as manufacturers. Interview with Henry Simon, counsel in some of the DES litigation for one of the defendant drug companies, in New York City (May 26, 1977). Thus, not all of the 300 are DES manufacturers. In the cases where plaintiffs are represented by Kolsby, Wolf & Gordon and where a number of DES manufacturers are joined as defendants because the plaintiffs cannot identify the manufacturer of the injury-producing product, plaintiffs, in an attempt to be inclusive, initially joined 94 DES manufacturers. See notes 26-27 infra and accompanying text. This number is based on an FDA computer printout of every company for which the FDA approved a New Drug Application (N.D.A.) for DES for use in accidents of pregnancy, or in a dosage suitable for such use. However, this printout did not include information on those companies which were allowed to market DES without an N.D.A. after it was no longer a new drug. More important, the printout did not include information on drugs manufactured simultaneously with DES and having the same purpose and effect. Interview with Herbert Kolsby, Kolsby, Wolf & Gordon, in Philadelphia (Aug. 17, 1977). Consequently, it can only be estimated that the number of firms which manufactured DES for use in pregnancy is between 94 and 300.

4. N.Y. Times, Mar. 29, 1977, at 16, col. 2. An indication of the popularity of the drug can be found in the medical literature. "The public has been so frequently told of the virtue of this drug through articles appearing in lay journals that it now requires a courageous physician to refuse this medication. The mass of pharmaceutical literature, extolling the wonders of this drug, has also rendered most practitioners amenable to his patient's [sic] demands. This situation, together with the understandable desire to do something positive toward rescuing a teetering pregnancy, has resulted in the widespread use of diethylstilbestrol in threatened abortion." Robinson & Shettles, *supra* note 2, at 1330; *see* M. Dixon, *supra* note 2, § 11.27.

5. Greenwald, Barlow, Nasca & Burnett, Vaginal Cancer After Maternal Treatment with Synthetic Estrogens, 285 N. Eng. J. Med. 390 (1971); Herbst, Ulfelder & Poskanzer, Adenocarcinoma of the Vagina, 284 N. Eng. J. Med. 878 (1971). Scientists discovered the link between DES and cancer by noting a sudden increase in incidence of a rare form of cancer and then by taking highly detailed histories of the women exhibiting this disease, including maternal ingestion of drugs. Id. at 878-79. Subsequent studies of the same nature have confirmed this original finding, e.g., Nordqvist, Fidler, Woodruff & Lewis, Clear Cell Adenocarcinoma of the Cervix and Vagina, 37 Cancer 858 (1976). Studies are still being conducted. See note 11 infra. Recent research has also revealed an apparent link between use of DES during pregnancy and structural and functional changes in the genital tracts of the sons of such women. These changes may include reduced fertility. Gill, Schumacher & Bibbo, Structural and Functional Abnormalities in the Sex Organs of Male Offspring of Mothers Treated with Diethylstilbestrol (DES), 16 J. Reprod. Med. 147, 152-53 (1976).

Scientists frequently assume causation on the basis of statistical data like that in the DES

one-half million or more<sup>6</sup> DES daughters are presently suffering from clearcell adenocarcinoma of the vagina and uterus,<sup>7</sup> heretofore rare<sup>8</sup> and sometimes fatal<sup>9</sup> forms of cancer. The vast majority have other abnormalities, which may be pre-cancerous.<sup>10</sup> In 1971, the FDA, contraindicating DES for

studies. Gordon, The Unborn Plaintiff, 63 Mich. L. Rev. 579, 600-02 (1965). However, the phrase "significant association," Herbst, Ulfelder & Poskanzer, supra at 879, denotes that a cause-and-effect relationship does not necessarily follow from such a statistical relationship. In an absolute sense, the causation of cancer could only be established through an understanding of the scientific mechanism whereby the introduction of a substance into the body creates a tumor. This is not understood in the case of DES. M. Dixon, supra note 2, § 4.04[11]. Neither is it understood in any instance of environmentally caused cancer. Environmental Carcinogenesis, supra note 2, at 94-96. Because of the variance between a medical acceptance of statistical data as indicative of causation, and the more absolute requirements of a legal cause-in-fact, see Gordon, supra at 600-02, plaintiffs in the DES cases may encounter difficulties. Nevertheless, courts have found liability in other cases of environmentally caused cancer. See, e.g., Karjala v. Johns-Manville Prods. Corp., 523 F.2d 155 (8th Cir. 1975) (asbestosis and mesothelioma); Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076 (5th Cir. 1973), cert. denied, 419 U.S. 869 (1974) (asbestosis). In view of the rarity of the forms of cancer associated with DES in any persons other than DES daughters, see note 8 infra, it should not be difficult for a court to find a legal causal relationship between DES and cancer.

6. Ulfelder, *The Stilbestrol-Adenosis-Carcinoma Syndrome*, 38 Cancer 426, 429 (1976). The author states that this estimate is conservative. *See* N.Y. Times, May 17, 1977 at 18, col. 3 (estimating 3 million women whose mothers took DES during pregnancy).

7. Estimates of the incidence of adenocarcinoma in DES-exposed daughters vary from one in 250 to one in 1000. B. Seaman, Women and the Crisis in Sex Hormones 29 (1977). One doctor noted for his DES research recently estimated that incidence might be as low as one in 10,000. Wall St. J., May 17, 1977, at 13, col. 1.

A nationwide registry for cases of clear-cell adenocarcinoma of the genital tract was established soon after the link between this disease and DES was established. By 1975 two hundred and fifty cases had been reported to it. Two-thirds of all cases had a confirmed exposure to DES; for vaginal adenocarcinoma, the confirmed exposure was over 80%. Ulfelder, *supra* note 6, at 428. However, exposure to DES, and sometimes even the development of adenocarcinoma, can be asymptomatic. DESAD Project, Div. of Cancer Control and Rehabilitation, Nat'l Cancer Inst. & Office of Cancer Communications, NCI, Questions and Answers About DES Exposure Before Birth 6-7 (Dep't of Health, Education, and Welfare Pub. No. (NIH) 76-1118) [hereinafter cited as Questions]. Also, routine gynecological examinations will not disclose DES exposure. Herbst, Scully & Robboy, *Problems in the Examination of the DES-Exposed Female*, 46 Obstet. & Gynecol. 353, 354 (1975). Therefore, it is to be expected that actual incidence of DES-related adenocarcinoma is higher than reported.

8. Clear-cell adenocarcinoma of the cervix had been infrequently reported before the DEScancer linked cases; only three cases of clear-cell adenocarcinoma of the vagina had ever been recorded before. Ulfelder, *supra* note 6, at 428.

9. Of 154 cases treated by the preferred methods of surgery or radiation, 37 (24%) had recurrences and 24 (16%) of these died, although the follow-up period was less than two years in one-third of the cases. Herbst, Robboy, Scully & Poskanzer, Clear-Cell Adenocarcinoma of the Vagina and Cervix in Girls: Analysis of 170 Registry Cases, 119 Am. J. Obstet. & Gynec. 713, 720 (1974).

10. The most consistently present abnormality is adenosis, which is "tissue placed abnormally on the cervix or vagina." Questions, *supra* note 7, at 3. The FDA requires the following warning for those forms of DES and related drugs which are still sold: "Vaginal adenosis has been use by pregnant women, effectively banned it for this purpose both because of its danger<sup>11</sup> and ineffectiveness.<sup>12</sup>

Several hundred daughters,<sup>13</sup> some with cancer and some with possibly

reported in 30% to 90% of postpubertal girls . . . whose mothers received diethylstilbestrol or a closely related congener during pregnancy. . . . The significance of this finding with respect to potential for development of vaginal adenocarcinoma is unknown. Periodic examination of such patients is recommended." 40 Fed. Reg. 32,773 (1975).

11. In view of the dangers of DES, in 1971 the FDA took the following three steps: "1, All manufacturers of DES or closely related congeners (dienestrol, hexestrol, benzestrol, promethestrol) are being notified that appropriate changes will be required in the labeling for such drugs. This change will consist in the listing of pregnancy as a contraindication to the use of diethylstilbestrol and the other above-mentioned compounds. 2. All other estrogens will be required to have the following WARNING in their labeling: 'A statistically significant association has been reported between maternal ingestion during pregnancy of diethylstilbestrol and the occurrence of vaginal carcinoma developing years later in the offspring. Whether such an association is applicable to all estrogens is not known at this time. In any event, estrogens are not indicated for use during pregnancy.' 3. Epidemiological studies are being initiated to determine the true incidence of this disease in young women . . . and the probability of a cause-and-effect relationship." U.S. Food and Drug Administration, Dep't of Health, Education, and Welfare, Drug Bull., Diethylstilbestrol Contraindicated in Pregnancy (Nov. 1971). For current contraindications and warnings for DES, see Physicians Desk Reference, supra note 2, at 951, and A. Osol & R. Pratt, supra note 2, at 420-21. The epidemiological studies referred to are in progress, supported by the National Cancer Institute in cooperation with Massachusetts General Hospital, University of Southern California, Baylor College of Medicine, and the Mayo Clinic. Letter from Robert Avery, Jr., Head Public Inquiries Section, Office of Cancer Communications, Dep't of Health, Education, and Welfare (Mar. 7, 1977).

12. Early studies indicated that DES might not be effective for the prevention of miscarriages. See note 2 supra. However, the drug laws of 1938 only required drug manufacturers to submit proof of safety to the FDA. Federal Food, Drug, and Cosmetic Act of 1938, ch. 675, § 505(b), 52 Stat. 1052 (1938). The 1962 amendment to the Act required proof of effectiveness as well. Act of Oct. 10, 1962, Pub. L. No. 87-781, 76 Stat. 781 (1962) (codified at 21 U.S.C. § 355 (1970)). In the late 1960's, the FDA sponsored a study to review the effectiveness of all drugs approved by it prior to 1962. This study gave drugs one of four possible ratings: "effective," "probably effective," "possibly effective," and "ineffective." National Research Council, National Academy of Sciences, Drug Efficacy Study 7 (1969). "Possibly effective" was defined to mean "there is little evidence of effectiveness under any of the criteria stated . . . ." Id. at 42. In 1971. DES and several related drugs received a "possibly effective" rating for the indication "[p]revention of accidents of pregnancy." Although at that time drugs could still be sold for the "possibly effective" indication, because of the known dangers of DES it was also contraindicated. 36 Fed. Reg. 21,537 (1971). Subsequently, drugs rated "possibly effective" were no longer allowed to be sold for such indications. 38 Fed. Reg. 26,824 (1973).

13. Interview with Henry Simon, counsel in some of the DES litigation for one of the defendant drug companies, in New York City (May 26, 1977). A Michigan suit alone, currently on appeal, involves 144 women as plaintiffs. N.Y. Times, May 17, 1977, at 18, col. 3. The number of women involved in the DES cases is greater than this estimate if one includes those women who could be affected by the pending class action suits. *E.g.*, Tigue v. E.R. Squibb & Sons, Inc., No. 3838/76 (N.Y. Sup. Ct., filed Mar. 1976). (This suit was originally captioned Boxer v. E.R. Squibb & Sons, Inc. Although the class action is still continuing, plaintiff Ronnie Boxer's action has been severed and is now Boxer v. Eli Lilly & Co., No. 3838/76 (N.Y. Sup. Ct. Dec. 13, 1977) (caption amended).)

pre-cancerous conditions,<sup>14</sup> are plaintiffs in an estimated eighty to one hundred DES cases presently pending in the United States.<sup>15</sup> Most of the major drug companies are defendants.<sup>16</sup> Plaintiffs allege that defendants insufficiently tested DES and sold it without warning, when they knew or should have known it was both ineffective and unsafe for use by pregnant women.<sup>17</sup> It should be noted that under present law, even a cause of action in strict liability in the area of drugs apparently sets a negligence standard for tortious behavior—that the manufacturer knew or should have known his product was dangerous.<sup>18</sup> Only one of the DES cases, *Barros v. E.R. Squibb* 

14. A defendant's attorney in some of the DES cases states that the majority of the women in the DES cases have adenosis rather than cancer. Interview with Henry Simon, counsel for one of the defendant drug companies, in New York City (Feb. 23, 1978). It is not known how serious adenosis is. See note 10 supra. A number of plaintiffs who do not have cancer have nevertheless undergone surgery. N.Y. Times, May 17, 1977, at 18, col. 3. Many of the DES plaintiffs do have cancer. N.Y. Times, Mar. 29, 1977, at 16, col. 2 (describing plaintiffs in Abel v. Eli Lilly & Co., No. 74-030-070 NP (Mich. Cir. Ct. May 16, 1977)); N.Y. Times, May 17, 1977, at 18, col. 3 (same); Interview with Herbert Kolsby, Kolsby, Wolf & Gordon, in Philadelphia (Aug. 17, 1977) (describing the plaintiffs whom he is representing).

15. Interview with Henry Simon, counsel in some of the DES litigation for one of the defendant drug companies, in New York City (May 26, 1977).

16. For example, the 16 companies which are defendants in the Michigan suit include: Lilly, Upjohn, Squibb, Merck, Schering, and Abbott. Wall St. J., May 17, 1977, at 13, col. 1. All of these companies are listed among the 500 largest U.S. industrial corporations of 1976. Fortune, May 1977, at 364.

17. See, e.g., Plaintiffs' Brief in Opposition to Defendants' Joint Motions for Partial Summary Judgment at 1, 6, Abel v. Eli Lilly & Co., No. 74-030-070 NP (Mich. Cir. Ct. May 16, 1977) (motion granted) [hereinafter cited as *Abel*, Plaintiffs' Brief].

18. This negligence standard in products liability is, of course, based on the requirement that liability for negligent behavior is imposed only when the risk is foreseeable. W. Prosser, Law of Torts § 31 (4th ed. 1971). In a suit against a drug manufacturer for negligence, it is consequently important to determine at what point in time the manufacturer knew or should have known that his product was dangerous. E.g., Tinnerholm v. Parke Davis & Co., 285 F. Supp. 432, 448, 451 (S.D.N.Y. 1968), aff'd, 411 F.2d 48 (2d Cir. 1969); McEwen v. Ortho Pharm. Corp., 270 Or. 375, 390, 528 P.2d 522, 530 (1974). In strict liability one would expect a more stringent standard, since under the Restatement strict liability applies although "the seller has exercised all possible care in the preparation of his product . . . ." Restatement (Second) of Torts § 402A(2)(a) (1965). However, an exception has been created for "[u]navoidably unsafe products . . . . which, in the present state of human knowledge, are quite incapable of being made safe for their intended and ordinary use." Id. § 402A, Comment k (italics deleted). The exception applies particularly to drugs. Id. The sale of such products may be justified because their benefit appears to outweigh their risk; hence they are not defective if accompanied by a proper warning. Id. In the case of new or experimental drugs, the seller should not be held strictly liable "for unfortunate consequences . . . merely because he has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk." Id. In such cases, a warning is required only "where the situation calls for it." Id. The courts, in general, have interpreted this to mean that a manufacturer only becomes liable for a defective drug where he fails to warn of its danger after such time as he knew or should have known of this danger, even though he is sued under strict liability or warranty. (In warranty, the standard applied is generally the same as strict liability.) E.g., Basko v. Sterling Drug, Inc., 416 F.2d 417, 424-27 (2d

& Sons, Inc.,<sup>19</sup> has gone to trial, resulting in a verdict for the defendant. However, the verdict was based on the jury's failure to accept the plaintiff's identification of the injury-producing product.<sup>20</sup> Thus, this case does not indicate whether future DES defendants will be found liable under the negligence standard. If the drug companies are found liable in future cases, damages are estimated in the billions.<sup>21</sup>

A number of legal problems face the plaintiffs in these cases: class action certification,<sup>22</sup> running of the statute of limitations in jurisdictions without a

Cir. 1969) (warranty and strict liability under 402A); Davis v. Wyeth Laboratories, Inc., 399 F.2d 121, 127-29 (9th Cir. 1968) (warranty held same standard as strict liability under 402A); Cudmore v. Richardson-Merrell, Inc., 398 S.W.2d 640, 643-44 (Tex. Ct. Civ. App. 1965), cert. denied, 385 U.S. 1003 (1967) (same standard for negligence and implied warranty). Several commentators have urged that, under strict liability, scienter should be supplied by law and the manufacturer should be liable, especially in the area of drugs, even if the danger was unknowable at the time of manufacture or use. Keeton, Products Liability-Drugs and Cosmetics, 25 Vand. L. Rev. 131, 140-41, 144 (1972); Noel, Products Defective Because of Inadequate Directions or Warnings, 23 Sw. L.J. 256, 268-69 (1969); Wade, On the Nature of Strict Tort Liability for Products, 44 Miss. L.J. 825, 834-35, 844-45 (1973). There is some indication in the courts of movement toward such a stricter standard in both strict liability and warranty. E.g., Green v. American Tobacco Co., 325 F.2d 673 (5th Cir. 1963), cert. denied, 377 U.S. 943, (1964) (after certification to Florida Supreme Court, held that cigarette manufacturer's actual or constructive knowledge is irrelevant to liability for cancer in implied warranty); Tinnerholm v. Parke Davis & Co., 285 F. Supp. 432, 443-44 (S.D.N.Y. 1968), aff'd, 411 F.2d 48 (2d Cir. 1969) (stating good test under implied warranty would be that a reasonable man would not have sold the drug if he had known of its danger); Hamilton v. Hardy, 549 P.2d 1090, 1106-09 (Colo. Ct. App. 1976) (test under strict liability is to assume seller knew of drug's danger); Crocker v. Winthrop Laboratories, Div. of Sterling Drug, Inc., 514 S.W.2d 429, 432 (Tex. 1974) (in suit for death resulting from addiction to drug, court stated: "[S]ome products . . . are so dangerous, in fact that the manufacturers should be liable for resulting harm though he did not and could not have known of the dangers at the time of marketing."). This issue will be an important one in the DES cases. See note 25 infra and accompanying text.

19. No. 75-1226 (E.D. Pa. Jan. 27, 1978).

20. In *Barros*, the plaintiff's mother identified Squibb as the manufacturer of the particular form of DES that she took during her pregnancy. The jury returned answers to interrogatories with their general verdict for the defendant. They were unanimous in concluding that it was not proved that plaintiff's mother had received Squibb's product. This was the dispositive fact in their verdict. The jury was also asked whether negligence or strict liability applied to defendants' manufacture of DES and on both these issues the jury was split. The jury's answers to these two questions are part of the court record, but since they could have had no effect on the verdict in *Barros*, they are merely indicative of possible future jury decisions. Telephone interview with Herbert Kolsby, plaintiff's attorney in *Barros* (Jan. 31, 1978).

