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## Strict Products Liability and Computer Software: Caveat Vendor, 4 Computer L.J. 373 (1983)

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## NOTES

# STRICT PRODUCTS LIABILITY AND COMPUTER SOFTWARE: CAVEAT VENDOR<sup>†</sup>

### I. INTRODUCTION

Computers are taking control of tasks that formerly required human performance. This assumption of control has had many profound effects. With computers, we have reached to the moon and the planets beyond. Production efficiency has increased through the use of computer-aided design and computer-aided manufacturing (CAD/CAM) techniques. Scientific knowledge has been greatly ex-

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<sup>†</sup> In the context of this Note, strict products liability refers to the doctrine of liability commonly referred to as strict liability, which is imposed upon those who place goods in the marketplace for consumption by the general public. The most commonly used definition of this doctrine is the RESTATEMENT (SECOND) OF TORTS, § 402A (1965):

- (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
  - (a) the seller is engaged in the business of selling such a product, and
  - (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
- (2) The rule stated in Subsection (1) applies though
  - (a) the seller has exercised all possible care in the preparation and sale of his product, and
  - (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.

Four policies are generally recognized as supporting the imposition of strict products liability. First, the party in the best position to detect and eliminate defects should be responsible for damages inflicted by defective products. Second, liability should be placed upon the party best able to absorb and spread the risk or cost of injuries through insurance. Third, a remedy should not be prevented by burdensome requirements of proof, since an injured person is not normally in a position to identify the cause of the defect. Fourth, due to modern marketing methods, consumers rely on the reputation of a manufacturer and no longer adhere to the doctrine of *caveat emptor*. These policy reasons are stated in Noel, *Manufacturers of Products—The Drift Toward Strict Liability*, 24 TENN. L. REV. 963, 1009-10 (1957); Note, *Strict Liability in Hybrid Cases*, 32 STAN. L. REV. 391, 393 (1980); *Escola v. Coca-Cola Bottling Co.*, 24 Cal. 2d 453, 462-68, 150 P.2d 436, 440-43 (1944) (Traynor, J., concurring). See also RESTATEMENT (SECOND) OF TORTS § 402A, comment c (1965) and *Lechuga, Inc. v. Montgomery*, 2 Ariz. App. 32, 37-38, 467 P.2d 256, 261-62 (1970) (Jacobsen, J., concurring).

panded by the awesome computational, "number crunching" ability of the computer. Business transactions have benefitted enormously through the speed and accuracy of today's machines. The resulting increased productivity has allowed us more recreation time—where there is further penetration by computers. We play with computer-controlled video games and with computers themselves. The special effects that we see in movie theaters are created with the help of computers. But, as we all know from these same movies, there is a dark side to all of this power. The next armed international conflict will likely be a stage for computer-designed and computer controlled weapons that are extremely accurate with immense destructive capabilities. Closer to home, programming errors could have tragic consequences where computers are being used for beneficial purposes and seemingly all is safe.

Consider the following scenario: a suburban family sleeps quietly. Their home minicomputer has been loaded with software<sup>1</sup> that makes the computer act as a security device, checking for any door or window movement (burglars) and for changes in temperature (fire). But their software has an undetected flaw in its programming logic and thus they are not alerted to a fire in which they all perish. One commentator has given three chilling examples of what can happen when a computer follows the instructions of faulty software:

Three devastating accidents had occurred. First, an air traffic controller, relying on his instruments, had directed two passenger jets onto an intersecting course. The jets had crashed and all aboard were killed. Second, a subway train, following directions from the central controller, had switched onto a track only to discover another train on that track rushing from the other direction. In the collision dozens had died. Third, industrial workers had found themselves being spattered with molten steel pured from the automated machinery above them. In this, as in the other accidents, investigators eventually traced the fault to errors in the computer programs which had directed the operations.<sup>2</sup>

As these examples show, the consequences of a computer program error can be much more devastating than a checkbook that will not balance. With the increase in computer use, claims resulting from physical harm brought on by computer software errors would seem to be inevitable. Claims may arise from the use of programs to pro-

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1. For the purposes of this Note, "computer program" refers to a sequence of instructions by which a programmer wishes to control a computer, while "software" refers to a tangible item containing the instructions, such as a program listing, punched card deck, magnetic tapes, or magnetic disk. See *Computer Sciences Corp. v. Commissioner*, 63 T.C. 327, 329 (1974).

2. Nycum, *Liability for Malfunction of a Computer Program*, 7 RUTGERS J. COMPUTERS, TECH. & LAW 1 (1979).

vide medical monitoring and diagnosis,<sup>3</sup> to control production,<sup>4</sup> to control the flight of aircraft,<sup>5</sup> and to provide security.<sup>6</sup>

These claims would present the courts with an issue that they have not yet encountered:<sup>7</sup> a strict products liability claim applied to software. While it is well settled that the law of strict products liability applies to goods and not to services,<sup>8</sup> many transactions lie somewhere between a transaction for a product and a transaction for a service, and are referred to as hybrid transactions. These include the fitting of eyeglasses and contact lenses,<sup>9</sup> the purchase and installation of goods into a home or other building,<sup>10</sup> and even a permanent wave treatment for one's hair.<sup>11</sup> Not the least of these hybrid transactions is the transaction for the purchase of software.

One normally receives software in the form of a program stored on a magnetic disk or tape—certainly a “product” or “good” in the sense of a chattel. But one is also paying for the programming expertise of the software developer, as is obvious from the difference

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3. See Brannigan and Dayhoff, *Liability for Personal Injuries Caused by Defective Medical Computer Programs*, 7 AM. J. L. AND MED. 123 (1981) and Freed, *Products Liability in the Computer Age*, 12 FORUM 461, 463 (1977).

4. See Kinnucan, *Computer-Aided Manufacturing Aims for Integration*, HIGH TECH., May-June 1982, at 49.

5. See Meyer, *Computers Transform New Airlines*, HIGH TECH., Sept-Oct. 1981, at 72. See also *Jet Engine Failure Tied to Computer: It's Too Efficient*, L.A. Times, Aug. 24, 1983, § I, at 1, col. 3. Persons aboard a Boeing 767 aircraft operated by United Airlines were forced to endure a four-minute glide while on approach to the Denver airport. There was some speculation that the onboard computer controlling the aircraft's descent had the aircraft operating so efficiently that the engines were not running fast enough to prevent ice from accumulating on the engines. As a result, the engines overheated, and the pilot was forced to turn them off. The aircraft dropped 5000 feet in altitude before the pilot was able to restart the engines. Fortunately, officials said that the plane had cleared a mountain range and could have landed safely even if the pilot had not been able to restart the engines.