21. In one class action suit, plaintiffs have asked for over one billion dollars in damages. N.Y. Times, Mar. 4, 1976, at 16, col. 7. In the Michigan case currently on appeal, the damages sought are about \$625 million. N.Y. Times, Mar. 29, 1977, at 16, col. 2.

22. Class action suits comprise some of the numerous DES cases. Several of these suits have already encountered difficulties related to their class action status. *E.g.*, Rheingold v. E.R. Squibb & Sons, Inc., No. 74 Civil 3420 (CHT) (S.D.N.Y. Oct. 14, 1975) (dismissed for lack of standing of named plaintiff); Stack v. E.R. Squibb & Sons, Inc., No. GD 77-05944 (Pa. Ct. C.P. June 30, 1977) (striking class action allegations).

The principal problem DES class actions will encounter is the requirement for common questions of law and fact among class members. See, e.g., Fed. R. Civ. P. 23; N.Y. Civ. Prac. Law § 901(a)(2) (McKinney 1976). Defendants will claim that individual questions of fact predominate, including injury, the administration of other drugs to plaintiffs' mothers, statutes of limitations, time of marketing and degree of knowledge about the danger of DES at that time, and the defenses of assumption of the risk and contributory negligence. See, e.g., Motion To Refuse Class Action Certification at 3-5, Stack v. E.R. Squibb & Sons, Inc., No. GD 77-05944 (Pa. Ct. C.P. June 30, 1977) (striking class action allegations). Damages will also vary widely among plaintiffs. For reasons like these, no class actions have been certified in cases of personal injury in products liability suits. Recently, however, courts have allowed products liability class actions for property damage. See, e.g., Vasquez v. Superior Ct., 4 Cal. 3d 800, 484 P.2d 964, 94 Cal. Rptr. 796 (1971) (refund requested for fraudulent misrepresentation on freezers); Anthony v. General Motors Corp., 33 Cal. App. 3d 699, 109 Cal. Rptr. 254 (1973) (replacement of defective truck wheels requested); Metowski v. Traid Corp., 28 Cal. App. 3d 332, 104 Cal. Rptr. 599 (1972) (refund requested of difference between actual and represented value of defective cameras); Landesman v. General Motors Corp., 42 Ill. App. 3d 363, 356 N.E.2d 105 (1976) (correction of defective motor mounts requested). Contra, Edelman v. Lee Optical Co., 24 Ill. App. 3d 216, 320 N.E.2d 517 (1974) (class certification to buyers of defective eyeglasses improper because individual reliance varies); Gilmore v. General Motors Corp., 35 Ohio Misc. 36, 300 N.E.2d 259 (Ct. C.P. 1973) (class certification denied to owners of defective cars). Unlike personal injury actions, damages were identical or nearly so in these cases. See, e.g., Metowski v. Traid Corp., 28 Cal. App. 3d at 338, 104 Cal. Rptr. at 602. Also the amount of damages made it unlikely that individual actions would be brought if class actions were not certified. See, e.g., Vasquez v. Superior Ct., 4 Cal. 3d at 810, 484 P.2d at 970, 94 Cal. Rptr. at 802. Because the DES cases have so many individual variations of fact and there is less need for class certification, it is expected they will have difficulty obtaining class certification.

It should be noted, however, that class actions for personal injury and wrongful death have been certified under Federal Rule 23 in the case of mass disasters. Fed. R. Civ. P. 23. Certification has been limited to those issues where the courts believed common questions of law and fact predominated and uniformity of result would ensue. See, e.g., Hernandez v. Motor Vessel Skyward, 61 F.R.D. 558 (S.D. Fla. 1973), aff'd, 507 F.2d 1278 (5th Cir. 1975) (mass food poisoning—certification restricted to issue of defendants' negligence); Gabel v. Hughes Air Corp., 350 F. Supp. 624 (C.D. Cal. 1972) (airline collision—certification restricted to liability and damages excluded). Since the DES cases are in some senses like a mass disaster, although there is obviously greater uniformity in accidents arising from one incident, these cases do offer hope for class certification in the DES cases, at least on the issue of liability.

If class actions were to be allowed in the DES cases, an interesting problem would arise in those suits that are class actions against multiple defendants. See note 28 infra and accompanying text. There is agreement among the courts that, where the named plaintiff has a cause of action against one defendant, he may not initiate a class action suit on behalf of members of a class, each of whom was injured by some one of the defendants joined because they were all engaged in a like practice. This is because the named plaintiff is not representative of the class, since each member of the class was injured by a different defendant. (Some courts have termed this a lack of standing.) See, e.g., La Mar v. H. & B. Novelty & Loan Co., 489 F.2d 461 (9th Cir. 1973); Leonard v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 64 F.R.D. 432 (S.D.N.Y. 1974); Weiner v. Bank of King of Prussia, 358 F. Supp. 684 (E.D. Pa. 1973); Phillips v. Crocker-Citizens Nat'l Bank, 38 Cal. App. 3d 901, 113 Cal. Rptr. 688 (1974). But cf. Haas v. Pittsburgh Nat'l Bank, 526 F.2d 1083, 1095-96 (3d Cir. 1975) (addition of named plaintiff having cause of action against the other defendant cures defect). The DES suits differ from these cases, however, in that each plaintiff is pleading a cause of action against all defendants, among whom there is alleged to be a common bond. See pts. III & IV infra. There is support in the language of the cases for the proposition

broad discovery rule,<sup>23</sup> possible absence of a cause of action for fetal injury

that a conspiracy or concerted action among the defendants, giving the named plaintiff a cause of action against them all, would make class certification permissible. See, e.g., La Mar v. H. & B. Novelty & Loan Co., 489 F.2d at 469-70; Petherbridge v. Altadena Fed. Sav. & Loan Ass'n, 37 Cal. App. 3d 193, 201, 112 Cal. Rptr. 144, 150 (1974).

23. The statute of limitations rules relating to discovery vary so greatly from state to state and even within a single state that it is almost impossible to make any generalizations. The basic problem is determining when the cause of action accrued and the statute began to run in the case of an injury which was undiscovered for a length of time because its effects were delayed. The issue is whether the injury occurred at the time of initial contact with the causative agent or when the effect of such contact was or should have been discovered. This is an essential distinction for the DES plaintiffs because it may be twenty years or more before the carcinogenic effects of the drug become manifest. See Environmental Carcinogenesis, supra note 2, at 83. It is not known how long DES daughters remain subject to risk. Questions, supra note 7, at 7. Even daughters with diagnosed adenocarcinoma may not learn of the relationship between DES and their illness until after diagnosis.

Some jurisdictions have adopted a strict rule that the cause of action accrues at the time of the original contact, because some damage occurred immediately, although the plaintiff was unaware of it. See, e.g., Roybal v. White, 72 N.M. 285, 383 P.2d 250 (1963); Schwartz v. Heyden Newport Chem. Corp., 12 N.Y.2d 212, 188 N.E.2d 142, 237 N.Y.S.2d 714, modified, 12 N.Y.2d 1073, 190 N.E.2d 253, 239 N.Y.S.2d 896, cert. denied, 374 U.S. 808 (1963). By judicial or statutory exception, however, the statute begins to run from time of discovery in some of these jurisdictions when a foreign object has been introduced into the body, usually through medical means. See, e.g., Melnyk v. Cleveland Clinic, 32 Ohio St. 2d 198, 201, 290 N.E.2d 916, 918 (1972); N.Y. Civ. Prac. Law § 214-a (McKinney Supp. 1977). The objects which are considered foreign are subject to wide variation. See, e.g., Raymond v. Eli Lilly & Co., 412 F. Supp. 1392 (D.N.H. 1976), aff'd, 556 F.2d 628 (1st Cir. 1977) (pill like a foreign object) (applying New Hampshire law); Dobbins v. Clifford, 39 App. Div. 2d 1, 330 N.Y.S.2d 743 (1972) (pancreas like a foreign object); Fonda v. Paulsen, 79 Misc. 2d 936, 940, 361 N.Y.S.2d 481, 485 (Sup. Ct. 1974), rev'd on other grounds, 46 App. Div. 2d 540, 363 N.Y.S.2d 841 (1975) (cancer is not a foreign object); Le Vine v. Isoserve, Inc., 70 Misc. 2d 747, 334 N.Y.S.2d 796 (Sup. Ct. 1972) (radioactive isotope is a foreign object).

Other states have a broader discovery rule, extending beyond foreign objects, but the definition of "discovery" differs, depending on the jurisdiction. See, e.g., Caron v. United States, 548 F.2d 366, 368-70 (1st Cir. 1976) (discovery occurred, not at onset of symptoms, but when cause of convulsions learned) (applying Michigan law); Casias v. United States, 532 F.2d 1339 (10th Cir. 1976) (discovery occurred when claimant learned or should have learned of association between complaint and doctor's act) (applying federal law); Roman v. A.H. Robins Co., 518 F.2d 970 (5th Cir. 1975) (discovery occurred when plaintiff told illness due to drug) (applying Texas law); Schenebeck v. Sterling Drug Inc., 423 F.2d 919, 924-25 (8th Cir. 1970) (discovery occured when the disease fully manifested itself and not at discovery of earliest symptom) (applying Arkansas law); Dauzat v. St. Paul Fire & Marine Ins. Co., 336 So. 2d 540 (La. Ct. App. 1976) (discovery occurred when plaintiff placed on notice of malpractice, before permanent effects were evident); Gilbert v. Jones, 523 S.W.2d 211 (Tenn. Ct. App. 1974) (discovery occurred when causal connection learned).

The discovery issue has frequently, but not exclusively, arisen in medical malpractice suits. Courts vary as to whether they will extend their jurisdictions' rule allowing discovery in medical malpractice cases to the area of products liability. See, e.g., Roman v. A.H. Robins Co., 518 F.2d 970 (5th Cir. 1975) (extension) (applying Texas law); Raymond v. Eli Lilly & Co., 412 F. Supp. 1392, 1398-1401 (D.N.H. 1976), aff<sup>3</sup>d, 556 F.2d 628 (1st Cir. 1977) (extension) (applying New Hampshire law); Le Vine v. Isoserve, Inc., 70 Misc. 2d 747, 334 N.Y.S.2d 796 (Sup. Ct.

prior to viability,<sup>24</sup> and absence of a cause of action if the danger of DES can be shown to have been unknowable at the time of manufacture.<sup>25</sup>

1972) (implicit extension). Even where a state has a discovery rule and applies it in products liability, the application may not extend to all causes of action. See, e.g., Raymond v. Eli Lilly & Co., 412 F. Supp. 1392, 1403 (D.N.H. 1976), aff'd, 556 F.2d 628 (1st Cir. 1977) (in breach of warranty, statute of limitations runs from tender of delivery) (applying New Hampshire law). For further discussion of these statute of limitations problems, see generally Annot., 4 A.L.R.3d 821 (1965 & Supp. 1977); Annot., 11 A.L.R.2d 277 (1950 & Later Case Serv. 1971 & Supp. 1977); Birnbaum, "First Breath's" Last Gasp: The Discovery Rule in Products Liability Cases, 13 Forum 279 (1977).

24. The first American case to consider a cause of action based on prenatal injury ruled that such an action was not maintainable. Dietrich v. Northampton, 138 Mass. 14 (1884) (Holmes, J.). In part, the decision was based on the fact that the fetus was not viable, *i.e.*, incapable of independent life, at the time of injury. *Id.* at 16. *Dietrich* was followed in the United States until a 1946 decision allowing an action for prenatal injury. Bonbrest v. Kotz, 65 F. Supp. 138 (D.D.C. 1946); *see* Annot., 40 A.L.R.3d 1222, § 2[a] (1971). The court in *Bonbrest* distinguished its ruling from that of *Dietrich* because the injury it considered occurred when the child was viable. 65 F. Supp. at 140. By 1972, all jurisdictions allowed a cause of action for prenatal injuries when the child was born alive. Annot., 40 A.L.R.3d 1222, § 3[c] (1971) (all states but Alabama allowed cause of action for fetal injury); Huskey v. Smith, 289 Ala. 52, 265 So. 2d 596 (1972) (allowing cause of action for fetal injury). A few courts have allowed causes of action for fetal injury where the plaintiff was not yet conceived when the tortious conduct took place. *E.g.*, Jorgensen v. Meade Johnson Laboratories, Inc., 483 F.2d 237 (10th Cir. 1973); Renslow v. Mennonite Hosp., 67 Ill. 2d 348, 367 N.E.2d 1250 (1977); *see* 48 U. Colo. L. Rev. 621 (1977).

Despite the unanimity in allowing a cause of action for fetal injury, the distinction between an injury occurring before or after viability has continued, with the states split on whether an action may be maintained for an injury sustained prior to viability. Annot., 40 A.L.R.3d 1222, § 3[a]-[b] (1971 & Supp. 1977) (listing jurisdictions on both sides of the question). The refusal to allow recovery for an injury which occurred before viability is based partly on precedent and partly on the notion that proof of causation is more difficult in such cases. Not only is this unsound, but "there is substantial medical authority which indicates that congenital structural defects occasioned by environmental factors can be sustained only within the earliest stages of the previable period. Judicial disallowance of actions for injuries to nonviable fetuses may well be a denial of the most meritorious claims." Note, *The Impact of Medical Knowledge on the Law Relating to Prenatal Injuries*, 110 U. Pa. L. Rev. 554, 563 (1962) (emphasis in original) (footnote omitted). *See generally* Gordon, *The Unborn Plaintiff*, 63 Mich. L. Rev. 579 (1965).

It was recommended that DES be administered to pregnant women from early in their pregnancies until they reached term. Smith, *supra* note 2, at 823-24. Some women, however, appear to have been treated on a short-term basis, only at the time their pregnancies were threatened. See Heinonen, *Diethylstilbestrol in Pregnancy*, 31 Cancer 573, 575 (1973). Generally, this would be early in the pregnancy. See Smith *supra*. Thus, although it is probably true that all DES injuries were sustained during the early months of pregnancy, M. Dixon, *supra* note 2, § 11.27, in those cases where the drug was only administered at that time, plaintiffs may be unable to maintain a cause of action in some jurisdictions.

25. For the required standard of knowledge on the part of a manufacturer in a suit for drug injury, see note 18 supra and accompanying text. Plaintiffs in the DES cases point to a substantial body of scientific literature by 1947 connecting the use of hormones to carcinogenic effects. See, e.g., Abel, Plaintiffs' Brief, supra note 17, at 11, apps. 18-43 (listing 402 articles, 56 dealing specifically with estrogens, published primarily in the 1940's). In addition, by 1947 oral administration of DES to laboratory animals had produced cancer. Bell v. Goddard, 366 F.2d 177, 179

However, the unique legal problem in the DES cases concerns the crucial issue of cause-in-fact. Because of the time lapse from the intake of DES to the manifestation of injury, and the further interval before recognition of DES as the probably causative agent,<sup>26</sup> a majority of plaintiffs cannot identify the manufacturer of the drug ingested by their mothers.<sup>27</sup> In such suits,<sup>28</sup>

(7th Cir. 1966). Consequently, plaintiffs argue that when DES was first manufactured for use in pregnancy, defendants should have known it was potentially carcinogenic. See, e.g., Abel, Plaintiffs' Brief, supra note 17, at 11-13. In particular, since studies of DES at that time showed a "primary effect on the genito-urinary tract," manufacturers were on notice to conduct detailed studies of such effects. M. Dixon, supra note 2, 11.27.

A major question left unanswered by this argument, however, is whether defendants had a duty in 1947 to test for injuries to the second generation. It was only after the thalidomide disaster in the early 1960's that "generational testing" of drugs was instituted. Gellis, *The Effects of Drugs on the Unborn Child*, in The Medicated Society 91, 94 (S. Proger ed. 1968). Since only generational testing would have revealed the danger to the daughters of the women who took the drug, and since defendants' duty under a negligence standard would extend only to those testing methods which were known to experts at the time, defendants have a "state of the art" defense, whereby they only become liable for the results of DES ingested after the early 1960's. See Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076, 1088-90 (5th Cir. 1973), cert. denied, 419 U.S. 869 (1974); Basko v. Sterling Drug, Inc., 416 F.2d 417, 426 (2d Cir. 1969); Davis v. Wyeth Laboratories, Inc., 399 F.2d 121, 128-29 (9th Cir. 1968); Noel, Products Defective Because of Inadequate Directions or Warnings, 23 Sw. L.J. 256, 266-67 (1969). See generally Raleigh, The "State of the Art" in Product Liability: A New Look at an Old "Defense," 4 Ohio N.U.L. Rev. 249 (1977).

A plaintiff's attorney in the DES cases suggests that the Restatement exception for drugs in a strict liability cause of action should not apply where the manufacturer knew, or should have known, that his product was ineffective. This is because the exception is based on the fact that the drug's benefit appears to outweigh its risk. See note 18 supra. If the manufacturer should have known that his product had no benefit, he is not entitled to avail himself of the Restatement exception. This results in the manufacturer's liability under strict liability, and probably warranty, even if he did not know of his product's danger. Interview with Herbert Kolsby, in Philadelphia (Aug. 17, 1977). Since studies in the early 1950's raised serious questions about the efficacy of DES, see note 2 supra, this theory would result in much earlier liability for the DES manufacturers. See also Reyes v. Wyeth Laboratories, 498 F.2d 1264, 1273-74 (5th Cir.), cert. denied, 419 U.S. 1096 (1974); Keeton, Products Liability -- Drugs and Cosmetics, 25 Vand. L. Rev. 131, 141-43 (1972).

26. See note 23 supra. The time lapse has resulted in the destruction of doctors' records of DES prescriptions. M. Dixon, supra note 2, § 11.27.

27. In general, for any cause of action in products liability, it is required that the defendant be identified as responsible for the product which caused injury. The named manufacturer must actually have made the product in question. E.g., O'Donnell v. Geneva Metal Wheel Co., 183 F.2d 733, 738 (6th Cir. 1950), cert. denied, 341 U.S. 903 (1951); Wetzel v. Eaton Corp., 62 F.R.D. 22, 28 (D. Minn. 1973); Thompson-Hayward Chem Co. v. Childress, 277 Ala. 285, 289, 169 So. 2d 305, 309 (1964); McDonough v. General Motors Corp., 6 Mich. App. 239, 148 N.W.2d 911 (1967); Rockett v. Pepsi Cola Bottling Co., 450 S.W.2d 737 (Mo. Ct. App. 1970); 63 Am. Jur. 2d Products Liability § 5 (2d ed. 1972); Annot., 51 A.L.R.3d 1344 (1973); 1 R. Hursh & H. Bailey, American Law of Products Liability § 1:41 (2d ed. 1974). The requirement that the manufacturer be identified is actually a specific instance of the general legal requirement that the defendant be the cause-in-fact of the plaintiff's injury. Therefore, it may be obviated under certain circumstances. See notes 30-32 infra and accompanying text.