6. See *Northrop Complex Nearing Completion*, L.A. Times, March 20, 1983, § VI, at 1, col. 1 (new office complex to have computer-controlled energy management system and computer-controlled monitor systems for office and parking structures).

7. See *Chatlos Systems, Inc. v. National Cash Register Corp.*, 479 F. Supp. 738, 740, note 1 (D. N.J. 1979), *aff'd* 635 F.2d 1081 (3d Cir. 1980), where the court deemed it unnecessary to rule on a computer strict products liability claim.

8. See generally Sales, *The Service-Sales Transaction: A Citadel Under Assault*, 10 ST. MARY'S L.J. 13 (1978); Note, *Strict Liability in Hybrid Cases*, 32 STAN. L. REV. 391 (1980) [hereinafter cited as Note, *Hybrid Cases*]; Note, *Products and the Professional: Strict Liability in the Sale-Service Hybrid Transaction*, 24 HASTINGS L.J. 111 (1972) [hereinafter cited as Note, *Products and the Professional*]; and R. HURSH & H. BAILEY, *AMERICAN LAW OF PRODUCTS LIABILITY*, ch. 4 (2d ed. 1974 & Supp. 1982).

9. See, e.g., *Barbee v. Rogers*, 425 S.W.2d 342 (Tex. 1968).

10. See, e.g., *Hinojasa v. Automatic Elevator Co.*, 92 Ill. App. 3d 351, 416 N.E.2d 45 (1980); *Worrell v. Barnes*, 87 Nev. 204, 484 P.2d 573 (1971).

11. See, e.g., *Newmark v. Gimbel's, Inc.*, 54 N.J. 585, 258 A.2d 697 (1969).

in price between a blank magnetic disk or tape and one with information recorded on it. A blank floppy disk may cost between five and ten dollars, but that same disk with programming may cost hundreds of dollars. The concern of this Note, then, is to determine where software lies on the service-product spectrum. Simply put, the question is: how can one tell whether or not the transaction engaged in will be subject to the law of strict products liability, or burdened with the problems of proof of negligence?<sup>12</sup> This is more than just a question of whether a transaction is for a product or for a service; as one commentator has observed, "the social policy underlying the doctrine has become the definition of a 'product' and 'sale.'"<sup>13</sup> In addition, courts have been wary of the trap of relying on broad dictionary definitions in deciding cases.<sup>14</sup>

## II. THE CURRENT ANALYSIS OF HYBRID TRANSACTIONS AND STRICT PRODUCTS LIABILITY

Most of the current analysis of hybrid transactions and strict products liability centers on the distinctions between professional and commercial businesses,<sup>15</sup> or between transactions whose essential purpose is for services and those whose essential purpose is for products.<sup>16</sup> These distinctions are often cited by the courts and have their bases in the law of sales, where courts had to construe transactions for purposes of the Statute of Frauds or for the applica-

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12. In many cases, it really doesn't matter. The unreasonably dangerous requirement of § 402A requires proof via a risk-utility balancing, which is also what is required for proof of breach of duty in a negligence action. See *United States v. Carroll Towing Co.*, 159 F.2d 169 (2d Cir. 1947). In either case, if the risk of harm is greater than the utility of the action or design, liability follows. See A. WEINSTEIN, A. TWERSKI, H. PIEHLER, & W. DONAHER, *PRODUCTS LIABILITY AND THE REASONABLY SAFE PRODUCT* 9 (1978). But note that some states, such as California, do not impose the unreasonably dangerous requirement. See *Barker v. Lull Engineering Co.*, 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978). In these states, a plaintiff in a products liability case does not have to prove that the product in question had a defect which rendered it unreasonably dangerous, rather, the plaintiff need only prove the existence of a defect and a causally related injury. See L. FRUMER & M. FRIEDMAN, *PRODUCTS LIABILITY*, § 16A[4][g] at 3B-160.

13. Maloney, *What Is or Is Not a Product Within the Meaning of Section 402A*, 57 MARQ. L. REV. 625, 627 (1974).

14. See, e.g., *Johnson v. Sears, Roebuck & Co.*, 355 F. Supp. 1065, 1066 (E.D. Wisc. 1973); *Lowrie v. City of Evanston*, 50 Ill. App. 3d 376, 383, 365 N.E.2d 923, 928 (1977).

15. See Maloney, *supra* note 13; Reynolds, *Strict Liability for Commercial Services—Will Another Citadel Crumble?*, 30 OKLA. L. REV. 298 (1977); Note, *Products and the Professional*, *supra* note 8.

16. See Note, *Hybrid Cases*, *supra* note 8, at 400.

tion of commercial laws.<sup>17</sup>

The professional/commercial distinction focuses on the nature of the business involved. If the party being charged with liability is a professional enterprise—physician, engineer, architect, or attorney—strict liability will not apply to the transaction because it is felt that the policy reasons that justify imposing strict products liability are not present in the case of professional businesses.<sup>18</sup> For example, one court has stated that “[p]rofessional services do not ordinarily lend themselves to the doctrine of tort liability without fault because they lack the elements which gave rise to the doctrine.”<sup>19</sup>

The essential nature or essence test looks to the basic purpose behind entering the transaction in question. If the transaction was entered into primarily for the purchase of a product, the policy reasons underlying strict products liability apply more strongly than if the purchase was for the rendering of services.<sup>20</sup> In *Allied Properties v. John A. Blume & Associates*,<sup>21</sup> a California court stated that “the well settled rule in California is that where the primary objective of a transaction is to obtain services, the doctrines of implied warranty and strict liability do not apply.”<sup>22</sup> Similarly, the Court of Appeals of New York used a “service predominates” test in a case involving a blood transfusion.<sup>23</sup>

In contrast to these attempts at categorization, one court has urged a case-by-case application of the policy reasons underlying strict products liability.<sup>24</sup> This has the appeal of being intellectually satisfying and philosophically “honest.” Nevertheless, on a practical level, it is extremely difficult for businesses and individuals to determine their legal responsibilities and rights before explanatory cases arise. This undermines confidence in the legal system, which is essential for public support of government in general and for a healthy

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17. See, e.g., *Milau Assocs. v. North Ave. Dev. Corp.*, 42 N.Y.2d 482, 485, 368 N.E.2d 1247, 1249 (1977).