28. E.g., Rheingold v. E.R. Squibb & Sons, Inc., No. 74 Civil 3420 (CHT) (S.D.N.Y. Oct.

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plaintiffs have joined as many as ninety-four DES manufacturers as defendants,<sup>29</sup> alleging joint and several liability. According to the existing law of joint tortfeasors, there are two possible theories which plaintiffs may utilize in order to solve the cause-in-fact problems posed by the DES cases. Under the first theory, plaintiff must prove that the defendants engaged in a concerted action.<sup>30</sup> Thus, each manufacturer becomes a cause-in-fact of each plaintiff's injury and the need to identify a particular manufacturer as defendant is obviated. Joint and several liability results. The second theory is alternative liability<sup>31</sup> as exemplified by Summers v. Tice,<sup>32</sup> in which all the defendants had behaved tortiously but only one had caused the plaintiff's injury. Under this approach, joinder of all tortfeasors shifts the burden of proof on the issue of causation from plaintiffs to defendants. Since defendants in the DES cases are as unable as plaintiffs to identify a particular manufacturer as the one who marketed the drug directly responsible for plaintiff's injury, this second theory also effectively results in joint and several liability. It should be noted that under either theory, the court must make a further determination of proximate cause: does the defendants' duty to protect the plaintiff extend to the particular result involved?<sup>33</sup> As a matter of policy, a court may refuse to hold defendants jointly liable where to do so would impose an extraordinary extension of the "original obligation"<sup>34</sup> owed by defendants to the plaintiff. Since neither concert nor alternative liability has ever been applied to a

14, 1975); Fields v. Eli Lilly & Co., No. C 122248 (Cal. Super. Ct. Dec. 1977) (motions for summary judgment granted with respect to most defendants); Rogers v. Abbott Labs., No. 61220 (Cal. Super. Ct. 1977) (case dismissed with respect to most defendants); Sindell v. Boyle Drug Co., No. C 169127 (Cal. Super. Ct. 1977) (case dismissed with respect to most defendants); Abel v. Eli Lilly & Co., No. 74-030-070 NP (Mich. Cir. Ct. May 16, 1977) (defendants' motion for partial summary judgment granted); Tigue v. E.R. Squibb & Sons, Inc., No. 3838/76 (N.Y. Sup. Ct., filed Mar. 1976) (for change in caption, see note 13 supra); Kaufman v. Eli Lilly & Co., No. 21234/76 (N.Y. Sup. Ct., filed 1976); Krieger v. Eli Lilly & Co., No. 21235/76 (N.Y. Sup. Ct., filed 1976); Stack v. E.R. Squibb & Sons, No. GD 77-05944 (Pa. Ct. C.P. June 30, 1977) (class action stricken). In all suits listed above involving multiple defendants, where the courts have considered motions by the defendants for dismissal or summary judgment based on the plaintiff's inability to identify the injury producing drug, see note 27 supra, the lower courts have refused to recognize a cause of action and plaintiffs are appealing, see Fields v. Eli Lilly & Co., No. C 122248 (Cal. Super. Ct. Dec. 1977) (motions for summary judgment granted with respect to most defendants); Rogers v. Abbott Labs., No. 61220 (Cal. Super. Ct. 1977) (case dismissed with respect to most defendants); Sindell v. Boyle Drug Co., No. C 169127 (Cal. Super. Ct. 1977) (case dismissed with respect to most defendants); Abel v. Eli Lilly & Co., No. 74-030-070 NP (Mich. Cir. Ct. May 16, 1977) (defendants' motion for partial summary judgment granted).

29. E.g., Wood v. Abbot Laboratories, No. 76-1312 (E.D. Pa., filed 1976); see note 3 supra. Other suits with multiple defendants joined far fewer defendants. E.g., Rheingold v. E.R. Squibb & Sons, Inc., 74 Civil 3420 (CHT) (S.D.N.Y. Oct. 14, 1975) (15 corporate defendants); Tigue v. E.R. Squibb & Sons., Inc., No. 3838/76 (N.Y. Sup. Ct., filed Mar. 1976) (19 corporate defendants as of Dec. 1977) (for change in caption, see note 13 supra).

30. See pt. III(A) infra.

31. See pt. III(B) infra.

32. 33 Cal. 2d 80, 199 P.2d 1 (1948), discussed at notes 120-127 infra and accompanying text.

33. W. Prosser, supra note 18, § 42, at 244.

34. Id.

factual pattern with the complex characteristics of the DES cases, this Comment will examine the logic, policy, and practice of these theories as they relate to DES. It will suggest that joint and several liability might be found under either theory, but it will also propose and define a third theory, that of "enterprise liability,"<sup>35</sup> as the best solution to the causation problems of DES.

Enterprise liability is a hybrid theory, with characteristics derived from alternative liability and concert of action, although it is based primarily on the first of these. In the process of fusion, both theories have been modified to enable plaintiffs to plead and prove their case more easily, and also to protect defendants. Under enterprise liability, the plaintiff must prove there is a high probability that her injury was caused by the tortious behavior of some one of the defendants—a modification of alternative liability. In addition, she must show that defendants concertedly adhered to a dangerous, industrywide safety standard in their manufacture of the injury-producing product. Evidence of these two elements will shift the burden of proof on causation to the defendants.

Enterprise liability would impose joint and several liability in a situation which occurs with increasing frequency in our highly industrialized society. Fungible products with delayed and dangerous effects cause injury, but the instrumentality and agent producing the specific injury are unidentifiable.<sup>36</sup>

36. A large number of cases involving injuries caused by asbestos exposure have been filed. E.g., Ferris v. Johns-Manville Corp., No. 77-639 (E.D. Va., filed Oct. 13, 1977); see N.Y. Times, Jan. 30, 1977, at 34, col. 1 (widow of sheet metal worker suing 17 asbestos companies). Only a few have been litigated. E.g., Karjala v. Johns-Manville Prods. Corp., 523 F.2d 155 (8th Cir. 1975); Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076 (5th Cir. 1973), cert. denied, 419 U.S. 869 (1974). Many of these actions present the same identification problem posed by the DES suits. Asbestos containing products are used in thermal insulation. The workmen in the building trades exposed to such products may, after a long latency period, develop asbestosis, mesothelioma, or lung cancer, all of which may be fatal. There are hundreds of distributors of asbestos products, of which approximately 12 to 15 are the major manufacturers. Several thousand plaintiffs have instituted hundreds of suits for injury from asbestos products in state and federal courts nationwide, although predominantly on the east coast. Some of these are class action suits. Since the employers or companies using asbestos products may obtain them from more than one manufacturer, and workers may have moved from one job in the building trade to another, the plaintiffs have frequently been multiply exposed and often have difficulty identifying the manufacturers of the injury-producing products to which they were exposed. Consequently, some of the asbestos suits initially joined as many as 45 defendants, although the number is now being narrowed. Telephone interview with Gene Locks, attorney for a substantial number of plaintiffs in asbestos cases (Feb. 7, 1978). It must be assumed that plaintiffs' theories of liability will be similar to those proposed in the DES cases. See note 136 infra.

The inability to identify a source of injury has also been the subject of comment in connection with suits for environmental pollution. See Katz, The Function of Tort Liability in Technology

<sup>35.</sup> The term is derived from its usage in Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 376-78 (E.D.N.Y. 1972). The same term is being used loosely by attorneys in the DES cases to denote any theory derived from *Hall* under which plaintiffs who cannot identify the manufacturer of the injury-producing product may join all the manufacturers of DES. For a discussion of the enterprise liability theory proposed in this Comment, see pt. IV *infra*.

Although the theory extends liability and is proposed at a time when insurers are lobbying to decrease the responsibility of manufacturers to the consumer,<sup>37</sup> it is suggested as an equitable, legally and economically sound method of joint liability. The DES cases are proposed as the first instance for its application.

#### II. THE DRUG INDUSTRY

In order to understand the factual, legal, and policy issues of the DES cases, some understanding of the nature of the drug industry and its production of DES is required. The drug industry is one of both high profits and high returns. Between 1961 and 1971, it ranked either first or second annually among the major industries in return on both stockholders' equity and sales.<sup>38</sup> During the late 1960's and early 1970's, the industry's profits rose annually by approximately 14%. This has recently dropped to 10%, which has been acknowledged by an industry spokesman to be a satisfactory level.<sup>39</sup> Seventeen drug companies, a number of them defendants in DES actions, appeared on the 1976 Fortune 500 list of the largest industrial corporations in the United States, ranked by sales.<sup>40</sup> In a 1972 report to Congress, it was emphasized that the drug industry was "practically unique" in that "[l]osses, or even low profits, are practically unheard of among large drug companies."41 Although the pharmaceutical manufacturers justify their profits by the extreme risk inherent in the development of new drugs,<sup>42</sup> critics have recognized an inherent contradiction in the coexistence of high risks and

37. See Insurance Information Institute, The Product Liability Problem: Proposals for Solutions Through Tort Reform (1977) (pamphlet available from the Institute, 110 William St., N.Y., N.Y.). The Institute suggests legislative changes in the following areas, among others: statutes of limitation, awards for "pain and suffering," punitive damages, and contingency fees.

38. Senate Subcomm. on Monopoly, Select Comm. on Small Business, Competitive Problems in the Drug Industry, 92d Cong., 2d Sess. 33-34 (Comm. Print 1972) [hereinafter cited as Senate Report].

42. Id. at 32.

Assessment, 38 U. Cin. L. Rev. 587, 616-20 (1969); Rheingold, Civil Cause of Action for Lung Damage Due to Pollution of Urban Atmosphere, 33 Brooklyn L. Rev. 17, 30-32 (1966). The problem becomes most severe when the environmental agent is a carcinogen, because of the approximately 15- to 40-year latency period for the development of cancer after exposure. See Environmental Carcinogenesis, supra note 2, at 94-97, 107-12. The recent discovery that a number of different pesticides are carcinogenic exemplifies a situation in which future lawsuits could develop with the same problem as the DES suits. Since these pesticides have been in widespread use, and since growers of agricultural products may use more than one pesticide, if consumers of such products are affected, it will be impossible for them to identify the injuryproducing product. See N.Y. Times, Dec. 13, 1977, at 1, col. 4; N.Y. Times, Sept. 11, 1977, at 1, col. 2.

<sup>39.</sup> Bus. Week, Jan. 17, 1977, at 80.

<sup>40.</sup> Fortune, May 1977, at 364-91.

<sup>41.</sup> Senate Report, supra note 38, at 33 (quoting Dr. Mueller, then Chief Economist to the Federal Trade Commission).

consistently high, industrywide profits.<sup>43</sup> Such risks would result in at least "occasional losses" to some firms.<sup>44</sup>

Parallel practices provide a basis for charges of concert in the drug industry. Parallel practices are demonstrated in a unique feature of drug companies, known as the "me-too"<sup>45</sup> practice. Once a manufacturer has issued a drug, other companies may foresee a significant potential market for this product and wish to manufacture the same drug. If they are unable to do so without violating a patent and are also unable to obtain a licensing arrangement, they often spend considerable research money to develop a drug which varies only insignificantly from the original product. This can then be marketed without invading the original patent.<sup>46</sup> The result is a proliferation of trade names with one basic product.<sup>47</sup> Furthermore, a single defect in the original drug may be common to all similar products subsequently manufactured, regardless of brand name.<sup>48</sup>

This parallel pattern is evident in the manufacture of DES. Since DES was unpatented by its inventor and potentially useful for the treatment of a variety of estrogen problems in women, in 1941 twelve drug companies submitted a joint clinical file to the FDA pursuant to their request for New Drug Applications (N.D.A.'s) for DES. These twelve companies also agreed on common chemical standards for the drug to be manufactured by each of them, and on uniform labeling and product literature. The purposes for which the drug was approved in 1941 did not include its subsequent use for the prevention of miscarriages.<sup>49</sup> Commencing in 1947 and during a short period of time thereafter, new individual N.D.A.'s for the use of DES by pregnant women were submitted by these companies and others, and approved by the FDA.<sup>50</sup> Subsequently, other, generically differentiated drugs with the same danger as DES if used during pregnancy were developed and manufactured by still other drug companies to take advantage of the growing market.<sup>51</sup> Although the parties to the DES suits hotly dispute the significance of the 1941 joint file and agreement, especially since DES was not being submitted to the FDA for use by pregnant women at that time, plaintiffs have cited these events in charging defendants with concert of action.<sup>52</sup>

Other special features of the drug industry deserve attention both because

- 47. Senate Report, supra note 38, at 41-42.
- 48. M. Dixon, supra note 2, § 6.03.

49. Abel, Defendants' Brief, supra note 1, at 44-48; Abel, Plaintiffs' Brief, supra note 17, at 2-4. Although the accounts by the two sides in Abel of the events in 1941 differ in some details, and in the emphases placed on certain of these events, the basic occurrences are not disputed.

50. Abel, Defendants' Brief, supra note 1, at 4; Abel, Plaintiffs' Brief, supra note 17, at 6. 51. Abel, Defendants' Brief, supra note 1, at 4; Abel, Plaintiffs' Brief, supra note 17, at 9. A list combining generic and brand names mentions 78 DES-type drugs. Questions, supra note 7, at 10-11.

<sup>43.</sup> Id. at 35.

<sup>44.</sup> Id.

<sup>45.</sup> M. Dixon, supra note 2, § 5.05[10].

<sup>46.</sup> Id. § 6.03; Senate Report, supra note 38, at 5.

<sup>52.</sup> E.g., Abel, Plaintiffs' Brief, supra note 17, at 2-14.

they aid in understanding the general background of the DES cases and because they also create suspicions of concerted action among industry members. Two such features are monopoly and pricing patterns. Despite the several hundred manufacturers of DES and related drugs, it has been estimated that Eli Lilly & Co. and five or six other manufacturers accounted for 90% of the market for this drug.53 This situation is not unique to DES; the pharmaceutical industry has been investigated by the Senate for its monopolistic practices<sup>54</sup> and has been the subject of major antitrust suits.<sup>55</sup> The drug industry consists of a series of product markets, each defined by a group of competitive, or substitutable, drugs. High barriers to market entry favor the large companies which can spend the most on promotion, and those which have a patent or are first to develop and advertise a drug. Although many firms may participate in a certain product market, a small number of the same companies tend to dominate each market.<sup>56</sup> It has been reported that "[i]n a group of twenty such markets, the proportion of output accounted for by the leading five firms ranged from 56 percent to 98 percent."57

Drugs produced by the dominant companies within a given market are generally not price competitive with each other, and frequently cost many times more than the competing brands of lesser known firms with a far smaller share of the market.<sup>58</sup> This is probably due to the lack of buyer participation in the creation of demand for a given product. The doctor, not the consumer, determines when a particular type of drug is required, and then specifies in his prescription the brand to be purchased.<sup>59</sup> Since the primary medical criteria for drug use are safety and efficacy rather than price,<sup>60</sup> and since the major source of drug information is the manufacturers themselves rather than objective sources,<sup>61</sup> industry members spend enormous amounts

53. B. Seaman, supra note 7, at 33. Lilly is estimated to have been the largest producer of DES. Id.

54. See Senate Report, supra note 38.

55. The antibiotics class actions have been the largest and lengthiest of such suits. These began with a Federal Trade Commission (FTC) investigation in 1951, and proceeded through the Kefauver Committee investigation, FTC findings of patent fraud, criminal proceedings resulting in eventual acquittal, and finally civil class actions. Charges at various times, in addition to patent fraud, included price fixing and monopoly. Wolfram, *The Antibiotics Class Actions*, 1976 Am. B. Foundation Research J. 253 (history of cases through 1975).

56. Senate Report, supra note 38, at 27-30.

57. Id. at 30.

58. Id. at 11-23.

59. Id. at 3. However, the extent to which doctors affect the market for a particular brand may be lessened as laws are passed allowing doctors to prescribe generically, and pharmacists to substitute generically equivalent drugs for those prescribed by brand. See N.Y. Times, June 9, 1977, at 30, col. 1 (editorial urging passage of New York state legislation requiring generic prescriptions). By 1977, over 25 states had repealed laws requiring prescription by brand name. Id.

60. Senate Report, supra note 38, at 3.

61. The manufacturers supply drug information primarily through advertisements in medical journals and the use of "detail men," who personally contact doctors to promote the use of specific

of money in order to influence the doctor's choice of a drug.<sup>62</sup> The result is wide variations in the prices of the same drug produced by different manufacturers, and very little relationship between cost and price.<sup>63</sup> The fact that the dominant drug in a product market may also be the one with the highest price raises questions of concert. The defensive reaction of many members of the drug industry when asked to explain this phenomenon to government investigators does nothing to alleviate this suspicion.<sup>64</sup> Although price is not a major factor in a doctor's choice of a drug, one would expect it to carry some weight where all other factors are equal. Nevertheless, those manufacturers who make a cheaper equivalent product do not generally alert doctors to this fact.<sup>65</sup> It seems entirely possible that this indicates an exchange of favors by major members of the drug industry, allowing each to continue to dominate certain product markets without interference.

Another indication of cooperation within the drug industry is its wellfinanced trade association, the Pharmaceutical Manufacturer's Association (PMA). It has been a strong lobbyist with legislative groups, the American Medical Association, and the FDA.<sup>66</sup> An organization which appears to have been a predecessor of the PMA, The American Drug Manufacturers Association, was instrumental in arranging the 1941 joint clinical submission for DES to the FDA.<sup>67</sup>

#### III. CONCERT OF ACTION AND ALTERNATIVE LIABILITY

#### A. Concert

Concert of action is one of the two theories under which plaintiffs may be able to obtain joint and several liability in the DES suits.<sup>68</sup> The typical

drugs. *Id.* at 54-59. Even the Physicians' Desk Reference, widely relied on by doctors when prescribing drugs, is subsidized by the firms that buy advertising space in it. *Id.* at 56.

62. In the early 1970's, the drug industry reported spending one billion dollars per year on advertising. It used 20,000 detail men, whose salaries totalled 700 million dollars. Its average expenditure for each physician in the United States was \$5000. M. Dixon, *supra* note 2, § 6.10[2].