18. See *La Rossa v. Scientific Design Co.*, 402 F.2d 937, 942, (3d Cir. 1968); *Gagne v. Bertran*, 43 Cal. 2d 481, 487, 275 P.2d 15, 20-21 (1954); *Schipper v. Levitt & Sons, Inc.*, 44 N.J. 70, 207 A.2d 314 (1965).

19. *La Rossa v. Scientific Design Co.*, 402 F.2d 937, 942 (3d Cir. 1968). The elements include mass production of goods, such that public policy places responsibility for injury-causing defects on the manufacturer, and a disparity in position and bargaining power which leads to consumer dependence on the producer for assurance of a quality product.

20. See Note, *Hybrid Cases*, *supra* note 8, at 400-01.

21. 25 Cal. App. 3d 848, 102 Cal. Rptr. 259 (1972).

22. *Id.* at 855, 102 Cal. Rptr. at 264 (citation omitted).

23. *Perlmutter v. Beth David Hospital*, 308 N.Y. 100, 104, 123 N.E.2d 792, 794 (1954). But see cases cited *infra* note 52.

24. *Johnson v. Sears, Roebuck & Co.*, 355 F. Supp. 1065, 1067 (E.D. Wis. 1973).

judiciary in particular.<sup>25</sup>

The purpose of this Note is to formulate guidelines usable in a predictive fashion. Advocating an application of the policy reasons justifying strict products liability to each individual case will not be of much benefit. Policy arguments are subject to broad interpretation and do not have great predictive value, as they are not closely connected to particular fact situations. Past professional/commercial distinctions are also inappropriate because computer specialists may or may not be classified as professionals (as are engineers, architects, and surveyors).<sup>26</sup> While the lay person does not typically consider computer programmers in the same light as architects or physicians, there is industry licensing of computer specialists and many programmers clamor for recognition as bona fide professionals. Finally, the service/product distinction, or essence test, is not helpful because the courts have had difficulty with hybrid transactions such as software sales. Software transactions are not easily placed in either category. They run from the purchase of a twenty dollar game cartridge to a sophisticated software support system that may cost hundreds of thousands of dollars.

Instead, this Note will establish guidelines that may be used to determine whether or not strict products liability will apply to a transaction. These guidelines will look beyond the doctrines recited by the courts in justifying their decisions, since their doctrines could easily be overbroad. Rather, the doctrines will be analyzed and synthesized into rules.

### III. STRICT PRODUCTS LIABILITY: THE CASES

The cases are divided according to factually similar circumstances. This is done for several reasons. First, it is important to avoid a grouping that may predispose the outcome of the analysis. This is akin to the principle behind dictionaries: don't use a word to

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25. Note the criticism of one commentator, who said:

Although the *Johnson* decision represents a praiseworthy attempt to overcome the technical sales-service distinction, the court's reasoning is based on an equally technical and perhaps even more confusing foundation. In differentiating between 'professional medical' and 'mechanical and administrative' services, the court resurrects a distinction which proved so difficult to apply that it was criticized and abandoned by the court in which it originated. . . .

. . . More importantly, the distinction only serves to obscure the issues in the broad policy debate now under way concerning the manner in which the law should view the role of hospitals in society.

Recent Developments, *Torts—Strict Liability—Hospitals May be Strictly Liable for Administrative Services*, 41 TENN. L. REV. 392, 399-400 (1974).

26. See *Pezzillo v. General Tel. & Elec. Information Sys., Inc.*, 414 F. Supp. 1257 (M.D. Tenn. 1976).

define itself. Next, when trying to discern what guidelines a court may be using it is most helpful to examine cases that contain similar factual circumstances, but different outcomes. This will more clearly reveal what facts courts deem to be important in deciding to apply strict products liability. Lastly, dividing the cases according to factual similarity may reveal particular transactions that the courts treat separately.

#### A. HEALTH CARE

The first group of cases encompasses strict liability claims against hospitals, doctors, dentists, and optometrists. No case has been found holding a medical practitioner strictly liable in the practice of his profession. The court in *Carmichael v. Reitz* said that this is due to the fact that medical treatment is especially inappropriate for the application of strict products liability.<sup>27</sup> The court noted that one of the requisites that the Restatement (Second) of Torts recognizes for the imposition of strict liability is that the seller of the object causing the injury be engaged in the business of selling the product.<sup>28</sup> Here, a patient had sustained an injury as a result of ingesting a drug prescribed by a physician. The court expressed the view that there is a distinction between a transaction in which the primary objective is to acquire the ownership or use of a product, and a transaction in which the dominant purpose is to obtain services. The court stated that: "[t]he physician's services depend upon his skill and judgment derived from his specialized training, knowledge, experience, and skill."<sup>29</sup>

*Barbee v. Rogers*<sup>30</sup> presents a hybrid transaction of special difficulty. Two optometrists operated an optical company as a partnership with eighty-four offices employing approximately one hundred and twenty-five licensed optometrists. The sale of contact lenses was promoted by newspaper, radio, and television advertisements. In addition, the contact lenses were sold for the same price regardless of the extent of the services required for proper fitting.<sup>31</sup> The court admitted that "the activities of [the defendants] fall between those ordinarily associated with the practice of a profession and those characteristic of a merchandising concern."<sup>32</sup> Even so, strict

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27. *Carmichael v. Reitz*, 17 Cal. App. 3d 958, 978-79, 95 Cal. Rptr. 381, 392-93 (1971).

28. *Id.* at 979, 95 Cal. Rptr. at 393 (quoting RESTATEMENT (SECOND) OF TORTS § 402A(1)(a) (1965)).

29. *Id.*

30. 425 S.W.2d 342 (Tex. 1968).

31. *Id.* at 344.

32. *Id.* at 345.



products liability was held not to apply in this situation. The court summarized as follows:

Apart, then, from [defendants'] way of practicing optometry, the fact remains that the contact lenses sold to [plaintiff] were designed in the light of his particular physical requirements and to meet his particular needs . . . They were not a finished product offered to the general public in regular channels of trade. The considerations supporting the rule of strict liability are not present.<sup>33</sup>

The court thought it important that the failure here was not attributed to the product itself, but to the professional act of measuring the power of vision of the customer and fitting lenses to correct or remedy the defective vision. The complaint of the plaintiff dealt with the fitting of the lenses. The court decided that the defendant was not in the business of selling products in the sense of section 402A of the Restatement.