63. Senate Report, supra note 38, at 22-23.

64. Id. at 11-15.

65. Id. at 3-4. The Senate Committee, in its analysis of the information supplied to doctors, concluded that "[p]hysicians need comparative drug and drug product information, including relative price data, if they are to function as fully informed prescription drug purchasing agents for their patients. The evidence indicates that, at present, they do not receive this information in a useable form." *Id.* at 58.

66. M. Dixon, *supra* note 2, § 6.01. The PMA and FDA have been criticized for the apparent strength of their relationship, including the number of FDA personnel who have been employed by the industry before or after their FDA tenure. Id.

67. See Abel, Plaintiffs' Brief, supra note 17, at 2-3, apps. 2-4.

68. There are generally considered to be four situations in tort law in which joint and several liability is imposed. Only one of these, concert, is directly applicable to the DES cases. The second, vicarious liability, includes master-servant and principal-agent relationships and is clearly irrelevant. The third encompasses instances in which the defendants are under a common duty to the plaintiff. *E.g.*, Corcoran v. Banner Super Mkt., Inc., 19 N.Y.2d 425, 227 N.E.2d 304, 280 N.Y.S.2d 385 (1967), modified on other grounds, 21 N.Y.2d 793, 235 N.E.2d 455, 288 N.Y.S.2d

concert of action case is that of the illegal drag race in which a bystander is injured by one of the participants. Assume A, B, and C participate in such a race and P, a bystander, is injured by A's car. P may sue A or B or C or any combination thereof, and each of the three is jointly and severally liable for P's injury. P need only allege that each defendant he has joined helped plan and facilitate the race, that the participation of each was tortious, and that his injury resulted from the race.<sup>69</sup> A plan or unspoken agreement may be inferred from the parallel actions of A, B, and C.<sup>70</sup>

Although the legal theory of concert seems to have evolved in order to deter hazardous group behavior rather than because the actual injury-producing party could not be identified,<sup>71</sup> the theory must deal with the problem of causation. Where A, according to commonsense notions of causation, was the only cause-in-fact of P's injury, some justification must be found for also holding B and C as causative agents. It has been suggested that "the act of one is the act of all,"<sup>72</sup> that is, that B and C are vicariously liable for A's act.<sup>73</sup> Another view theorizes that the causative tortious event was the car race itself in which all three parties participated, rather than A's collision with P.<sup>74</sup> Both

484 (1968) (joint and several liability applied to each of the two building owners for falling board affixed to both buildings). These cases presuppose one duty shared by the defendants and thus a closer bond among defendants than exists in the DES cases.

The fourth situation is where the concurring acts of independently acting tortfeasors unite to produce an indivisible injury. Although, at first glance, this theory appears to apply to the DES cases, see notes 135-41 infra and accompanying text, this is not the case since the tortfeasors' acts concurred at the point of producing and marketing DES and not at the point of injury. But cf. Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 379 (E.D.N.Y. 1972) (in case similar to DES, this difference is noted but apparently presented no difficulty). Only to the extent that Summers v. Tice, 33 Cal. 2d 80, 199 P.2d 1 (1948), see pt. III(B) infra, is considered a special instance of these indivisible injury cases, can this fourth theory of joint and several liability be directly applied to the DES cases. See 1 F. Harper & F. James, The Law of Torts § 10.1, at 702-04 (1956). For discussion of these four forms of joint and several liability, see generally id. § 10.1; W. Prosser, supra note 18, § 52, at 314-17.

69. See 1 F. Harper & F. James, supra note 68, § 10.1, at 698-99; W. Prosser, supra note 18, § 46; Restatement of Torts § 876 (1939). The minimal requirements for participation in concerted wrongdoing have been stated as follows: "All those who, in pursuance of a common plan or design to commit a tortious act, actively take part in it, or further it by cooperation or request, or who lend aid or encouragement to the wrongdoer, or ratify and adopt his acts done for their benefit, are equally liable with him." W. Prosser, supra § 46, at 292 (footnotes omitted).

70. E.g., Bierczynski v. Rogers, 239 A.2d 218, 221 (Del. 1968) (inference from cars racing side by side at twice the legal speed); Skroh v. Newby, 237 So. 2d 548 (Fla. Dist. Ct. App. 1970) (inference from cars staying together at 90 m.p.h.); see W. Prosser, supra note 18, § 46, at 292.

71. In none of the cases applying concert to find liability, with the exception of Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353 (E.D.N.Y. 1972), and the hunters cases cited in Summers v. Tice, 33 Cal. 2d 80, 84, 199 P.2d 1, 3 (1948), did identification present any problem.

72. W. Prosser, *supra* note 18, § 46, at 291 (quoting Sir John Heydon's Case, 11 Co. Rep. 5, 77 Eng. Rep. 1150 (1613)).

73. Id.

74. "The primary negligence involved is the race itself." Boykin v. Bennett, 253 N.C. 725,

explanations of cause-in-fact seem to be based on a fiction. Vicarious liability is necessarily a fiction. Under the second view, whenever there are more than two participants in the concerted action, the "but for" definition of cause-infact<sup>75</sup> is fictional as to the liability of some of the participants for the concerted action. For example, if C had not participated in the race at all, A and B might still have raced and injured P. Thus it is not true that, "but for" C's action, P would not have been hurt. However, this second justification for finding that each party to a concerted action is a cause-in-fact of the result seems clearly defensible when based on Prosser's preferred definition of cause-in-fact as "a material element and a substantial factor" in plaintiff's injury.<sup>76</sup> Under this rationale, the fiction is eliminated since each of the three participants contributed materially to the occurrence of the race, although it might have taken place even if one were absent.

An obvious analogy exists between the drag race and the manufacture of DES. Arguably, the drug industry pattern, where the first manufacturers of a product achieve dominance, could have motivated the decision of the original manufacturers to pool their data and rush into production without adequate testing. If they knew, or should have known, that this created the risk of an unreasonably dangerous product, their original cooperative behavior was tortious.<sup>77</sup> It can be argued that the later FDA approval of DES for use in pregnancy depended on this earlier joint submission of clinical data. Parallel, imitative practices among many of the manufacturers of DES, as well as actual agreement in some cases, resulted in uniform cautions, lists of contraindications and dosage schedules, and reliance on the same dubious scientific articles in promotional materials. The "me-too" practice in the drug industry increased the manufacture of DES and the consequent wide publicity and use of this drug.78 Thus each individual plaintiff's injuries resulted from the tortious, concerted activities of all DES manufacturers, just as P's injury resulted from the drag race in which A, B, and C participated. Since each DES manufacturer is a "substantial factor" causing each plaintiff's injuries, he is jointly and severally liable regardless of whether he manufactured the particular drug which the plaintiff's mother ingested.

Questions arise in the application of concert of action to the DES cases. One is whether concert, generally used in cases where individual tortfeasors participate in car races or assaults,<sup>79</sup> can be extended beyond a simple tort

76. Id. at 240; cf. Green, The Causal Relation Issue in Negligence Law, 60 Mich. L. Rev. 543, 548-61 (1962) (test of cause-in-fact is whether defendant's conduct contributed to victim's injury). This proposition has been judicially accepted. W. Prosser, supra note 18, § 41, at 240 & nn. 26, 27.

- 78. See notes 45-52 supra and accompanying text.
- 79. Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 372 (E.D.N.Y. 1972); see 6

<sup>731, 118</sup> S.E.2d 12, 17 (1961); cf. Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 372 (E.D.N.Y. 1972) (emphasizing "joint control of risk").

<sup>75. &</sup>quot;[T]he 'but for' or 'sine qua non' rule . . . may be stated as follows: The defendant's conduct is not a cause of the event, if the event would have occurred without it." W. Prosser, *supra* note 18, § 41, at 238-39 (footnote omitted).

<sup>77.</sup> See note 18 supra and accompanying text.

situation to one as complex as cooperation among modern industrial organizations. Given sufficient evidence of cooperation, concert should be as applicable to corporate activities as to individual activity. Courts have shown a willingness to apply it in such situations.

Hall v. E.I. Du Pont De Nemours &  $Co.^{80}$  is the major case involving corporate defendants where concert has been applied. One of the two cases consolidated in Hall<sup>81</sup> involved twelve separate accidents in which thirteen children were injured by dynamite blasting caps.<sup>82</sup> The evidence of individual manufacture was destroyed by the explosions.<sup>83</sup> Plaintiffs joined the six major domestic manufacturers of blasting caps and the industry's trade association, alleging that all the defendants knew that blasting caps were dangerous and agreed not to place warnings on them.<sup>84</sup> The court held that defendants were not entitled to a dismissal for plaintiffs' failure to state a claim since plaintiffs were pleading concert of action.<sup>85</sup> Thus, plaintiffs were not required to allege either a conspiracy to commit intentional harm or a joint venture.<sup>86</sup> Hall is parallel to the DES cases not only because the defendants were corporate entities comprising virtually an entire industry,<sup>87</sup> but also because concert was used not to deter manufacturers of blasting caps but exclusively to cure plaintiff's inability to identify the particular defendant whose product caused the injury. The court's awareness of its unusual use of concert was demonstrated by its additional requirement that the burden of proof of causation be shifted to defendants.<sup>88</sup> Ordinarily plaintiff's showing that each defendant joined in the concerted action would be sufficient to show that each was a cause and since proof of causation would be satisfied, there would be no need to shift this burden to defendants.<sup>89</sup> The court's purpose in allowing the use of the concert theory becomes even clearer in light of the other case<sup>90</sup> consolidated in Hall. In that case, plaintiffs were able to identify the manufacturers of the injury-producing caps. Thus, the court refused to allow a plea of concert

Am. Jur. 2d Assault and Battery §§ 127-30 (1963 & Supp. 1977) (collecting assault cases in which joint liability imposed); Annot., 13 A.L.R.3d 431 (1967 & Supp. 1977) (collecting car racing cases in which joint liability imposed on participants not directly responsible for injury).

80. 345 F. Supp. 353 (E.D.N.Y. 1972).

81. Chance v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353 (E.D.N.Y. 1972).

82. Id. at 359.

- 83. Id. at 378.
- 84. Id. at 359.
- 85. Id. at 386.

86. Id. at 372-74. While the term "conspiracy" is sometimes used in concert cases, it is unnecessary and inaccurate since conspiracy or agreement alone is insufficient for a tort. For concert, there must be an understanding among the defendants, and a tortious act by one of them. W. Prosser, *supra* note 18, § 47, at 293; *see* F. Harper & F. James, *supra* note 68, § 10.1, at 699. The other participants must be more than mere spectators. W. Prosser, *supra* § 47, at 292. For the minimal requirements for participants, see note 69 *supra*.

87. 345 F. Supp. at 358.

88. Id. at 378-80. For a further discussion of Hall's combination of concert and a shift in the burden of proof of causation, see notes 197-202 infra and accompanying text.

89. See W. Prosser, supra note 18, § 46.

90. Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353 (E.D.N.Y. 1972).

and the joinder as defendants of those manufacturers whose products had not injured each of the plaintiffs.<sup>91</sup>

A group of California cases<sup>92</sup> are noteworthy for extending liability to corporate defendants who, although not previously considered causes-in-fact of injury, were found liable because of the degree of their cooperation with the traditionally liable party. In each of these cases, while the court did not explicitly refer to concert, the language of the opinion indicated that the corporation's liability was based on a theory of concert of action. In *Connor v. Great Western Savings & Loan Association*,<sup>93</sup> liability was extended to a bank-lender where the loan recipient negligently designed and constructed homes. A joint venture was not found because the bank and the builder did not share profits and losses. However, the bank had a right to approve building plans, received first rights on construction loans to home buyers, and knew that the developer was dangerously underfinanced. It thus had a duty to the buyers although it was not in privity of contract with them.<sup>94</sup> The bank was found liable because "Great Western became much more than a lender . . . It became an active participant in a home construction enterprise."<sup>95</sup>

In Hanberry v. Hearst Corp., <sup>96</sup> the endorser of a defective product was held liable in negligence, although it had nothing to do with the product's manufacture. Good Housekeeping, by giving the product its seal of approval, had "voluntarily involved itself into the marketing process, having in effect loaned its reputation to promote and induce the sale of a given product  $\dots$ ."<sup>97</sup> In the third of these cases, Kasel v. Remington Arms Co.,<sup>98</sup> a trademark licensor was held strictly liable in tort for a defective shotgun shell actually manufactured by a Mexican affiliate. Although Remington was not the majority owner of the Mexican company's stock, Remington had a right of inspection and quality control of the product, its trademark and name were used on the package, and it received royalty payments and a percentage of net sales.<sup>99</sup> The court found controlling "defendant's participatory connection, for his personal profit or other benefit, with the injury-producing product and with the enterprise that created consumer demand for and reliance upon the product  $\dots$ ."<sup>100</sup>

91. Id. at 382-84. "A 'novel or boundary line' principle . . . , particularly where it requires courts and litigants to assume heavy burdens, need not be extended to situations where traditional remedies are perfectly satisfactory." Id. at 383 (source of quotation omitted).

92. Connor v. Great Western Sav. & Loan Ass'n, 69 Cal. 2d 850, 447 P.2d 609, 73 Cal. Rptr. 369 (1968); Kasel v. Remington Arms Co., 24 Cal. App. 3d 711, 101 Cal. Rptr. 314 (1972); Hanberry v. Hearst Corp., 276 Cal. App. 2d 680, 81 Cal. Rptr. 519 (1969).

93. 69 Cal. 2d 850, 447 P.2d 609, 73 Cal. Rptr. 369 (1968), discussed in Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 373 (E.D.N.Y. 1972).

- 95. Id. at 864, 447 P.2d at 616, 73 Cal. Rptr. at 376.
- 96. 276 Cal. App. 2d 680, 81 Cal. Rptr. 519 (1969).
- 97. Id. at 684, 81 Cal. Rptr. at 522.

- 99. Id. at 717-19, 101 Cal. Rptr. at 318.
- 100. Id. at 725, 101 Cal. Rptr. at 323.

<sup>94.</sup> Id. at 860-66, 447 P.2d at 613-17, 73 Cal. Rptr. at 373-77.

<sup>98. 24</sup> Cal. App. 3d 711, 101 Cal. Rptr. 314 (1972).

Another problem in the application of concert to the DES cases is evidentiary: what is sufficient evidence of concert absent explicit agreement? While discovery in the DES cases is not complete, the principal evidence of explicit agreement thus far is that of the twelve original manufacturers who jointly submitted clinical data to the FDA in 1941. With respect to subsequent activity and manufacturers other than these twelve, evidence consists of parallel activity and the cooperative nature of the industry. While concert does not require conspiracy or even an inferred agreement, but only an unspoken "tacit understanding,"101 it is easier to infer such an understanding between two cars racing side-by-side at ninety miles an hour<sup>102</sup> than among a number of drug manufacturers behaving in similar fashion. Nevertheless, courts should be willing to allow such an inference where the parallel behavior is knowing, part of a generally cooperative pattern in the industry, and beneficial to the participants, when accompanied by minimal evidence of explicit agreement.<sup>103</sup> Relevant here are antitrust cases based on section 1 of the Sherman Act, which requires a "contract, combination . . . or conspiracy."<sup>104</sup> The Supreme Court has held that in a section 1 case consciously parallel behavior without express agreement is sufficient evidence for a jury determination of conspiracy,<sup>105</sup> although such a determination is not compelled.<sup>106</sup> Generally, lower courts have required some additional evidence of interdependence, beyond that of mere parallelism, to find conspiracy.<sup>107</sup> Such evidence in the DES cases would be the original agreement. The antitrust cases have been cited as precedent in tort cases finding concert on the basis of parallel activity among business enterprises, including competitors, even where there was little additional evidence of contact among the defendants.<sup>108</sup>

101. W. Prosser, supra note 18, § 46, at 292.

104. 15 U.S.C. § 1 (Supp. V 1975).

- 105. Interstate Circuit, Inc. v. United States, 306 U.S. 208, 226-27 (1939).
- 106. Theatre Enterprises, Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537, 541 (1954).
- 107. See ABA, Antitrust Law Developments 36-37 (1975).

108. Schein v. Chasen, 478 F.2d 817, 822 (2d Cir. 1973), vacated sub nom. Lehman Bros. v. Schein, 416 U.S. 386 (1974), on remand sub nom. Schein v. Chasen, 519 F.2d 453 (2d Cir. 1975); Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 374 (E.D.N.Y. 1972). Schein was a shareholders' derivative suit where the defendants were a stock-brokerage firm and mutual fund companies, as well as individuals connected with these firms, to whom confidential information had been leaked, with the result that shares were sold just before their prices fell. The Second Circuit originally found all the defendants liable because, although no explicit agreement existed among them, the sequence of events showed a "common enterprise." 478 F.2d at 822. Florida law

<sup>102.</sup> See note 70 supra.

<sup>103.</sup> See Roberto Hernandez, Inc. v. Arnold Bernstein S., M.B.H., 31 F. Supp. 76 (S.D.N.Y. 1940), rev'd on other grounds, 116 F.2d 849 (2d Cir.), cert. denied sub nom. Compania Espanola de Navegacion Maritima, S.A. v. Roberto Hernandez, Inc., 313 U.S. 582 (1941) (concerted action found among three shipping lines refusing space to plaintiff's products, where evidence was of parallel behavior, benefit to defendant, industry cooperation, and statement by one defendant and one telegram from trade association); Firemen's Ins. Co. v. Jones, 245 Ark. 179, 431 S.W.2d 728 (1968) (insurance company liable for fraud although actual misrepresentation made by claims service, where cooperation was assumed from benefit to insurance company and one telephone call between them).

Another possible approach to insufficient evidence of an explicit agreement is suggested in dicta by the court in *Hall*. There it was indicated that parallel behavior among competitors might be viewed as a lesser form of concert sufficient to shift the burden of proof on the issue of causation to defendants.<sup>109</sup> Under one of these approaches, it is arguable that the minimal evidence of agreement in DES.manufacturing history plus parallel activity is sufficient to have the DES cases submitted to a jury.