There have been numerous cases where a patient has been injured due to a defective item used by a medical professional during the course of treatment—a hypodermic needle that broke in a dental patient's jaw,<sup>34</sup> a catheter that broke while being inserted into a patient's arm,<sup>35</sup> and a surgical needle that broke during a hysterectomy<sup>36</sup> are all examples. In each of these cases, the court decided that strict products liability was not applicable to the doctor using the instrument. In *Silverhart v. Mount Zion Hospital*, the court noted that whenever strict products liability had been extended beyond a manufacturer, the defendant had played an integral part in the overall production or marketing enterprise, or at least was a link in the chain of getting goods from the manufacturer to the ultimate consumer.<sup>37</sup> The court in *Vergott v. Deseret Pharmaceutical Co.* noted that the hospital involved would not be liable since it was not engaged in the business of selling the particular product involved in the case.<sup>38</sup> In *Magrine v. Krasnica*, the court gave several reasons for its holding: the dentist was in no better position than the patient to control, inspect, and discover the defect; the dentist did not put the item in the stream of commerce; and placing the liability on the dentist would defer liability that should rightly be placed on the manufacturer. The court relied on the dominant purpose test in

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33. *Id.* at 346.

34. *Magrine v. Krasnica*, 94 N.J. Super. 228, 227 A.2d 539 (Law Div. 1967), *aff'd sub nom. Magrine v. Spector*, 100 N.J. Super. 223, 241 A.2d 637 (App. Div. 1968), *aff'd per curiam* 53 N.J. 259, 250 A.2d 129 (1969).

35. *Vergott v. Deseret Pharmaceutical Co.*, 463 F.2d 12 (5th Cir. 1972).

36. *Silverhart v. Mount Zion Hospital*, 20 Cal. App. 3d 1022, 98 Cal. Rptr. 187 (1971).

37. *Id.*

38. *Vergott v. Deseret Pharmaceutical Co.*, 463 F.2d 12 (5th Cir. 1972).

holding that the essence of the relationship was for professional services and skill.<sup>39</sup> In each case, the medical practitioner was not held strictly liable.

The Michael Reese Hospital and Medical Center in Illinois was a defendant in three separate actions brought by patients who had received x-ray therapy. The patients claimed that their malignant tumors were caused by the therapy, which had been given for tonsillitis. Again, the court refused to apply strict products liability. In both *Dubin v. Michael Reese Hospital*<sup>40</sup> and *Greenberg v. Michael Reese Hospital*,<sup>41</sup> the court stated that the action related to an error in professional judgment rather than to the nature of x-radiation itself. In *Pitler v. Michael Reese Hospital*,<sup>42</sup> the court specifically decided that the administration of radiation treatment was not the sale of a product, so that strict liability in tort was not applicable.

The court in *Johnson v. Sears, Roebuck & Co.*<sup>43</sup> denied a motion to dismiss a strict products liability claim against a hospital. The court noted that strict liability does not apply to medical services by doctors, but stated that strict liability could apply to the mechanical and administrative services provided by hospitals. This rather anomalous result was justified by the court on the grounds that "it is in the public interest that those services which hospitals perform for both doctors and patients be performed properly."<sup>44</sup> The court pointed to the serious consequences of defective hospital services, the near total inability of laymen to recognize or control such defective service, and the importance of providing doctors with accurate information to use when determining an appropriate treatment. Among the reasons for excluding doctors from strict products liability was the fact that "doctors do not contract with patients to provide cures but rather to provide treatment in a non-negligent manner."<sup>45</sup> How this distinguished doctors from hospitals the court did not say, even with regard to routine administrative services. The holding has met with disapproval from at least one commentator.<sup>46</sup>

The action in *Hoven v. Kelble*<sup>47</sup> was brought by a husband and wife who sought to recover damages for injuries suffered by the husband while undergoing a lung biopsy. While conceding that the pro-

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39. 94 N.J. Super. at 235, 227 A.2d at 543.

40. 83 Ill. 2d 277, 415 N.E.2d 350 (1980).

41. 83 Ill. 2d 282, 415 N.E.2d 390 (1980).

42. 92 Ill. App. 3d 739, 415 N.E.2d 1255 (1980).

43. 355 F. Supp. 1065 (E.D. Wis. 1973).

44. *Id.* at 1067.

45. *Id.*

46. See *supra* note 25.

47. 79 Wis. 2d 444, 256 N.W.2d 379 (1977).

vider of medical services stands in substantially the same position with respect to the patient as the seller of goods does to the consumer, the court refused to apply strict products liability to the rendering of medical services, noting:

[O]ther considerations call for caution in moving in the direction the plaintiffs advocate. There are differences between the rendition of medical services and transactions in goods (or perhaps other types of services as well). Medical and many other professional services tend often to be experimental in nature, dependent on factors beyond the control of the professional, and devoid of certainty or assurance of results. Medical services are an absolute necessity to society, and they must be readily available to the people.<sup>48</sup>

The court ended with the observation that "the consequences of the step the plaintiffs urge cannot be predicted with sufficient clarity to permit that step to be taken."<sup>49</sup> This case helps explain why courts traditionally treat service transactions differently from goods transactions.

#### B. BLOOD TRANSFUSIONS

The provision of blood for transfusions has generated substantial interest on the part of legislatures<sup>50</sup> and commentators<sup>51</sup> as well as in the courts.<sup>52</sup> The leading case imposing strict products liability is *Cunningham v. MacNeal Memorial Hospital*,<sup>53</sup> while the leading case refusing to impose liability without fault is *Perlmutter v. Beth David Hospital*.<sup>54</sup> In *Cunningham*, the court refused to distinguish blood banks from hospitals and applied strict products liability to both.

Although it may be conceded that a blood bank's *principal function* is to stockpile blood for dispensation to various institutions, whereas a hospital ordinarily provides blood for transfusion purposes only ancillary and as a part of its total services, both entities

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48. *Id.* at 469, 256 N.W.2d at 391.

49. *Id.* at 472, 256 N.W.2d at 393.