Another problem is that, unlike the DES cases, most instances of concert involve few defendants and the causative action occurs at the same time and place.<sup>110</sup> However, these characteristics do not appear necessary to the legal theory of concert and have probably occurred coincidentally, because of the simple nature of the tortious activities in most such cases. Nor have they invariably appeared. An assault suit in which concert was found involved the participation of seventy-five to eighty men.<sup>111</sup> In *Hall*, the activities of defendants took place over a decade,<sup>112</sup> on a nationwide basis.<sup>113</sup>

A final problem in the application of concert to the DES cases is that, where plaintiffs join fewer defendants than the total number of DES manufacturers, they are subject to the charge of arbitrary and inequitable selection of responsible parties. Plaintiffs may prefer to join fewer than all DES manufacturers, because of cost or general impracticability. In most cases they will be forced to join fewer than all manufacturers. Some manufacturers may not be subject to the court's jurisdiction; some may have gone out of business;<sup>114</sup> and the plaintiffs will be forced to omit others because they cannot ascertain who all the DES manufacturers were.<sup>115</sup> There are three responses to the charge of inequitable selection of defendants. First, the defendants themselves can implead further manufacturers. Second, under the theory of concert each participant is equally liable for the total damages and

governed, but since that law was unclear, the court reached its decision by applying and extending New York precedent. *Id.* at 821. Subsequently, the Supreme Court vacated this decision so that the Second Circuit could decide if the legal questions should be certified to the Florida court. 416 U.S. at 391-92. Florida held it would not decide the issue as the Second Circuit had. Hence, on remand, the Second Circuit affirmed the district court decision which it had originally reversed. 519 F.2d at 454. Consequently, the original Second Circuit decision is only demonstrative of what this circuit would hold if it were to decide a similar case under New York law.

109. Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 374 (E.D.N.Y. 1972).

110. This is true in the majority of the car race and assault cases. See note 79 supra.

111. Meints v. Huntington, 276 F. 245, 247 (8th Cir. 1921).

112. 345 F. Supp. at 358.

113. Chance v. E.I. Du Pont De Nemours & Co., 371 F. Supp. 439, 441-42 (E.D.N.Y. 1974). In this further disposition of the case, Judge Weinstein severed the various actions comprised in it. See note 194 *infra*.

114. Some of the original manufacturers are defunct, some have merged with other companies, and some have reorganized and now have other names. Liability of the parent company is not completely clear in some cases of merger or subsequent acquisition. Interview with Henry Simon, counsel in some of the DES litigation for one of the defendant drug companies, in New York City (May 26, 1977).

115. See note 3 supra.

joinder of all possible tortfeasors is not therefore required.<sup>116</sup> Third, if, as appears likely, only six or seven DES manufacturers dominated the market,<sup>117</sup> joinder of only these manufacturers is a selection of the most responsible parties. Not only is one of them most likely to be the manufacturer of the specific drug ingested, but the major manufacturers as a group were the pace setters and decision makers in the manufacture of the drug.

It seems clear that concert could be pleaded in the DES cases in order to arrive at joint and several liability. The most serious problem for plaintiffs, and one which might lead to a directed verdict for defendants, is the possibly inadequate evidence of agreement, or "tacit understanding," among defendants.

## B. Alternative Liability

"[D]ouble fault and alternative liability" is a completely different legal theory which, like concert of action, imposes joint and several liability.<sup>118</sup> This theory has been applied to cases where all defendants are at fault in that all behaved tortiously, but only one unidentifiable defendant caused plaintiff's injury. Since the defendants acted independently, there is no concert of action. In order to solve the problem of causation, once all tortfeasors are joined the courts have shifted the burden of proof of cause-in-fact to defendants. Where defendants cannot meet this burden and absolve themselves, joint and several liability results.<sup>119</sup> This theory is appropriate to the DES cases for two reasons. Unlike concert, where the chief purpose of joint liability is deterrence, this theory evolved in order to relieve a plaintiff of the burden of proving causation where it was inequitable to require him to do so. Secondly, the DES plaintiff is relieved of the evidentiary burden required by concert of showing agreement or "tacit understanding."

Summers v. Tice<sup>120</sup> demonstrates the classic fact pattern of cases relying on a theory of alternative liability. Here, plaintiff's two hunting companions fired their guns simultaneously and negligently in his direction. Only one of them could have fired the shot which injured him, but it was impossible for plaintiff to ascertain which of them had done so. Although concert had been found in similar cases cited as precedent,<sup>121</sup> the court felt a holding of concert was "straining that concept."<sup>122</sup> Instead, it justified its holding of joint and several liability, unless either or both defendants could absolve themselves, on policy grounds: where defendants are all wrongdoers and their negligence has caused a situation in which the innocent plaintiff cannot identify the cause of his injury, fairness dictates that he should not be required to do so or go remediless.<sup>123</sup> In addition, the court pointed out, defendants often have better

- 116. W. Prosser, supra note 18, § 52, at 314-15.
- 117. See note 53 supra and accompanying text.
- 118. W. Prosser, supra note 18, § 41, at 243.

- 120. 33 Cal. 2d 80, 199 P.2d 1 (1948).
- 121. Id. at 84, 199 P.2d at 3.
- 122. Id. at 85, 199 P.2d at 3.
- 123. Id. at 86-87, 199 P.2d at 4-5.

<sup>119.</sup> F. Harper & F. James, supra note 68, § 10.1, at 703-04; W. Prosser, supra note 18, § 41, at 243.

access to evidence of causation than do plaintiffs.<sup>124</sup> Therefore, "[t]he wrongdoers should be left to work out between themselves any apportionment [of damages]."<sup>125</sup> The Restatement (Second) of Torts has codified the *Summers* holding in section 433B(3),<sup>126</sup> offering the same policy reason of fairness.<sup>127</sup>

Analyzed in terms of cause-in-fact, *Summers* and the cases following it<sup>128</sup> create a clearly fictional presumption. If all wrongdoers are joined as defendants, one of them must have been the cause-in-fact of injury. By shifting the burden of proof to them, with the resulting possibility that each will be found liable, the presumption has been created that each is the cause-in-fact,<sup>129</sup> although this is obviously impossible under any definition of causation. Since there is an equal probability of causation by each defendant, even with the smallest possible number of defendants the probability for each is no greater than 50%. However, the presumption can be justified because, since all possible tortfeasors are joined, there is a 100% probability of causation collectively. Since policy reasons favor finding liability,<sup>130</sup> the usual requirement in civil cases of a "preponderance of evidence"<sup>131</sup> for each defendant, here interpreted to mean a mathematical probability,<sup>132</sup> has been lifted in favor of certainty as to all defendants.

- 125. Id. at 88, 199 P.2d at 5.
- 126. Restatement (Second) of Torts § 433B(3) (1965) (Illustration 9 is Summers).
- 127. Id., Comment f.

128. E.g., Bowman v. Redding & Co., 449 F.2d 956, 967-68 (D.C. Cir. 1971); Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 378-80 (E.D.N.Y. 1972); see cases collected in Annot., 5 A.L.R.2d 98 (1949 & Later Case Serv. 1971 & Supp. 1977). It is apparent that only a minority of jurisdictions have followed Summers. See id. A number of courts have recognized the Summers' holding but have distinguished the case they were considering because all tortfeasors were not before the court and/or had not all been proved negligent. See, e.g., Shunk v. Bosworth, 334 F.2d 309, 312 (6th Cir. 1964); Wetzel v. Eaton Corp., 62 F.R.D. 22, 30 (D. Minn. 1973); Eley v. Curzon, 121 Cal. App. 2d 280, 284-85, 263 P.2d 86, 89 (1953). Other cases, however, have extended Summers as precedent, these cases, in fact, apply a theory analogous to that of Summers, using res ipsa loquitur. See notes 142-57 infra and accompanying text. Such cases will be cited in this Comment as examples of the Summers line of cases.

129. True presumptions have been defined as compelling, at the least, a shift of the burden of going forward with the evidence. C. McCormick, Evidence § 342, at 803 (2d ed. E. Cleary 1972). This rule is followed in most jurisdictions, but it has been proposed that presumptions should allocate the burden of persuasion, or of proof, to the party denying the presumed fact. *Id.* § 345. This is the effect given the *Summers* presumption. 33 Cal. 2d at 86, 199 P.2d at 4; Restatement (Second) of Torts § 433B(3) (1965).

130. See notes 123-24 supra and accompanying text.

131. C. McCormick, *supra* note 129, § 339, at 793; 9 J. Wigmore, Evidence § 2498 (3d ed. 1940).

132. Courts are divided on the issue of whether the preponderance of the evidence standard is based on a showing of probability or a subjective standard of belief. It has been suggested that much of this dispute is a quibble over semantics. C. McCormick, *supra* note 129, § 339, at 795. Many commentators believe the standard is one of probability, however it is described, and juries should be so instructed. *See id.*; 1 E. Morgan, Basic Problems of Evidence 24 (1954); Broun &

<sup>124.</sup> Id. at 86, 199 P.2d at 4.

Many of the elements of the Summers fact pattern are present in the DES cases. Defendants' manufacture of dangerous pills for the unwary public can be compared to the hunters shooting in the direction of their companion. In each situation, all defendants are tortfeasors owing a duty of care to the injured plaintiff.<sup>133</sup> In both the DES cases and Summers, the tortious nature of each of the defendants' conduct was identical and created the same type of risk.<sup>134</sup> Neither the plaintiff in Summers hit by a bullet nor the DES daughter who developed cancer is at fault for being unable to identify the one who caused his injury. In both cases the defendants created the conditions which caused the plaintiff's inability to identify—by shooting simultaneously in Summers and by manufacturing a single drug under a variety of trade names in the DES cases.

Although the *Summers* line of cases is the clearest example, arguably two other groups of cases also exemplify alternative liability and should also be compared to the DES cases. In these two groups of cases the burden of going forward with the evidence or of proof as to causation is also shifted to defendants because the plaintiff cannot identify the cause of his injury. In one group, the defendants' independent tortious actions have combined to cause indivisible injury to the plaintiff.<sup>135</sup> The multiple car collision cases are examples of this group.<sup>136</sup> Each of the defendants in such a collision has

Kelly, Playing the Percentages and the Law of Evidence, 1970 U. Ill. L.F. 23, 26-27; cf. McBaine, Burden of Proof: Degrees of Belief, 32 Calif. L. Rev. 242 (1944) (jury should be convinced of required degree of probability). A distinct and highly technical controversy has involved the use of probability theory in the courtroom to identify the defendant as the wrongdoer. For example, where plaintiff was injured by a blue bus and defendant owns four-fifths of the blue buses on that route, is this sufficient evidence to make the defendant liable? See discussion and articles cited in J. Maguire, J. Weinstein, J. Chadbourn & J. Mansfield, Cases and Materials on Evidence 871, n.1 (6th ed. 1973). This issue is distinguishable from the use of probability in Summers and that advocated for the DES cases in this Comment because in Summers and the DES cases probability is not being used to identify the defendants but to apportion damages among them. It is submitted that this is a reasonable application of probability and statistical evidence since in Summers and the DES cases all defendants are tortfeasors, whereas in the case of the blue bus owner, the defendant may be totally innocent. See notes 179-81, 208-11 infra and accompanying text for discussion of apportionment in the DES cases.

133. Note that in Summers, however, defendants breached a duty of care to that particular plaintiff. In the DES cases, defendants breached a duty to the class of which plaintiff is a member. For a discussion of this as merely an enlargement of modern concepts dispensing with privity, see pt. IV(B) *infra*.

134. The Restatement states that these are characteristics of the Summers fact pattern. Restatement (Second) of Torts § 433B, Comment h (1965).

135. 74 Am. Jur. 2d Torts § 62 (1974); 1 F. Harper & F. James, supra note 68, § 10.1, at 701-09; W. Prosser, supra note 18, § 52, at 315-17.

136. See cases collected in Annot., 100 A.L.R.2d 16 (1965 & Later Case Serv. 1976 & Supp. 1977). See also, for application of this theory to a case where the defendants caused cancer, Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076, 1094-96 (5th Cir. 1973), cert. denied, 419 U.S. 869 (1974). In *Borel*, the plaintiff was exposed to the asbestosis-producing products of each of the defendants successively over a period of 33 years. Since it could not be determined which exposure caused his injury, and since it had been proven that the effects of successive exposures

theoretically caused some part of the damage, but the contribution of each is difficult or impossible to apportion. Joint liability is generally found,<sup>137</sup> and under the Restatement<sup>138</sup> and the law of some jurisdictions,<sup>139</sup> the burden of proof is shifted to defendants to limit their liability. The cases justify this joint liability by saying that since all defendants contributed to the plaintiff's injury, he should not be required to go remediless unless he can show the degree to which each defendant contributed and identify the specific injury each caused.<sup>140</sup> Arguably, many of these cases are examples of alternative liability in another guise. For example, one car in a multiple collision might have caused no injury to the plaintiff at all,<sup>141</sup> but if each defendant argued this and the plaintiff were required to prove each one had caused some injury, then all defendants could escape liability. Since this would be inequitable, the courts shift the burden of proof just as they do in *Summers*.

The second group of cases are instances of joint liability in a res ipsa loquitur context. Generally, res ipsa loquitur is used to infer negligence where a single defendant is in exclusive control of the instrumentality causing harm.<sup>142</sup> However, even where there are multiple, independent defendants and only one can be assumed to have caused the plaintiff's injury but he cannot be identified, some courts have used res ipsa loquitur to infer negligence *and causation*. Other courts have shifted the burden of going forward with the evidence and even of proof as to negligence *and causation* to all the defendants, with a finding of joint liability where the defendants cannot meet this burden.<sup>143</sup> In such cases there is obviously no proof of exclusive control.

were cumulative, each defendant was found a cause-in-fact of some of the injury. Id. at 1094. The defendants were held jointly and severally liable, and the burden was shifted to defendants, if they wished to limit their liability, to show what part of the damage each had caused. Id. at 1095. The court expressly refused to limit this rule to situations where the defendants' conduct was simultaneous. Id. at 1095-96.

137. The theories under which liability is found vary. Annot., 100 A.L.R.2d 16, § 2 (1965). Only some jurisdictions offer the justification of concurrent causation and indivisible injury. *Id.* § 9[a].

138. Restatement (Second) of Torts § 433B(2) (1965). This rule is applicable not only to collision cases but to all cases where defendants' actions have combined to cause injury.

139. See, e.g., Lareau v. Southern Pac. Co., 44 Cal. App. 3d 783, 789-92, 118 Cal. Rptr. 837, 840-42 (1975); Murphy v. Taxicabs of Louisville, Inc., 330 S.W.2d 395 (Ky. 1959); Fugere v. Pierce, 5 Wash. App. 592, 597-99, 490 P.2d 132, 135-36 (1971); Annot., 100 A.L.R.2d 16, § 9[a] (1965) (collecting collision cases where burden of proof shifted).

140. "The 'single injury' rule is based on the proposition that it is more desirable, as a matter of policy, for an injured and innocent plaintiff to recover his entire damages jointly and severally from independent tortfeasors, one of whom may have to pay more than his just share, than it is to let two or more wrongdoers escape liability altogether, simply because the plaintiff cannot carry the impossible burden of proving the respective shares of causation or because the tortfeasors have not committed a joint tort." Holtz v. Holder, 101 Ariz. 247, 251, 418 P.2d 584, 588 (1966) (en banc); cf. Summers v. Tice, 33 Cal. 2d 80, 86, 199 P.2d 1, 4 (1948) (similar language).

141. See Cummings v. Kendall, 41 Cal. App. 2d 549, 107 P.2d 282 (1940) (defendants in multiple car collision contend there is no evidence that they caused any of the damage); Annot., 100 A.L.R.2d 16, 26 (1965).

142. W. Prosser, supra note 18, § 39, at 219-20.

143. See generally id. at 221-24; McCoid, Negligence Actions Against Multiple Defendants, 7

These cases go much further than *Summers*, or than would a DES case, in that not all the defendants are tortfeasors.<sup>144</sup>

One such case is *Ybarra v. Spangard*,<sup>145</sup> where the plaintiff awoke after an appendectomy with an inexplicable paralysis of his shoulder. Knowing neither the person nor the instrumentality which caused his injury, he sued six persons, doctors and nurses, each of whom had an independent responsibility for his welfare at some point during the period in which he was unconscious. Presumably only one defendant was negligent. While the theory of concert of action has been used,<sup>146</sup> with some plausibility, to explain the court's shifting to the defendants of the burden of going forward with the evidence for

Stan. L. Rev. 480, 482-501 (1955); Comment, The Application of Res Ipsa Loquitur in Suits Against Multiple Defendants, 34 Albany L. Rev. 106 (1969). The commentators state that res ipsa loquitur is generally applied to multiple defendants where some form of joint liability, such as concerted action, already exists among the defendants. Annot., 38 A.L.R.2d 905, § 1 (1954); W. Prosser, supra note 18, § 39, at 221. In such a situation, all defendants would automatically be causes-in-fact of the injury. The cases themselves often seem to be stretching to apply this concept. See, e.g., Dement v. Olin-Mathieson Chem. Corp., 282 F.2d 76, 82-83 (5th Cir. 1960) (defect causing injury was in either dynamite or cap, but held res ipsa loquitur applies to both manufacturers because components made to be used in combination); Raber v. Tumin, 36 Cal. 2d 654, 226 P.2d 574 (1951) (master-servant relationship between two defendants, but each held liable for the other's acts). Other cases clearly apply res ipsa loquitur to multiple defendants acting independently, where only one defendant could be the cause-in-fact. See,  $e_{R_{1}}$ , Litzmann v. Humboldt County, 273 P.2d 82 (Cal. Dist. Ct. App. 1954) (only one of two independent contractors supplied fair with fireworks which injured plaintiff); Nichols v. Nold, 174 Kan. 613, 258 P.2d 317 (1953) (manufacturer, distributor, and retailer responsible for exploding bottle); Loch v. Confair, 372 Pa. 212, 93 A.2d 451 (1953) (bottler and retailer responsible for exploding bottle). Many cases have elements of joint control and independent action, but independent action predominates. See, e.g., Ybarra v. Spangard, 25 Cal. 2d 486, 154 P.2d 687 (1944); notes 145-51 infra and accompanying text.

It is frequently impossible to determine the effect res ipsa loquitur is given in these cases. For an analysis of this problem in *Ybarra*, for example, see note 147 *infra*. In most jurisdictions, res ipsa loquitur is a form of circumstantial evidence from which the jury may, but need not, draw an inference of negligence, which the defendants are not required to meet. W. Prosser, *supra* note 18, § 40, at 228-29. In California, where res ipsa loquitur is frequently applied to multiple defendants, it is settled that res ipsa loquitor creates a mandatory inference, resulting in a directed verdict for the plaintiff unless the defendant offers sufficient evidence to meet the inference. Burr v. Sherwin Williams Co., 42 Cal. 2d 682, 691, 268 P.2d 1041, 1046 (1954); *see* McCoid, *supra* at 484-85. The mandatory inference is thus a presumption, shifting the burden of going forward with the evidence to the defendants. *See* note 129 *supra*. In several states, the application of res ipsa loquitur shifts the burden of proof. W. Prosser, *supra* note 18, § 40, at 230. New Jersey has gone even further. *See* note 156 *infra* and accompanying text.

144. Consequently, the application of res ipsa loquitur to multiple defendants has been severely criticized for imposing liability without fault. Many of the criticisms have been directed at Ybarra v. Spangard, 25 Cal. 2d 486, 154 P.2d 687 (1944), but are equally applicable to similar cases. See Raber v. Tumin, 36 Cal. 2d 654, 662-65, 226 P.2d 574, 579-81 (1951) (Traynor, J., dissenting and concurring); Talbot v. Dr. W.H. Groves' Latter-Day Saints Hosp., 21 Utah 2d 73, 76, 440 P.2d 872, 874 (1968) (Henriod, J., concurring); Adamson, Medical Malpractice: Misuse of Res Ipsa Loquitur, 46 Minn. L. Rev. 1043 (1962); Seavey, Res Ipsa Loquitur: Tabula in Naufragio, 63 Harv. L. Rev. 643 (1950).

145. 25 Cal. 2d 486, 154 P.2d 687 (1944).

146. See notes 204-07 infra and accompanying text.

causation as well as negligence,<sup>147</sup> the court's basic reasoning was that of alternative liability, buttressed by the fairness argument<sup>148</sup> later used in *Summers*. Commentators have also justified the result in *Ybarra* on the basis of the special responsibility of medical personnel for their patient's safety.<sup>149</sup> While only one was actively negligent, all the defendants owed the plaintiff a duty "to see that no unnecessary harm came to him."<sup>150</sup> This justification is equally applicable to a finding of a joint liability in the DES cases, since manufacturers also owe a special duty of care to members of the consuming public. The consumer of DES who swallowed a pill relied on the manufacturers' skills in research and their assurances of safety,<sup>151</sup> just as the patient who submits to an operation relies on the special skills and assurances of hospital personnel.

In a recent case, the Supreme Court of New Jersey made just such an argument in extending the Ybarra holding to a manufacturer and a distributor. In Anderson v. Somberg, 152 the plaintiff was injured when a surgical instrument broke off in his spinal canal during an operation. He sued the doctor and hospital for negligence, the instrument's distributor for breach of warranty, and its manufacturer in strict liability. While one of these parties must have been the cause of injury, the evidence did not conclusively point to the culpable one.<sup>153</sup> The court held that something "akin"<sup>154</sup> to res ipsa loquitur applied for all causes of action because of the "special responsibility"<sup>155</sup> of the manufacturer and distributor, as well as of the other defendants, to the patient. It also held that in such cases, where all possible defendants were before the court, not only did the burden of proof shift to the defendants but the jury must be instructed to find at least one defendant liable.<sup>156</sup> It reached this unprecedented holding because of the strong policy reasons favoring the plaintiff's recovery.<sup>157</sup> Equally strong reasons exist in the DES cases.

Although the DES cases are directly comparable to *Summers* and to the related groups of cases discussed above, the application of alternative liability to the DES cases does require a modification of some of the elements present

- 149. Prosser, Proximate Cause in California, 38 Calif. L. Rev. 369, 390 (1950).
- 150. 25 Cal. 2d at 491, 154 P.2d at 690.
- 151. For a discussion of the duty owed by all manufacturers to plaintiffs, see pt. IV(B) infra.
- 152. 67 N.J. 291, 338 A.2d 1, cert. denied, 423 U.S. 929 (1975).
- 153. Id. at 296, 338 A.2d at 4.
- 154. Id. at 300, 338 A.2d at 5 (quoting NOPCO Chem. Div. v. Blaw-Knox Co., 59 N.J. 274, 281 A.2d 793 (1971)).
  - 155. Id. at 302, 338 A.2d at 7.
  - 156. Id. at 302-03, 338 A.2d at 7.
  - 157. Id. at 298, 338 A.2d at 5.

<sup>147.</sup> The court was not entirely clear about the effect it gave to res ipsa loquitur, since it referred to an inference but required that the inference be met by the defendants. 25 Cal. 2d at 494, 154 P.2d at 691. It was apparently applying the California mandatory inference, actually a presumption, although *Ybarra* was decided before California's highest court officially held that res ipsa loquitur was to be given this effect. See note 143 supra.

<sup>148. 25</sup> Cal. 2d at 490-91, 154 P.2d at 689.

in *Summers* and most similar cases. Consequently, those elements which will be varied must be examined to determine whether a finding of joint and several liability in the DES cases will still be logically and legally coherent.

The cause of action in Summers was negligence,<sup>158</sup> while in DES, as in most product liability cases, there are alternative causes of action. Strict liability and warranty have dispensed with the element of fault and are based on the presence of three factors—causation, defect, and injury.<sup>159</sup> It is arguable that alternative liability, which effectively eliminates causation in the sense that it cannot be ascribed to any one party, provides an insufficient basis for joint liability under either of these causes of action. However, the Restatement explicitly extends its application of Summers to all tortious conduct<sup>160</sup> and cases such as Anderson have applied a form of alternative liability to strict liability and warranty causes of action.<sup>161</sup> A court considering this extension would probably base its decision on the policy reasons for finding liability. In the DES cases, this issue is moot, since the law appears to set a negligence standard under all causes of action when the defective product is a drug.<sup>162</sup>

In Summers, all tortfeasors were before the court. In some of the DES cases an attempt has been made to accomplish this, but others include only the major manufacturers of DES.<sup>163</sup> Since it is probably impossible to bring suit against all the tortfeasors,<sup>164</sup> it should be permissible to join a relatively small number of manufacturers, if those joined accounted for the great majority of DES sales, and still apply alternative liability.

There are several arguments against allowing joinder of fewer than all tortfeasors. First, if even one tortfeasor is absent, and it was he who actually caused the plaintiff's injury, then only the "innocent" defendants may be held liable. In any case, however, in which alternative liability is applied there exists the probability of one or more "innocent" defendants being held liable. This is allowable on policy grounds: no tortfeasor is actually innocent and it is preferable for him to bear the loss which may have resulted from his wrongdoing rather than for a completely innocent plaintiff to do so. A second argument is that *Summers* created a presumption of causation which varied the standard of preponderance of the evidence. Although the probability of causation by any single defendant was 50% or less, this was balanced by the certainty that one of the joined defendants *was* the cause. Since this variation of the standard of proof depends on joinder of all defendants, arguably joining fewer than all destroys the presumption. In answer, it may be pointed

- 159. See W. Prosser, supra note 18, § 103.
- 160. Restatement (Second) of Torts § 433B, Comment f (1965).
- 161. See, e.g., Nichols v. Nold, 174 Kan. 613, 258 P.2d 317 (1953) (implied warranty); Anderson v. Somberg, 67 N.J. 291, 338 A.2d 1, cert. denied, 423 U.S. 929 (1975) (warranty and strict liability); NOPCO Chem. Div. v. Blaw-Knox Co., 59 N.J. 274, 281, 281 A.2d 793, 796 (1971) (express and implied warranty).
  - 162. See note 18 supra and accompanying text.
  - 163. See note 29 supra and accompanying text.
  - 164. See notes 114-15 supra and accompanying text.

<sup>158. 33</sup> Cal. 2d at 83, 199 P.2d at 2.

out that the Restatement acknowledges that future cases may arise in which some modification of the joinder requirement may be necessary.<sup>165</sup> In Hall, which applied alternative liability in addition to concert, such a case did arise. The court required only that plaintiffs "show by a preponderance of the evidence"166 that their injuries were caused by some one of the defendants. Therefore, although Canadian-made blasting caps were sold in the United States and no foreign manufacturers were joined in the suit, joinder of the manufacturers responsible for the majority of domestic blasting cap sales satisfied the plaintiffs' burden of proof.<sup>167</sup> It is suggested that, while the Summers presumption should be modifiable, the court in Hall created too great a modification by requiring only that plaintiffs show by a preponderance of the evidence that one of the defendants was the cause. Where joinder of all tortfeasors is difficult or practically impossible, and the equities favor the imposition of liability, the proper standard for joinder should be "clear and convincing evidence"<sup>168</sup> that some one of the defendants caused the plaintiff's injury. Precisely what proportion of the total market would be required in a DES case would have to be determined by a court, but the market share accounted for by defendants should be substantially greater than 50%. Such a standard is not only logical, but realistic, since it is practically impossible for all possible causes of any event to be before the court and ultimately any court must be satisfied with the most probable causative agents.<sup>169</sup>

The Summers approach arguably requires that plaintiffs not be at fault for the impossibility of identification, since otherwise it would be unjust to place the burden of identifying the actual causative agent on the defendants. Although it seems apparent that a DES plaintiff, unborn when her mother took DES, is no more at fault for her inability to identify than was the wounded plaintiff in Summers, defendants in one DES case have argued that she is at fault. The reasons given were that the mother's choice of drug, doctor, and pharmacist, the mother's records and her memory, were all more within the control of plaintiff daughters than of defendants.<sup>170</sup> This argument seems fallacious for several reasons. Plaintiffs, as yet unborn, were certainly not in control of the activities of their mothers. Furthermore, ascribing fault to the women who took DES is a misrepresentation of the actual process by which drugs are prescribed, a process which involves little choice by consumers.<sup>171</sup> It is arguable that plaintiffs' mothers are no more blameworthy for failing to notice or remember the exact pill they took than the plaintiff in Summers for failing to notice who shot him.

In balancing the respective fault of plaintiff and defendants, a more important consideration, and one emphasized by the Restatement, is whether

168. This standard is applied in those civil cases where "the party is required to establish [his claim] by a more exacting measure of persuasion." C. McCormick, *supra* note 129, § 340, at 796. 169. See W. Prosser, *supra* note 18, § 41.

<sup>165.</sup> Restatement (Second) of Torts § 433B, Comment h (1965).

<sup>166. 345</sup> F. Supp. 353, 379 (1972).

<sup>167.</sup> See id.

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<sup>170.</sup> Abel, Defendants' Brief, supra note 1, at 20-21.

<sup>171.</sup> See notes 59-62 supra and accompanying text.

it was the nature of the defendants' conduct and the resulting harm which caused the plaintiff's inability to identify.<sup>172</sup> The manufacture under a variety of trade names of a drug with delayed effects created a situation in which it was unlikely that any identification could be made. Thus, the DES cases are more compelling than *Summers* in this respect, since in *Summers* the conduct which created impossibility of identification was the simultaneity of defendants' shooting, not in itself tortious. With respect to DES, it is arguable that the very tortiousness of defendants' conduct in failing to discover or warn of the dangers of DES was the major reason why all parties failed to keep better records or remember the drug prescribed, since they were unaware of any reason to do so.<sup>173</sup>

The Summers court emphasized in dicta that defendants often are better able to identify the cause of injury than the plaintiff.<sup>174</sup> This reasoning is a concession to the usual justification given for allocating the burden of proof,<sup>175</sup> and is not based on the realities. Just as the hunters in Summers had no better access to such information than did the wounded plaintiff, so DES manufacturers have no better access than do daughters with cancer. In most such cases, causation is inexplicable by all parties and the allocation of the burden of proof depends on other factors, such as fairness or the "disfavoring [of] certain defenses."<sup>176</sup>

In Summers, the events took place at one location simultaneously. In the DES cases, defendants' conduct took place over a wide geographic area during a period of years. The only reason to require unity of time and place in an alternative liability case is to allow the defendants, who bear the burden of proof, to see what happened and thus be able to identify the causative agent. However, since generally none of the parties in cases of alternative causation can identify the causative agent, this is an insufficient reason to require such characteristics. The Restatement, which only mentions simultaneity as a characteristic of the cases, recognized that passage of time in a particular situation might necessitate a modification of this requirement.<sup>177</sup> The cases have done so.<sup>178</sup> Furthermore, to require unity of time and place would be to limit the Summers holding to a simple, nonindustrial world.

174. 33 Cal. 2d 80, 86, 199 P.2d 1, 4 (1948).

175. C. McCormick, supra note 129, § 337, at 787. "This consideration [that a party has better access to information] should not be overemphasized. Very often one must plead and prove matters as to which his adversary has superior access to the proof." *Id.; cf.* Prosser, *Res Ipsa Loquitur: A Reply to Professor Carpenter*, 10 S. Cal. L. Rev. 459, 463-64 (1937) (if allocating the burden of proof in res ipsa loquitur cases depended on superior knowledge "sheer ignorance might be the most powerful weapon in the law").

176. C. McCormick, supra note 129, § 337, at 789.

177. Restatement (Second) of Torts § 433B, Comment h (1965).

178. In Hall there was neither unity of time nor place. See notes 112-13 supra and

<sup>172.</sup> Restatement (Second) of Torts § 433B, Comment f (1965).

<sup>173.</sup> Cf. Haft v. Lone Palm Hotel, 3 Cal. 3d 756, 773-74, 478 P.2d 465, 476, 91 Cal. Rptr. 745, 756 (1970) (making the same argument where defendant's unlawful failure to provide a lifeguard resulted in plaintiff's inability to establish the proximate cause of decedents' death by drowning).

In Summers there were only two defendants; in Ybarra there were six, and in Hall seven. In the DES cases as many as ninety-four defendants have been joined,<sup>179</sup> although this Comment suggests that far fewer would be sufficient for alternative liability to apply. The DES cases present the problem of whether Summers can be applied to cases with a large number of defendants. The greater the number, the less likely it is that any particular one of the defendants was responsible for any particular injury. In Summers there was a 50% chance that either one of the two parties was responsible; in the DES cases with ninety-four defendants, assuming an equal probability as to each defendant, there is slightly more than a 1% chance of each defendant's responsibility. Although joint liability may seem inequitable under these circumstances, it need not be. Since there is not an equal possibility of causation for each defendant, and the possibility of causation can best be estimated by market share, damages should be apportioned according to market share.<sup>180</sup> If this were done, the amount of damages each defendant would pay in the total number of DES cases would be approximately the same whether identification were made or not, and the number of defendants would be irrelevant. For example, if X Manufacturer sold one-fifth of all the DES prescribed for pregnancy and identification could be made in all cases, Xwould be the sole defendant in approximately one-fifth of all cases and liable for all the damages in those cases. Under alternative liability, X would be joined in all cases in which identification could not be made, but liable for only one-fifth of the total damages in these cases. X would pay the same amount either way. Although the correlation is not, in practice, perfect,<sup>181</sup> it is close enough so that defendants' objections on the ground of fairness lose their value.

One question remains: how much and what type of evidence is required to exculpate any single defendant from liability in the DES cases? This was not specified in *Summers* or the cases following it, but it is possible that in *Summers* a 51% probability of liability for one defendant might have exculpated the other. Such a result is arguably inequitable in the context of the *Summers* case, and clearly so in the DES cases, which differ from *Summers* in that the evidence on market share is statistical. Although it has been urged that in the DES cases plaintiff's burden is satisfied by joining those manufacturers responsible for a high percentage of sales,<sup>182</sup> there is nothing to stop defendants from joining as many additional defendants as they are able, who

accompanying text. In Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076 (5th Cir. 1973), cert. denied, 419 U.S. 869 (1974), which was a case of concurrent causation rather than alternative liability, but otherwise analogous to the DES cases, defendants' actions were not simultaneous. See note 136 supra.

179. See notes 3, 29 supra and accompanying text.

180. For a discussion of apportionment, see notes 208-11 infra and accompanying text.

181. There are not enough DES cases for an exact correlation, nor will all cases with multiple defendants join the same defendants. Since the defendants joined will also not account for 100% of the market, but will have to pay 100% jointly of the damages, their share of damages will not be precisely the same as their share of the market.

182. See notes 168-69 supra and accompanying text.

would then be proportionately liable for damages. A defendant should not be able to exculpate itself if it had a 2% market share and another defendant had 75% of the market. Carried to its logical conclusion, such exculpation could result in one manufacturer, if it had a sufficient market share, being liable for all damages in all DES cases. It is therefore suggested that only evidence unrelated to market share be exculpatory. For example, if a plaintiff's mother took red pills in Milwaukee in 1955, all defendants whose products were not sold in Milwaukee in that year or were any other color than red could remove themselves from the action.

## IV. ENTERPRISE LIABILITY A. The Theory

Enterprise liability as proposed here combines the better features of concert and alternative liability into one coherent theory. It can result in the joint and several liability of all the industry members that manufactured an identically defective product. The theory would be available to plaintiffs who cannot or might not be able to identify the actual causative agent of their injury. In all other instances it would be unavailable because traditional tort law would be sufficient to fix liability. The elements of enterprise liability are:

- 1) Plaintiff is not at fault for his inability to identify the causative agent and such liability is due to the nature of the defendants' conduct.
- 2) A generically similar defective product was manufactured by all the defendants.
- 3) Plaintiff's injury was caused by this product defect.
- 4) The defendants owed a duty to the class of which plaintiff was a member.
- 5) There is clear and convincing evidence that plaintiff's injury was caused by the product of some one of the defendants. For example, the joined defendants accounted for a high percentage of such defective products on the market at the time of plaintiff's injury.
- 6) There existed an insufficient, industrywide standard of safety as to the manufacture of this product.
- 7) All defendants were tortfeasors satisfying the requirements of whichever cause of action is proposed: negligence, warranty, or strict liability.

Once plaintiff proves these elements, the burden of proof as to causation shifts to defendants, each of which can exonerate itself only by showing, according to the standards of proof already proposed, that its product could not have been the one which injured this particular plaintiff.<sup>183</sup> Defendants, of course, may also attempt to disprove any and all elements of plaintiff's case. Damages will be apportioned among those defendants found liable in proportion to their market shares.

Enterprise liability has been developed specifically to solve the problem of causation encountered in the DES cases and cases analogous to them—the plaintiff's inability to identify the manufacturer that sold the defective product that resulted in her injury. It is suggested that policy requires, as between

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<sup>183.</sup> See pt. III(B) supra.

an innocent plaintiff and a group of tortfeasors, that the plaintiff's loss be placed on the tortfeasors. Traditional tort law, however, may prove inadequate to solve the problem of causation in DES cases. Plaintiffs might not be able to meet the concerted action requirement of a "tacit understanding" among the manufacturers.<sup>184</sup> The elements of alternative liability, particularly those requiring only a few tortfeasors, all of which are before the court, are sufficiently distorted that it virtually becomes a different theory.<sup>185</sup> It is therefore suggested that a new theory be designed to fit the facts in the DES cases by combining elements of alternative liability<sup>186</sup> and concert.<sup>187</sup> Enterprise liability is derived from alternative liability because its basic premise is that some one of the defendants probably caused, in the traditional sense, the plaintiff's injury. Therefore, any defendant who can show that his product could not have caused the injury, even though he also adhered to inadequate industry standards, may exculpate himself. Such exculpation would not be allowed under the concert approach.<sup>188</sup> Enterprise and alternative liability are also alike because the primary purpose of both theories is to cure plaintiff's inability to identify the injurious product, and both accomplish this purpose by shifting the burden of proof of causation to defendants.