50. See CCH PRODUCTS LIABILITY REPORTS ¶ 1187 (May 1983).

51. See Note, *Strict Liability—The Medical Service Immunity and Blood Transfusions in California*, 7 U.C.D.L. REV. 196 (1974); Sales, *supra* note 8, at 27; Maloney, *supra* note 13, at 641; Note, *Products and the Professional*, *supra* note 8, at 121.

52. Some representative cases: *Perlmutter v. Beth David Hosp.*, 308 N.Y. 100, 123 N.E.2d 792 (1954); *Cunningham v. MacNeal Memorial Hosp.*, 47 Ill. 2d 443, 266 N.E.2d 897 (1970); *Balkowitsch v. Minneapolis War Memorial Blood Bank, Inc.*, 270 Minn. 151, 132 N.W.2d 805 (1965); *Baptista v. St. Barnabas Medical Center*, 57 N.J. 167, 270 A.2d 409 (1965); *Brody v. Overlook Hosp.*, 127 N.J. Super. 331, 317 A.2d 392 (1974); *Shepard v. Alexian Bros. Hosp.*, 33 Cal. App. 3d 606, 109 Cal. Rptr. 132 (1973).

53. 47 Ill. 2d 443, 266 N.E.2d 897 (1970).

54. 308 N.Y. 100, 123 N.E.2d 792 (1954).

are clearly within the distribution chain of the product involved.<sup>55</sup>

Once the court decided that the providing, for a fee, of blood for transfusion was the selling of a product, strict products liability naturally followed. It should be noted that as a result of the holding in *Cunningham* many states passed legislation declaring that providing blood for transfusion is not a product sale for purposes of strict products liability.<sup>56</sup>

In *Perlmutter*, the court refused to find an implied warranty attached to the transfusion of blood. The court held that the service element dominated the transaction, and that the transaction could not be split between the rendering of a service and the providing of a product. Most courts denying strict liability do so on the grounds that a service transaction is present, thus employing the essence test of *Perlmutter*. Some courts employ an "unavoidably unsafe product" rationale in denying strict liability, but, by and large, state legislative action has preempted this approach. Therefore, *Perlmutter* and *Cunningham* continue to be the primary cases in this area and the analysis here is divided between the essence test or primary purpose test (*Perlmutter*) and the distribution or stream of commerce rationale (*Cunningham*).

### C. ENGINEERING AND DESIGN TRANSACTIONS

Engineering firms, like physicians, have been free of the imposition of strict products liability in their work. The leading case is *La Rossa v. Scientific Design Co.*,<sup>57</sup> an action for wrongful death and claim for survival. The defendant had contracted with the decedent's employer to design, engineer, and supervise the construction and the initial operation of a new chemical plant. The important factor in the court's analysis was whether or not there had been a mass production of goods reaching the marketplace. The court decided that the particular engineering services affected only the small group of employees and had no impact on the public at large.<sup>58</sup> The court noted that there was neither mass production of goods nor any large body of distant consumers, and that, therefore, the elements

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55. 47 Ill. 2d 443, 452, 266 N.E.2d 897, 901 (emphasis in original).

56. See, e.g., *Glass v. Ingalls Memorial Hosp.*, 32 Ill. App. 3d 237, 238 n.1, 336 N.E.2d 495, 497 n.1 (1975). See also PROD. LIAB. REP. (CCH) ¶ 4290 (Jan. 1983). Also note that New Jersey courts interpret blood transfusions as products, but as products that are unavoidably unsafe, therefore taking them out of the reach of § 402A of the Restatement (Second) of Torts. See PROD. LIAB. REP. (CCH) ¶ 4290.228 at 4405 (Jan. 1983).

57. 402 F.2d 937 (3d Cir. 1968); see also *Chatlos Sys., Inc. v. National Cash Register Co.*, 635 F.2d 1081 (3d Cir. 1980), cert. dismissed, 457 U.S. 1112 (1982).

58. 402 F.2d at 943.

that give rise to strict products liability were lacking.<sup>59</sup>

Another important case is *Gagne v. Bertran*,<sup>60</sup> which involved a soil tester. The court refused to impose liability without fault in the form of an implied warranty because the essence of the transaction was for the rendering of a service. The court stated that experts are sought because of their special skill. One who hires such a person is purchasing service, not insurance. Because there was no sale of a product involved, it was improper to impose strict liability. Similar methods of analysis have been applied, with similar results, to a soil tester,<sup>61</sup> the designer of a sprinkler system,<sup>62</sup> a water system design firm,<sup>63</sup> a marine engineering firm,<sup>64</sup> and an architect.<sup>65</sup> For example, in *Stuart v. Crestview Mutual Water Co.*,<sup>66</sup> the court found that the engineering firm had rendered a professional service, and was not "analogous to manufacturers who place products on the market and who are, therefore, in the best position to spread the cost of injuries resulting from defective products."<sup>67</sup>

#### D. HOME AND BUILDING CONSTRUCTION

The construction cases are roughly split between two types of circumstances: (1) a construction firm builds single-family homes as part of a development and incurs strict liability for construction defects; and (2) a firm constructs unique structures that are not part of a planned development and does not incur strict liability.<sup>68</sup> For example, *Schipper v. Levitt & Sons, Inc.*<sup>69</sup> was an action against a builder vender of a home in a housing project. Injuries were sustained by a child of the purchasers' lessee due to excessively hot water drawn from a bathroom faucet. The court held that the builder could be held liable on the theory of strict liability upon

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59. *Id.* at 942.

60. 43 Cal. 2d 481, 275 P.2d 15 (1954).

61. *Swett v. Gribaldo, Jones & Assocs.*, 40 Cal. App. 3d 573, 115 Cal. Rptr. 99 (1974).

62. *Milau Assocs. v. North Ave. Dev. Corp.*, 42 N.Y.2d 482, 368 N.E.2d 1247, 398 N.Y.S.2d 882 (1977).

63. *Stuart v. Crestview Mut. Water Co.*, 34 Cal. App. 3d 802, 110 Cal. Rptr. 543 (1973).

64. *Allied Properties v. John A. Blume & Assocs., Eng'rs*, 25 Cal. App. 3d 848, 102 Cal. Rptr. 259 (1972).

65. *Queensbury Union Free School Dist. v. Jim Walter Corp.*, 91 Misc. 2d 804, 398 N.Y.S.2d 832 (1977).

66. 34 Cal. App. 3d 802, 110 Cal. Rptr. 543 (1973).

67. *Id.* at 811, 110 Cal. Rptr. at 549.

68. *See, e.g., Kriegl v. Eichler Homes, Inc.*, 269 Cal. App. 2d 224, 228-29, 74 Cal. Rptr. 749, 753 (1969); *Del Mar Beach Club Owners Ass'n v. Imperial Contracting Co.*, 123 Cal. App. 3d 898, 911-13, 176 Cal. Rptr. 886, 893-94 (1981).

69. 44 N.J. 70, 207 A.2d 314 (1965).

proof that the hot water distribution system design was unreasonably dangerous and had proximately caused the injury. The defendant was a well-known developer of planned communities. The home in question was part of a development called Levittown, now known as Willingboro, New Jersey. The homes were generally sold on the basis of advertised models that were constructed to Levitt's specifications. The court looked to the policy reasons that gave rise to the doctrine of strict products liability and concluded that there was no meaningful distinction between the defendant's mass production and sale of homes, and the mass production and sale of automobiles. Since the pertinent policy considerations were the same, the liability principles normally applied to producers of goods also applied to the defendant. The court then observed that:

*Caveat emptor* developed when the buyer and seller were in an equal bargaining position and they could readily be expected to protect themselves in the deed. Buyers of mass produced development homes are not on an equal footing with the builder vendors and are no more able to protect themselves in the deed than are automobile purchasers in a position to protect themselves in the bill of sale.<sup>70</sup>

Similarly, the owner of a new home brought suit in *Humber v. Morton*,<sup>71</sup> alleging that the fireplace and chimney were improperly constructed so that the house caught fire and partially burned the first time that a fire was lighted in the fireplace. The court held that an implied warranty (the basis for a tort action in Texas) applied to new houses. The contractor in *Worrell v. Barnes*<sup>72</sup> was held liable for damage to a home from a fire resulting from a leaky gas fitting installed when the home was remodelled. This was not a case involving the purchase of a new home, so the home itself was not classed as a product. Instead, the court decided that the gas fitting was a defective product, and that therefore the installation of the fitting that resulted in fire damage to the home was subject to a cause of action for liability without fault.

On the other hand, *Heller v. Cadral Corporation*<sup>73</sup> resulted in the holding that a condominium was not a product within the doctrine of strict products liability. The court decided that there was no such liability since there was no mass production and mass marketing of the unit, there was no difficulty of access to a remote manufacturer or supplier, and there was no mass production over which to distribute the risk of injury. A similar result was reached in *Low-*

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70. *Id.* at 91-92, 207 A.2d at 326.

71. 426 S.W.2d 554 (Tex. 1968).

72. 87 Nev. 204, 484 P.2d 573 (1971).

73. 84 Ill. App. 3d 677, 406 N.E.2d 88 (1980).

*rie v. City of Evanston*,<sup>74</sup> in which the court held that neither a parking structure nor a parking space within it was a product within the doctrine of strict products liability. The court considered the language of section 402A of the Restatement (Second) of Torts, along with its framers' intent, and considered the adequacy of alternative remedies, such as the law of implied warranties and the law of negligence.

#### E. SALES TRANSACTIONS

This grouping contains a diverse collection of claims that is not easily categorized beyond the commercial nature of the relationships. In most of the cases reviewed, strict products liability was applied to the transaction in question. Most of the cases look to the degree of participation in bringing a defective product to the marketplace, where unsuspecting consumers are injured.<sup>75</sup>

In one of the cases where strict products liability was held not to apply, *Kaiser Steel Corp. v. Westinghouse Electric Corp.*, neither of the parties was a consumer.<sup>76</sup> The plaintiff was the Kaiser Steel Corporation, and the defendant was the Westinghouse Electric Corporation. The court held that the plaintiff was not within the class of persons protected by the doctrine of products liability. Therefore, any societal interest in loss shifting was absent and the plaintiff would be forced to rely on the law of sales. The court noted that the parties were contracting from positions of relatively equal bargaining power for a product designed to negotiable specifications and not furnished off the shelf. The court then concluded that:

[T]he doctrine of products liability does not apply as between parties who: (1) deal in a commercial setting; (2) from positions of relatively equal economic strength; (3) bargain the specifications of the product; and (4) negotiate concerning the risk of loss from defects in it.<sup>77</sup>

This case is very instructive as to why some transactions are subject to strict products liability and some are not. For cases conferring li-

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74. 50 Ill. App. 3d 376, 365 N.E.2d 923 (1977).

75. See, e.g., *Ramsey v. Marutamaya Ogatsu Fireworks Co.*, 72 Cal. App. 3d 516, 140 Cal. Rptr. 247 (1977). Plaintiffs were employed to conduct a fireworks display and were injured when some fireworks exploded. The appellate court held that the defendant sponsors of the display, who purchased the fireworks, were not liable under a strict products liability theory since they were not engaged in the business of distributing fireworks to the public and were not a link in the marketing of the fireworks. However, they were held liable under a negligence theory.

76. *Kaiser Steel Corp. v. Westinghouse Elec. Corp.*, 55 Cal. App. 3d 737, 127 Cal. Rptr. 838 (1976).

77. *Id.* at 748, 127 Cal. Rptr. at 845.

ability, the accent is on the individual consumer, the disparate economic strength, and the lack of any opportunity to negotiate regarding the nature of the product or recourse in the event of defects or dissatisfaction.

Another case where liability was rejected is *Hinojasa v. Automatic Elevator Co.*<sup>78</sup> The plaintiff brought suit against an elevator installer for injuries sustained when the overhead door of a freight elevator fell upon him at his place of employment. The court held that the defendant was not legally responsible as the manufacturer, that the defendant was not liable as an installer/assembler, and that the doctrine of strict products liability does not extend to an installer who is not also the seller of the product. Rather, an installer of parts is responsible in strict liability only if he also sells the parts and thereby receives profit from placing the product in the stream of commerce. Additionally, there is an implied requirement that the parts, when assembled, constitute a product or a unit of their own. Thus, in *Stafford v. International Harvester*,<sup>79</sup> the defendant in question replaced the steering mechanism on plaintiff's truck. Later, the steering mechanism failed and caused an accident in which the truck owner received severe and permanent injuries. The court held that strict products liability did not apply because the parties had entered into what was predominately a service contract. In comparing *Stafford* with *Hinojasa*, one sees that, although the defendant in *Stafford* sold the parts in question, the parts themselves again were assimilated into a product that had originally been sold by someone else. In *Hinojasa*, although the defendant was responsible for the assimilation of the parts into a whole (consisting of the parts themselves), the defendant had not sold the parts alleged to be defective. Although both cases involved defendants ostensibly engaged in the providing of a service, not all such defendants escape liability.