Unlike the theory of alternative liability, however, enterprise liability emphasizes certain activities of the industry as a whole—adherence to an inadequate safety standard and manufacture of an identically defective product. It is submitted that, in an ethical and a legal sense, this group behavior resulted in the plaintiffs' injuries. This focus on the joint activities of industry members is analogous to the "agreement" requirement in concert cases, and also reflects the purpose of those cases—to deter similar behavior in the future. Unlike concert, however, the parallel behavior of defendants, absent any understanding among them, is sufficient to prove this element.

The justification for concluding that each defendant is a cause-in-fact of the plaintiff's injury under enterprise liability is also derived from a combination of the explanations of causation in concert and alternative liability. The primary model is alternative liability, as it was modified earlier in this Comment.<sup>189</sup> Accordingly, cause-in-fact results from the fictional presumption that each defendant is the cause because, jointly, there is a high probability—clear and convincing evidence—that the product manufactured by some one of the defendants, all of which behaved tortiously, caused the specific plaintiff's injury. The standard of clear and convincing evidence is met by joining those manufacturers that accounted for a high percentage of the defective products on the market, approximately 75% to 80%. This standard of evidence is less demanding than the traditional *Summers* pre-

<sup>184.</sup> See notes 101-09 supra and accompanying text.

<sup>185.</sup> See notes 163-69, 179-81 supra and accompanying text.

<sup>186.</sup> See pt. III(B) supra.

<sup>187.</sup> See pt. III(A) supra.

<sup>188.</sup> No defendant that participated in the concerted plan or activity is exonerated from liability for its result. See note 69 supra and accompanying text.

<sup>189.</sup> See notes 168-69 supra and accompanying text.

sumption which requires all tortfeasors to be joined. The Summers theory is also diluted because, by joining so many defendants, the probability that any one was the cause-in-fact is lessened.<sup>190</sup> On the other hand, plaintiff must prove an additional element in enterprise liability, not found in Summers, one that is derived from the concerted activities of the defendants: an insufficient industrywide safety standard. Industry custom has generally been used by courts as evidence to determine whether an industry member has met the proper standard of care, although such evidence has not been conclusive.<sup>191</sup> In Hall, however, the court suggested in dicta that adherence to an inadequate industry standard might be a lesser form of concert because it indicated joint control of risk, the basis for a finding of concert.<sup>192</sup> Analyzed in terms of causation, the industrywide standard becomes itself the cause of plaintiff's injury, just as defendants' joint plan is the cause of injury in the traditional concert of action plea. Each defendant's adherence perpetuates this standard, which results in the manufacture of the particular, unidentifiable injury-producing product. Therefore, each industry member has contributed to plaintiff's injury. Proof of this standard alone would be too weak a form of concert to justify a finding that each industry member was a substantial cause of plaintiff's injury and therefore jointly and severally liable.<sup>193</sup> However, the addition of this explanation of causation to the weakened presumption derived from Summers should be sufficient to shift the burden of proof on the issue of causation to the defendants under enterprise liability.

Both Hall and Ybarra provide precedent for enterprise liability. Hall's major contribution is that, in a case similar on its facts to the DES cases, it proposed and provided a rationale for a theory of industrywide liability<sup>194</sup>

190. However, apportionment of damages largely cures this defect. See notes 179-81 supra and accompanying text.

191. See, e.g., The T.J. Hooper, 60 F.2d 737, 740 (2d Cir.), cert. denied sub nom. Eastern Transp. Co. v. Northern Barge Corp., 287 U.S. 662 (1932); see W. Prosser, supra note 18, § 33, at 166-68.

192. 345 F. Supp. 353, 374 (E.D.N.Y. 1972).

193. Id.

194. Id. at 376-78. This rationale has been relied on to some extent in pt. IV(B) infra. The dicta, as well as the holding, in Hall are predicated on an assumption of "the existence of a national body of state tort law." Id. at 360. Consequently, both Hall's theory of enterprise liability and its holding have been criticized as not complying with the rule in Erie R.R. v. Tompkins, 304 U.S. 64 (1938). See Abel, Defendants' Brief, supra note 1, at 26. Erie states that "[t]here is no federal general common law" for the purposes of substantive decisions in diversity cases. 304 U.S. at 78. However, in Hall, Judge Weinstein assumed a national tort law in order to determine whether defendants were entitled to a dismissal, because he did not yet have enough information to settle the complex choice of law questions that the case presented. 345 F. Supp. at 360. He could have simply refused to consider defendants' motion for dismissal until he had received more information on the choice of law issue and so have reached the same result. Instead, he went beyond what was necessary and proposed a novel theory of joint liability. Since there were a number of jurisdictions whose law might ultimately control, id., the assumption of a body of national tort law may be viewed as meaning that some of the applicable state law might allow the plaintiffs' cause of action. Since California, which decided Summers, Ybarra, and the cases discussed in notes 92-100 supra and accompanying text, was one of these states, this was not

where the industry members were "the most strategically placed participants in a risk-creating process,"<sup>195</sup> although only one of them could have "directly"<sup>196</sup> caused each plaintiff's injury. *Hall's* major defect is that, while it provided policy reasons for such an imposition of liability, it neither recognized nor analyzed the problems of cause-in-fact implicit in the court's theory, nor in its decision. Therefore, although the court in *Hall* proposed several working models for enterprise liability, each combining elements of concert and alternative liability,<sup>197</sup> these combinations are not logically defensible when analyzed in terms of cause-in-fact. For example, the court apparently decided that the plaintiff's allegations of an explicit agreement among defendants to join in a tortious activity<sup>198</sup> were sufficient to state a claim because they constituted a "classic" plea of concerted action.<sup>199</sup> However, citing *Summers* and section 433B(3) of the Restatement, the court then required that plaintiffs also show "by a preponderance of the evidence . . . that the caps

an unwarranted assumption. See 345 F. Supp. at 360. Judge Weinstein's "national" tort law was also clearly meant as an assumption of general tort principles of the kind that are taught in law schools throughout the country. It was on such principles that he based his theory of enterprise liability; its acceptance by any jurisdiction would obviously depend on the law of that jurisdiction.

Critics of Hall have also stated that its theory was subsequently retracted by Judge Weinstein in Chance v. E.I. Du Pont De Nemours & Co., 371 F. Supp. 439 (E.D.N.Y. 1974). See Abel, Defendants' Brief, supra note 1, at 26. In Chance, the court severed the various actions in the case and transferred them to the federal district courts sitting in the states where the accidents had occurred. (It should be remembered that Chance (345 F. Supp. 353 (E.D.N.Y. 1972)) was the actual case, of the two cases consolidated in Hall, for which enterprise liability was proposed. See note \$1 supra and accompanying text.) In response, it should be pointed out that the decision was based on the absence of any meaningful joint activities of the industry members in New York, and on the substantial interests of the situs states. 371 F. Supp. at 345-46. Judge Weinstein had anticipated the possibility of severance in Hall. See 345 F. Supp. at 386. Neither the decision nor the rationale of Hall were retracted by the severance in Chance, 371 F. Supp. 439, nor by the statement there that the cases should not be tried in New York on a "federal torts standard." Id. at 448. This was simply a recognition of the Erie rule. See id. It should also be noted that the court in Chance did not dismiss any of the plaintiffs' claims, although the defendants had moved for dismissal again. Id. at 451.

The severed cases never dealt with the issue of enterprise liability. In two, the statutes of limitations had run. Lehtonen v. E.I. Du Pont De Nemours & Co., 389 F. Supp. 633 (D. Mont. 1975) (motion to dismiss granted); Davis v. E.I. Du Pont De Nemours & Co., 400 F. Supp. 1347 (W.D.N.C. 1974) (summary judgment granted). In the third, the Sixth Circuit affirmed a jury verdict rejecting the plaintiff's negligence claim, and affirmed the lower court's directed verdict against plaintiff's strict liability claim on grounds unrelated to enterprise liability, since plaintiff did identify the manufacturer in this suit. Ball v. E.I. Du Pont De Nemours & Co., 519 F.2d 715 (6th Cir. 1975).

195. 345 F. Supp. at 376.

196. Id.

197. See id. at 374, 378. In addition, the court's decision that a showing of concert would also require a shift in the burden of proof of causation to defendant also suggests a combination of concert and alternative liability. See notes 199-202 infra and accompanying text.

198. 345 F. Supp. at 374.

199. Id. at 373-74.

involved in the accidents were the products of the named defendantmanufacturers,"<sup>200</sup> whereupon plaintiffs would be relieved of the burden of proving causation and this burden would shift to defendants.<sup>201</sup> However, if plaintiffs' allegations of concert were to be believed, defendants' participation in the concerted plan was sufficient to arrive at causation, and there was no necessity for any additional proof.<sup>202</sup>

*Ybarra* is noteworthy because, like *Hall*, in a situation where plaintiff could not identify the injury-producing tortfeasor, the court seemed to justify its finding of causation on the grounds of alternative liability and concert. Although Summers is generally credited with having created alternative liability, Ybarra, which was decided earlier, is clearly a variant of that theory in a res ipsa loquitur context.<sup>203</sup> However, the finding of causation in Ybarra can also be viewed as based on concert.<sup>204</sup> The court itself briefly referred to the "highly integrated system of activities"<sup>205</sup> in modern hospitals, and to the fact that "doctors and nurses in attendance [could but did not] voluntarily [choose] to disclose the identity of the negligent person . . . . "206 This latter fact has been elaborated by commentators into the theory of a conspiracy of silence among the hospital personnel.<sup>207</sup> If, however, the concerted action in Ybarra was the joint silence of all defendants, this took place after the injury had occurred and could not have been its cause. Thus, Ybarra's theory of concert does not explain causation, nor did the court in Ybarra attempt to relate concert to its predominant holding of alternative liability. The theory of enterprise liability proposed in this Comment builds on the foundation laid by both these cases, but attempts to combine the theories of concert and alternative liability in a more satisfactory fashion than did either case.

Much of the strength and justice of enterprise liability rests in the suggestion that damages be apportioned among defendants in proportion to their market shares. Since enterprise liability results in joint and several liability, each defendant is liable for the whole amount of the damages.<sup>208</sup> Because contribution exists in the majority of jurisdictions,<sup>209</sup> damages in fact will

202. The court may be presumed to have required this additional proof in recognition of its unique use of concert to cure plaintiffs' inability to identify specific manufacturers of the injury-producing products. See id. at 383. However, if this is the court's reasoning, it is never explained.

203. See notes 145-51 supra and accompanying text. Ybarra is cited in Summers as precedent for its theory of alternative liability. 33 Cal. 2d at 86-87, 199 P.2d at 4.

204. The California Supreme Court later stated that Ybarra was based on concert. Clark v. Gibbons, 66 Cal. 2d 399, 411, 426 P.2d 525, 533, 58 Cal. Rptr. 125, 133 (1967).

205. 25 Cal. 2d at 493, 154 P.2d at 691.

206. Id. at 490, 154 P.2d at 689.

207. See W. Prosser, supra note 18, § 39, at 223; Adamson, Medical Malpractice: Misuse of Res Ipsa Loquitur, 46 Minn. L. Rev. 1043, 1051 (1962).

208. W. Prosser, supra note 18, § 47, at 297-98.

209. The common law rule, generally followed until relatively recently in the United States, did not allow contribution among joint tortfeasors. Id. § 50. The Uniform Contribution Among

<sup>200.</sup> Id. at 379.

<sup>201.</sup> Id. at 380.

generally be divided among the defendants. Unfortunately, only a minority of jurisdictions recognizes a comparative form of contribution where the amount of damages each defendant pays is based on the degree to which each defendant caused plaintiff's injury,<sup>210</sup> although such contribution is more equitable where the degree of responsibility among defendants is ascertainably unequal. It is suggested that comparative contribution should exist in enterprise liability, for the reasons discussed earlier.<sup>211</sup>

## B. Policy

The primary reason advanced thus far for the plaintiff's recovery in the DES cases has been an equitable one—that as between the innocent plaintiff and the tortfeasors, the tortfeasors should bear the cost of injury.<sup>212</sup> While this is the basic policy behind enterprise liability, it is a simplistic approach to a complex issue. There are a number of arguments favoring the imposition of enterprise liability in DES, which are in line with twentieth-century thought in tort law.

Tortfeasors Act of 1939, which was revised in 1955, does allow contribution. Eighteen states have adopted the Act. 12 Uniform Laws Ann. 57, 34 app. (1975 & Supp. 1978). Other states not adopting the Uniform Act have also passed statutes permitting contribution among joint tortfeasors. See, e.g., Cal. Civ. Proc. Code § 875 (West Supp. 1977); Ga. Code Ann. § 37-303 (1962); Ky. Rev. Stat. § 412.030 (1970); Mich. Comp. Laws Ann. § 600.2925a (Supp. 1977); N.Y. Civ. Prac. Law § 1401 (McKinney 1976); Va. Code § 8.01-34 (1950); W. Va. Code § 55-7-13 (1966). See also the comparative contribution among joint tortfeasors. See, e.g., Bedell v. Reagan, 159 Me. 292, 192 A.2d 24 (1963); Ellis v. Chicago & N.W. Ry., 167 Wis. 392, 167 N.W. 1048 (1918). In federal courts in diversity suits, state law is applied. 18 Am. Jur. 2d Contribution § 45 (1965). In the absence of comparative contribution, see note 210 infra and accompanying text, a state allowing contribution will apportion damages "pro rata," or equally, among defendants found liable. See, e.g., Contribution Among Tortfeasors Act of 1955, § 1(b), 12 Uniform Laws Ann. 63 (1975).

210. Some states have recognized comparative contribution by statute. See, e.g., Ark. Stat. Ann. § 34-1002(4) (1947); Del. Code tit. 10, § 6302(d) (1974); Haw. Rev. Stat. § 663-12 (1976); N.Y. Civ. Prac. Law § 1402 (McKinney 1976); S.D. Compiled Laws Ann. § 15-8-15 (1967); Tex. Rev. Civ. Stat. Ann. art. 2212a (Vernon Supp. 1978). Several jurisdictions have recognized comparative contribution judically. See, e.g., Kohr v. Allegheny Airlines, Inc., 504 F.2d 400 (7th Cir. 1974), cert. denied sub nom. Forth Corp. v. Allegheny Airlines, Inc., 421 U.S. 978 (1975) (federal law); Gomes v. Brodhurst, 394 F.2d 465 (3d Cir 1967) (federal law); Stevens v. Silver Mfg. Co., No. 48974 (Ill. Sup. Ct. 1977), 2 Prod. Liab. Rep. (CCH) ¶ 7778; Skinner v. Reed-Prentice Div. Package Mach. Co., No. 48757 (Ill. Sup. Ct. 1977), 2 Prod. Liab. Rep. (CCH) ¶ 7742; Robinson v. Int'l Harvester Co., No. 49205 (Ill. Sup. Ct. 1977), 2 Prod. Liab. Rep. (CCH) ¶ 8065; Orr v. Coleman, 455 S.W.2d 59 (Ky. Ct. App. 1970); Packard v. Whitten, 274 A.2d 169 (Me. 1971); Bielski v. Schulze, 16 Wis. 2d 1, 114 N.W.2d 105 (1962).

The statutes and cases recognizing comparative contribution generally refer to apportionment by degree of "fault." *E.g.*, Ark. Stat. Ann. § 34-1002(4) (1947). This apparently means, however, that damages are apportioned according to the degree to which defendants caused the injury, and not the degree to which the defendants' conduct was tortious. *See* Bielski v. Schulze, 16 Wis. 2d at 9, 114 N.W.2d at 109; Annot., 53 A.L.R.3d 184, § 1[a] (1973).

211. See notes 179-81 supra and accompanying text.

212. See notes 123-27, 140, 148 supra and accompanying text.

The proposed theory of enterprise liability holds liable defendants that, according to traditional notions, are not really at fault. In addition, not only are the defendants not in privity with the plaintiff in the usual sense, but all defendants except the one that actually sold the injury-producing product are not even in the vertical chain of distribution. Therefore, privity is absent even in the most extended sense. The absence of fault and privity, however, are not without precedent. Modern theories of tort law that remove the necessity for either provide theoretical support for enterprise liability, and justifications for its existence.

The doctrine of respondeat superior, which *Hall* suggested is related to enterprise liability,<sup>213</sup> holds a master liable for the torts of his servant although the master is not in privity with the injured third party and is innocent of any tortious behavior himself.<sup>214</sup> Respondeat superior is not a recent form of liability, and, although numerous "ingenious"<sup>215</sup> explanations of it have been advanced over the years, "the modern justification for vicarious liability is a rule of policy, a deliberate allocation of risk. The losses caused by the torts of the employees, which as a practical matter are sure to occur in the conduct of the employer's enterprise, are placed upon that enterprise itself, as a required cost of doing business."<sup>216</sup> The employer, who derives a profit from the enterprise, is the party best able to absorb and distribute its foreseeable costs to the public. He is also in the best position to take preventive measures.<sup>217</sup>

In the past twenty years the advent of strict liability has largely abolished the requirements for privity and fault in products liability.<sup>218</sup> The manufacturer has been the focal point for liability,<sup>219</sup> although he has "exercised all possible care"<sup>220</sup> and "entered into [no] contractual relation" with the user.<sup>221</sup> The policy reasons advanced for strict liability of the seller are identical with those for respondeat superior.<sup>222</sup>

- 214. 2 F. Harper & F. James, supra note 68, § 26.1; W. Prosser, supra note 18, § 69.
- 215. W. Prosser, supra note 18, § 69, at 459.
- 216. Id. (footnote omitted).

217. 2 F. Harper & F. James, supra note 68, §§ 26.1, 26.5; W. Prosser, supra note 18, § 69. Most of the same arguments have also been made in favor of another form of no-fault liability, workmen's compensation laws. See New York Central R.R. v. White, 243 U.S. 188, 202-05 (1917); 2 F. Harper & F. James, supra § 11.2; W. Prosser, supra § 80.

218. See generally Prosser, The Fall of the Citadel, 50 Minn. L. Rev. 791 (1966); Prosser, The Assault Upon the Citadel, 69 Yale L.J. 1099 (1960).