*Newmark v. Gimbel's Inc.*<sup>80</sup> was an action brought against a beauty parlor by a patron for injuries allegedly caused by a permanent wave solution. One might easily characterize the defendant as one providing a service and therefore in no way comparable to a manufacturer or retailer of products; however, the court held that persons whose regular course of business is the distribution of products to the public are subject to strict products liability. The defendant attempted to characterize itself as the provider of a service in the same way that a doctor or a dentist is the provider of a service. In refusing to accept this characterization, the court noted that

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78. 92 Ill. App. 3d 351, 416 N.E.2d 45 (1980).

79. 668 F.2d 142 (2d Cir. 1981).

80. 54 N.J. 585, 258 A.2d 697 (1969).



neither medicine nor dentistry is an exact science, in that there is no implied warranty of cure or relief. Instead, the court found the plaintiff to be more like a typical retailer who is part of the overall producing and marketing enterprise that should bear the cost of injuries resulting from defective products.

The defendant in *Halstead v. United States*<sup>81</sup> used a similar "provider of a service" argument with the same result. This case was not as difficult to characterize, however. The wrongful death actions arose out of the crash of a small private plane into a mountain range. Plaintiffs alleged that the accident resulted from the negligence of federal air traffic controllers and from a defect in a navigational chart. The defendant chart manufacturer argued that the essence of its transaction was the conveyance of information, which was the rendering of a service and not the providing of a product. The analogy to computer software is readily apparent. The court did not accept defendant's argument, but pointed to the context in which the information was provided: "If suitable for mass marketing, the information is in some sense a fungible good for which the manufacturer placing it on the market must assume responsibility."<sup>82</sup> Thus, in commercial transactions the courts focus on the mass production and mass distribution aspects of the business.

#### F. ELECTRICITY

The electricity cases involve plaintiffs who have been injured by high voltage and defendant utility companies who provide electricity. In some cases the courts effectively avoid the policy issues by holding that the electricity, whether or not it was a product, was not placed in the stream of commerce.<sup>83</sup> Numerous plaintiffs have tried to rely on the rule from the English case of *Rylands v. Fletcher*,<sup>84</sup> regarding strict liability for abnormally dangerous activities, but no court has accepted it.<sup>85</sup>

In *Genaust v. Illinois Power Co.*<sup>86</sup> the plaintiff was injured when an electric current arced from overhead power lines and electrified an antenna and tower that he was erecting. Plaintiff brought a strict

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81. 535 F. Supp. 782 (D. Conn. 1982).

82. *Id.* at 791.

83. See, e.g., *Genaust v. Illinois Power Co.*, 62 Ill. 2d 456, 343 N.E.2d 465 (1976); *Hedges v. Public Service Co.*, 396 N.E.2d 933 (Ind. Ct. App. 1979); *Petroski v. Northern Indiana Public Service Co.*, 171 Ind. App. 14, 354 N.E.2d 736 (1976); *Williams v. Detroit Edison Co.*, 63 Mich. App. 559, 234 N.W.2d 702 (Mich. Ct. App. 1975); *Kemp v. Wisconsin Electric Power Co.*, 44 Wis. 2d 571, 172 N.W.2d 161 (1969).

84. 3 L.R.-E. & I. App. 330 (1868).

85. See Annot., 82 A.L.R.3d 218, § 4 (1978).

86. 62 Ill. 2d 456, 343 N.E.2d 465 (1976).

products liability suit against the utility company who owned the premises, the seller of the antenna and tower, and the manufacturers of the antenna and tower. The court affirmed a lower court holding that there was no cause of action based upon strict liability in tort. The court stated that "[t]he doctrine of strict liability was not intended to encompass injuries resulting from a 'product' which is in an unmarketable state and which had not yet been released into the stream of commerce by sale or display to the consumer."<sup>87</sup>

In *Ransome v. Wisconsin Electric Power Co.*,<sup>88</sup> the owners of a home that was destroyed by fire as a result of an electrical overload caused when lightning struck a transformer brought a strict liability action against the electric company. The court held that electricity is a consummable product and that therefore the principles of strict liability are applicable. The court noted that electricity is a form of energy that can be produced by men, confined, controlled, transmitted, and distributed. Further, even though the distribution of electricity via transmission lines may be a service, the electricity itself is a product. The court expressed the view that strict products liability for electricity is justified because consumer self-protection is not feasible. Also, the seller is in a better position to anticipate, protect against, and eliminate possible dangerous electricity overloads, and the seller can more easily absorb or spread or insure against any financial losses which result. The court in *Aversa v. Public Service Electric and Gas Co.*<sup>89</sup> relied upon *Ransome* and came to the same result, holding that when electricity has been introduced into the stream of commerce by a sale or otherwise, the liability of the electric company is not dependent upon a showing of negligence, but may be based upon a strict products liability action.

Another recent case, *Elgin Airport Inn, Inc. v. Commonwealth Edison Co.*,<sup>90</sup> denied strict liability against the utility company. The court held that the electricity that caused damage to the plaintiff's appliances was not abnormally dangerous in any event,<sup>91</sup> and thereby never reached the issue of whether or not electricity is a product. It is interesting to note, however, that this holding by the Supreme Court of Illinois reversed the lower court's determination that electricity is a product and that strict products liability applies

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87. *Id.* at 465, 343 N.E.2d at 470.

88. 87 Wis. 2d 605, 275 N.W.2d 641 (1979).

89. 186 N.J. Super. 130, 451 A.2d 976 (1982).

90. 89 Ill. App. 3d 138, 432 N.E.2d 259 (Ill. Ct. App. 1982).

91. Activities that are described as being abnormally dangerous have traditionally been subject to strict tort liability. Activities of this type, however, typically involve such actions as keeping wild animals, using explosives, or using poisonous substances. See RESTATEMENT (SECOND) OF TORTS §§ 519, 520 (1977).

to the utility.<sup>92</sup>

#### IV. STRICT PRODUCTS LIABILITY: THE RULES

Before considering any rules to be gleaned from the cases just reviewed, one must recognize the most important rule that is applied to all strict products liability cases: there must be a physical harm.<sup>93</sup> Liability without fault is a potentially onerous burden to place on a party, notwithstanding questions of causation. Normally, courts are reluctant to intrude into the dealings of individuals, and would prefer that the parties work out mutually satisfactory compromises on their own. When physical injury occurs, there is more at stake than a group of dissatisfied individuals. There is a possibility of widespread societal effects such as pain, trauma, suffering, and fear, in addition to economic effects such as medical costs, insurance fees, lost wages, and business instability. Likewise, destruction of property is more significant than the loss of a bargain. Physical harm, then, is a significant enough consequence that an intrusion into individual liberty in the form of government legislation and adjudication of liability is appropriate.