219. See, e.g., Vandermark v. Ford Motor Co., 61 Cal. 2d 256, 260-61, 391 P.2d 168, 170-71, 37 Cal. Rptr. 896, 898-99 (1964); Greenman v. Yuba Power Prods., Inc., 59 Cal. 2d 57, 63-64, 377 P.2d 897, 901, 27 Cal. Rptr. 697, 701 (1963); Escola v. Coca Cola Bottling Co., 24 Cal. 2d 453, 461, 150 P.2d 436, 440 (1944) (Traynor, J., concurring); James, General Products—Should Manufacturers Be Liable Without Negligence?, 24 Tenn. L. Rev. 923 (1957).

220. Restatement (Second) of Torts § 402A(2)(a) (1965).

221. Id. § 402A(2)(b).

222. See Escola v. Coca Cola Bottling Co., 24 Cal. 2d 453, 461, 150 P.2d 436, 440 (1944) (Traynor, J., concurring); Restatement (Second) of Torts § 402A, Comment c (1975); Calabresi, Some Thoughts on Risk Distribution and the Law of Torts, 70 Yale L.J. 499, 517 (1961); Ehrenzweig, Negligence Without Fault (1951), reprinted in 54 Calif. L. Rev. 1422, 1472-74

<sup>213. 345</sup> F. Supp. at 376.

Enterprise liability can be justified on the same policy grounds as respondeat superior and strict liability. Where an entire industry, engaged in a predictably dangerous enterprise<sup>223</sup> and following similar safety practices, places an identically defective product in the stream of commerce, the industry rather than the individual manufacturer should be the focal point for liability because it can best allocate risks, distribute costs, and take preventive measures. Under these circumstances, privity and the conventional notion of fault are dispensable. Therefore, like respondent superior and strict liability, enterprise liability shifts liability from the one in privity to the parties best able to satisfy these policy goals. While the first two shift liability vertically, from employee to employer and from retailer to wholesaler to manufacturer, enterprise liability shifts it horizontally, from one manufacturer to a group of manufacturers. This horizontal shift is a unique feature of enterprise liability, because the majority of the defendants are consequently not in the chain of distribution of the actual injury-producing product. However, this feature can be considered merely an extension of the theories of respondeat superior and strict liability-the next step in the removal of the requirements of fault and privity.

(1966); Klemme, The Enterprise Liability Theory of Torts, 47 U. Colo. L. Rev. 153 (1976); Morris, Hazardous Enterprises and Risk Bearing Capacity, 61 Yale L.J. 1172, 1175-79 (1952); cf. Calabresi & Hirschoff, Toward a Test for Strict Liability in Torts, 81 Yale L.J. 1055, 1060-74 (1972) (liable party should be one who is best able to make cost-benefit analysis of accident costs); Keeton, Conditional Fault in the Law of Torts, 72 Harv L. Rev. 401, 433-36 (1959) (insured party should be liable, but moral standards more important than risk distribution in strict liability); Posner, A Theory of Negligence, 1 J. Legal Stud. 29 (1972) (negligence system itself based on cost analysis and accident prevention).

223. See notes 229-30 infra and accompanying text. The fact that the manufacture of drugs is predictably dangerous suggests an analogy between the imposition of enterprise liability on the drug industry and liability for "inherently dangerous" activities such as blasting. See Hall v. E.I. Du Pont De Nemours & Co., 345 F. Supp. 353, 377 (E.D.N.Y. 1972). See generally W. Prosser, supra note 18, § 71, at 472-74.

224. 24 Cal. 2d 453, 461-68, 150 P.2d 436, 440-44 (1944) (Traynor, J., concurring).

225. Id. at 467, 150 P.2d at 443 (Traynor, J., concurring).

<sup>226.</sup> Id.

## C. Application of Enterprise Liability to the DES Cases

The DES cases are ideal for this first application of enterprise liability because the drug industry rather than the individual manufacturer is so clearly the proper focal point for liability. It was the industry, and not individual manufacturers, which did not meet the "normal expectations"<sup>227</sup> of society in manufacturing DES. Through imitative drug research, joint submission of clinical data, and parallel, possibly imitative, marketing practices,<sup>228</sup> the industry adhered to an industrywide inadequate safety standard. Therefore the industry as a whole is responsible for consumer reliance on the safety of DES, its widespread use, and the resulting injuries.

The party best able to predict injury and pay claims is also the industry itself, rather than particular manufacturers. Drugs rank high as a cause of consumer injuries, both in frequency and severity.<sup>229</sup> Consequently, catastrophic drug injuries are predictable events,<sup>230</sup> although exactly which injuries will result is not. Industrywide statistics on drug injury have been compiled<sup>231</sup> and presumably are used by insurance companies in order to determine product liability insurance rates. Additionally, large drug manufacturers presently cooperate with each other and the federal government to jointly set industrywide loss control standards.<sup>232</sup> Even greater centralization of statistical data seems possible in the near future, as does the initiation of centralized payment of claims. In view of dramatically rising product liability insurance premiums<sup>233</sup> and drug manufacturers' difficulty in obtaining such

227. Klemme, supra note 222, at 180. Klemme proposed that failure to meet the "normal expectations" of the persons involved is one criterion in the choice of the best "but for" cause of an injury. *Id.* at 180-82. The term "enterprise liability" as used by Klemme does not have the same meaning as that used in this Comment.

228. See notes 45-52 supra and accompanying text.

229. Drug injuries ranked 14th in a list of the 25 worst consumer product injuries of 1975, with combined frequency-severity values assigned to each injury. 1 Gordon Assoc., Inc., Product Liability: Final Report of the Industry Study III-25 (Interagency Task Force on Product Liability, U.S. Dep't of Commerce PB-265-542, 1977) (Table III-6) [hereinafter cited as Industry Study]. Although the drug injuries reported in 1975 represented only 1.4% of all reported product injuries, *id.* at III-27 (Table III-7), they ranked among the highest in severity, *id.* at III-26. It should also be noted that the majority of drug reactions are never reported because of the consumer's or doctor's failure to recognize the relationship between drug and symptom, the doctor's reluctance to report, the absence of an adequate reporting mechanism, and the occasional concealment of adverse effects by drug manufacturers. Merrill, *Compensation for Prescription Drug Injuries*, 59 Va. L. Rev. 1, 4-7 (1973). The United States Public Health Service has estimated one million nonfatal drug reactions per year. *Id.* at 3. By 1960, it was estimated some 40 new diseases were produced by therapeutic drugs. *Id.* 

230. 1 McKinsey & Co., Product Liability: Final Report of the Insurance Study 3-34 (Interagency Task Force on Product Liability, U.S. Dep't of Commerce PB-263-600, 1977) [hereinafter cited as Insurance Study].

231. For example, the National Electronic Injury Surveillance System (NEISS) compiled the statistics used in the Department of Commerce publication cited in note 229 supra. See 1 Industry Study, supra note 229, at III-22.

232. 1 Insurance Study, supra note 230, at 3-34.

233. The cost of that part of their comprehensive general liability premiums attributed to product liability coverage by pharmaceutical companies quadrupled between 1971 and 1976. 2

insurance,<sup>234</sup> several pharmaceutical concerns have established "captive" insurance companies.<sup>235</sup> In other words, they have become self-insurers. It has recently been suggested that the entire industry establish a captive insurance company, which would mean a sharing of risks industrywide.<sup>236</sup> West Germany, which by law requires product liability insurance for drug companies, sets the example of another method of centralizing data and risk—a pool set up by insurance companies to underwrite pharmaceutical products liability.<sup>237</sup> Either alternative would be more likely to provide coverage for drug companies, be more economic, and probably be more efficient than the present system of insurance in the United States. The implementation of such innovations in insurance would be hastened by the adoption of enterprise liability.

Where generically similar drugs are manufactured industrywide, prevention of injury can best be undertaken by the entire industry rather than by the individual manufacturer. Under the present system, unification already exists through the FDA which gathers and interprets safety data supplied to it by the drug industry before and after N.D.A.'s are issued.<sup>238</sup> The FDA's testing requirements before approval of N.D.A.'s are much more comprehensive than they were at the time DES was first manufactured.<sup>239</sup> However, the FDA post-marketing reporting system for adverse reactions has been severely criticized.<sup>240</sup> This reporting system is a major FDA function because serious side effects, which frequently have a low incidence or take years to develop, often do not manifest themselves until a drug has been widely marketed.<sup>241</sup> It

Industry Study, supra note 229, at A-132. The study warns that it was unable to validate these estimates. *Id.* at A-3. Some of the rise in cost must be attributed to inflation during those years. Also, "rate increases that seem huge when viewed in isolation are not nearly so huge when viewed as percentage of sales . . . " 1 Insurance Study, supra note 230, at ES-4. Recent premium increases, in some part due to a correction for past rate inadequacy, are not expected to rise as rapidly in the future. *Id.* 

234. 1 Insurance Study, supra note 230, at 3-34.

235. Id. at 3-34 to 3-35. See generally Comment, Federal Taxation Concepts in Corporate Risk Assumption: Self-Insurance, the Trust, and the Captive Insurance Company, 46 Fordham L. Rev. 781 (1978).

236. Business Insurance, May 16, 1977, at 16, col. 5.

237. 1 Insurance Study, supra note 230, at 3-36.

238. M. Dixon, supra note 2, §§ 5.04, 5.05.

239. More stringent FDA requirements for approval of a new drug were instituted by the Drug Amendments of 1962, Pub. L. No. 87-781, 76 Stat. 780 (codified at 21 U.S.C. § 355 (1970)). Because the Secretary of HEW has authority to exempt drugs from these requirements so that they may be investigated for safety and efficacy prior to approval under 21 U.S.C § 355(i) (1970), comprehensive regulations governing such exemptions have been promulgated. See 21 C.F.R. § 130.3 (1972). The 1962 regulations have resulted in an increase in the cost of investigating new drugs and in the length of time before a new drug can be marketed, as well as in a decrease in the number of new drugs approved yearly. See W. Wardell & L. Lasagna, Regulation and Drug Development 19-25, 45-47 (1975); Spark, Breaking the Drug Barrier, N.Y. Times, Mar. 20, 1977, § 6 (Magazine), at 64.

240. M. Dixon, supra note 2, § 6.09; W. Wardell & L. Lasagna, supra note 239, at 140. Of the 12 countries registered with the World Health Organization's Drug Monitoring System, the U.S. has one of the lowest reporting rates. Id.

241. W. Wardell & L. Lasagna, supra note 239, at 139; Merrill, supra note 229, at 17-20.

has been suggested that, in view of the stringent FDA requirements on drug manufacturers to warn of known or suspected dangers, it is to the manufacturers' advantage not to improve this reporting system.<sup>242</sup> The imposition of enterprise liability would provide incentive to the industry for such improvement, since there would be instances in which it would be liable as a whole. For example, in addition to urging better mechanisms for reporting adverse reactions to the manufacturers than now exist,<sup>243</sup> the industry could establish its own system to collect and collate such reports. This might well be more efficient than waiting for the overworked FDA<sup>244</sup> to coordinate the data it receives.

Economic criteria have already been discussed as significant in the choice of best risk bearer. These are: choice of that enterprise which can best absorb the loss and distribute it most widely, and choice of that enterprise which can distribute the loss to those who benefited from the injury-producing enterprise.<sup>245</sup> A choice of the entire drug industry meets these criteria as well as or better than the individual manufacturer, or the injured plaintiff if no liability were to be found.

The drug industry can best absorb and distribute the loss. Although its profits have decreased in recent years, the industry is a financially healthy one.<sup>246</sup> It is either protected by insurance, albeit at rising costs, or capable of self-insuring.<sup>247</sup> The small manufacturers, which are most susceptible to rising liability and insurance costs,<sup>248</sup> may even be protected by enterprise liability, which is aimed at the largest producers with the major share of the market—the giant drug companies. Claiming that money would be diverted from research and development of new drugs,<sup>249</sup> the drug industry would

249. This is the argument the industry makes to all increases in governmental regulation. Merrill, supra note 229, at 117. Merrill's discussion of why increased liability for the manufacturers would not inhibit research is interesting. See id. at 117-20.

<sup>242.</sup> See M. Dixon, supra note 2, § 6.09.

<sup>243.</sup> There is presently no mandatory system imposed on doctors or hospitals to report adverse drug reactions to either the manufacturers or the FDA. *Id.*; Merrill, *supra* note 229, at 110 n.396. The industry could urge the adoption of such a system.

<sup>244.</sup> See Spark, supra note 239, at 65.

<sup>245.</sup> These criteria consolidate the theories of the sources cited in note 222 supra. Probably the clearest and most comprehensive statement of these criteria is in Klemme, supra note 222. One criterion has been omitted—that the preferred risk bearer is the one who can best allocate resources. Allocation of resources means the charging of an industry with its hidden costs, including the cost of injuries, in order to insure that goods are valued at their true cost. In a free enterprise system, this theoretically results in the proper functioning of the system of supply and demand. Calabresi, supra note 222, at 500-07; Klemme, supra at 158-61. This criterion has been omitted because it has no relevance to the drug industry. Drugs are not supply-demand products, nor do their prices accurately reflect their costs. See notes 59-63 supra and accompanying text. Consequently, while charging the cost of DES-produced injuries to the pharmaceutical industry might be reflected in prices, it would still not result in drugs being valued at their true cost. Neither would price increases be likely to affect the demand for prescription drugs.

<sup>246.</sup> See notes 38-41 supra and accompanying text.

<sup>247.</sup> See notes 233-35 supra and accompanying text.

<sup>248. 1</sup> Insurance Study, supra note 230, at ES-7, 3-35.

obviously resist an increase in its liability costs through the imposition of enterprise liability. In fact, the drug industry has been criticized for expending its research money on unimportant variants of existing drugs rather than on basic research, which raises the question of how much pharmaceutical research is for the public's benefit and how much is simply for profit regardless of benefit.<sup>250</sup> Since drug manufacturers do not spend a large percentage of their total sales on research<sup>251</sup> and spend a great deal on promotion,<sup>252</sup> their concern with the effect of additional costs on research is suspect. This claim is also fallacious because the industry can absorb the cost of higher liability through higher prices; and since demand is relatively inelastic, the industry can retain its present profit margins. To the extent that liability might reduce profit, the industry would be forced to reevaluate and reallocate its presently wasteful research efforts to the public's benefit. As for distribution, the drug industry can obviously distribute the tort loss more widely than individual manufacturers or the plaintiffs. It does so primarily by raising prices.

Analyzed narrowly, the criterion that the ultimate cost of the loss be borne by those who have benefited from the risk-producing enterprise is difficult to meet. Since DES was probably ineffective in preventing miscarriages,<sup>253</sup> neither the women who took it nor their daughters benefited from the drug. Therefore, placing the tort loss on the daughters does not satisfy this goal. Even had DES been effective, its tort cost cannot now be distributed to pregnant women through a retroactive raise in price, since DES is no longer on the market for use in pregnancy. Therefore, placing the loss on the individual manufacturer will not result in distributing the cost to these women. However, distribution through pricing is, in the broadest sense, a distribution of cost to the industry's beneficiaries—the drug-buying public. Enterprise liability thus does satisfy the criterion of distributing cost to the enterprise's beneficiaries. Attaching liability to the entire industry also distributes it to those few who did actually benefit from the manufacture of DES—investors and employees.

250. See notes 45-47 supra and accompanying text. The Senate Committee on Small Business commented: "When two or more firms stand to gain financially from being first with products that can be effectively promoted to prescribers, the likelihood of duplicative research efforts is strong and, from the consumer's standpoint, undoubtedly wasteful. 'Research' that has as its objective merely the circumvention of existing patent barriers, or which is intended only to provide firms with vehicles for market competition, probably results in costs that consumers must bear without the comparable benefits of real product improvement." Senate Report, supra note 38, at 31. Other critics note that the consumer is being cheated of more than his money. "Since the profit motive is the basic guideline for research, . . . the manufacturers spend most of their research money on only the most common disease entities. . . . Consequently, there are many seriously debilitating diseases which would justify the idealistic research suggested by industry publicity, but which now are starved for research funds." M. Dixon, supra note 2, § 6.03, at 6-6.

251. See Senate Report, *supra* note 38, at 31 (chart listing estimated research expenditures for 1969—71 of 13 large drug companies and the percentage of their sales that this represented: percentage of sales ranged from 2.6% to 12.0%).

252. See note 62 supra and accompanying text.

253. See note 12 supra and accompanying text.

## V. CONCLUSION

The DES cases present a gap in tort law. Liability as to multiple defendants, only one of which directly caused injury, cannot be found under present law unless either the theory of concert or of alternative liability is stretched beyond its current limits. Although this Comment has attempted to develop both these concepts logically to a point where they can be applied to the DES cases, application of either theory is makeshift. Therefore enterprise liability, a third theory involving aspects of both, is advocated for adoption by the courts in the DES cases.

The DES cases are only the tip of an iceberg. As technology and science advance, there will be more products liability and analogous cases in which the injured party will be unable to identify the specific cause of his injury.<sup>254</sup> Society faces a choice in these cases: it can either leave the injury where it falls as the price of modern technology; provide sporadic compensation through the application of current tort theories; or adopt a new legal theory which enables it to compensate uniformly. It is suggested that, where such injuries are the result of an entire industry's activity, the industry rather than the injured individual should bear the loss. Enterprise liability accomplishes this. An enlightened tort law should be able to adjust itself to the equities and the economic realities that the DES cases present.

Enterprise liability suggests more than it proposes. Most of the policy arguments advanced in favor of industrywide liability, where the entire industry has concertedly manufactured an identical, defective product, are equally valid even where an injured plaintiff can identify the cause of his injury. Such liability is the logical extension of the more limited liability proposed in this Comment. Understandably, enterprise liability has not been urged in such a situation because existing tort law, which is still firmly grounded in fault and conventional notions of causation, can reach an equitable result. An even greater extension than enterprise liability would be no-fault insurance for all product injuries, subsidized by manufacturers and available to consumers solely on proof of causation of injury by a product.<sup>255</sup> Such solutions are in the province of the legislatures; it is not the function of the courts to propose such broad extensions of liability. It is the courts' business to weigh the equities between the parties before it and where these permit, to compensate tort victims. Enterprise liability permits them to do so in DES and similar cases.

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<sup>254.</sup> See note 36 supra and accompanying text.

<sup>255.</sup> See Baynes, Liability for Vaccine Related Injuries: Public Health Considerations and Some Reflections on the Swine Flu Experience, 21 St. Louis U.L.J. 44, 70-73 & n.173 (1977). Baynes suggests that the swine-flu experience, in which the government underwrote the manufacturers' losses, might provide a model for no-fault legislative solutions in future mass immunization situations. Id. at 74-75.