Another indispensable element is the presence of a consumer. Modern products liability law developed in response to modern marketing methods where there is consumer reliance on the skill and judgment of a distant manufacturer. As *Kaiser Steel Corp. v. Westinghouse Electric Corp.*<sup>94</sup> demonstrates, one of the elements of a strict products liability action is that one of the parties is a consumer with little bargaining power in relation to the business enterprise. The purposes of strict products liability will not be served by imposing tort liability where two businesses negotiate a commercial transaction. But when an unsuspecting consumer purchases an item based on advertising that implicitly promises quality, and who rightly assumes that the item will be safe for use, that person will be provided with protection should he be harmed. Society has decided that it is not too much to ask that an item not injure people.

The outcome of some cases may be determined by looking to the essence or primary purpose of the transaction, or by examining the nature of the business and its relationship to its customers.

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92. For the lower court holding see *Elgin Airport Inn Inc. v. Commonwealth Edison Co.*, 88 Ill. App. 3d 477, 410 N.E.2d 620 (1980).

93. Strict products liability does not apply to cases where there is only economic injury. See *PROD. LIAB. REP.* (CCH) ¶¶ 4220, 4230 (Aug. 1982); W. PROSSER, *HANDBOOK ON TORTS* § 101 (4th ed. 1971).

94. 55 Cal. App. 3d 737, 127 Cal. Rptr. 838 (1976). See *supra* note 76 and accompanying text.

Such an inquiry will help to determine which party is in the best position to discover and prevent defects, to determine the degree of reliance on the part of the consumer, and the extent of difficulty of proof of negligence that the consumer faces. This will not be sufficient, however, in cases at the margin, where the service/product distinction blurs and new technologies create new professionals. For example, should computer programmers be characterized as professionals? Physicians are accepted as professionals and are therefore not subject to strict liability for their work. (Of course, their work is also subject to a high standard of care.) The blurring of the service/product distinction can be seen where courts struggle with characterizing electricity as a product or service. Query whether receiving software over communications lines is like purchasing electricity, or if it is merely detecting changes in voltages that represent data? In such cases one must synthesize rules from previously decided cases instead.

One of the most important rules to be generalized from the cases is that strict products liability will be imposed where there is mass production of an item, with mass distribution and mass marketing methods employed to bring the item to consumers. The court in *La Rossa v. Scientific Design Co.*<sup>95</sup> decided not to apply liability because only a small group of employees was affected while the public at large was spared. Similarly, the court in *Heller v. Cadral Corporation*<sup>96</sup> decided that for the condominium in question, there was no difficulty in locating a distant manufacturer or supplier. The difficulty in locating such parties and the concomitant difficulty in proving negligence had contributed to the rise of strict products liability. Without these elements, strict products liability was inappropriate. Continuing the mass market analogy, the *Halstead v. United States*<sup>97</sup> court decided that the conveyance of information in the form of mass-produced maps was sufficient to justify imposition of strict liability. Transforming the information into items suitable for prepackaged, off-the-shelf purchases made the information a type of fungible good, justifying the imposition of strict products liability. Software vendors, take note. Likewise, the court in *Barbee v. Rogers*<sup>98</sup> refused to impose liability where the consumer had not purchased a finished product present in the mass market, but had instead purchased custom-fitted contact lenses. It appears that dis-

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95. 402 F.2d 937 (3d Cir. 1968). See *supra* note 57 and accompanying text.

96. 84 Ill. App. 3d 677, 406 N.E.2d 88 (1980). See *supra* note 73 and accompanying text.

97. 535 F. Supp. 782 (D. Conn. 1982). See *supra* notes 81-82 and accompanying text.

98. 425 S.W.2d 342 (Tex. 1968). See *supra* notes 30-33 and accompanying text.

tribution for the mass market is a dispositive characteristic for imposing liability.<sup>99</sup>

In deciding to apply strict products liability against an electric company, the court in *Ransome v. Wisconsin Electric Power Co.*<sup>100</sup> found it important that electricity is a consumable item. While one may debate whether or not one "consumes" a power bench saw when using it to construct furniture,<sup>101</sup> one certainly purchases the saw through the channels of trade of mass distribution. On the other hand, though it isn't clear whether or not electricity is purchased through traditional channels of trade, it certainly is consumed. The *Ransome* court decided that liability was as apt in one case as in the other. On this basis, if the outcome of the mass marketing test is unclear, look to the item itself.

Another characteristic of the transaction that the courts will consider important is whether or not someone is hired for his or her special skill, that is, whether or not one is dealing with an expert. This is really the essence of the traditional product/service distinction, and is illustrated by *Gagne v. Bertran*.<sup>102</sup> There a soil tester was held not subject to strict products liability. For the purposes of this Note, which examines situations where the product/service distinction is not clear, it is important to view *Gagne* from the following perspective: it was not so much that the defendant provided a service, but that the defendant was hired for his special skill. The defendant was not a difficult-to-find manufacturer turning out packaged test results; he was someone who collected samples of soil, subjected them to various examinations, and summarized the results in a soil report.

The court in *Hinojasa v. Automatic Elevator Co.*<sup>103</sup> combined the *Gagne* rationale with the mass marketing test. The elevator installer in *Hinojasa* was not liable under strict products liability because he did not sell the elevator in combination with the installation. Therefore, he was not part of the mass distribution network bringing such items to the consumer, and he was hired solely

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99. Strict liability may still be imposed, however, where the market is not very large. For example, strict liability will be applied to the providing of food or of items for personal consumption. See RESTATEMENT (SECOND) OF TORTS § 402A, comment b (1965).

100. 87 Wis. 2d 605, 275 N.W.2d 641 (1979). See *supra* note 88 and accompanying text.

101. *Greenman v. Yuba Power Products, Inc.*, 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963).

102. 43 Cal. 2d 481, 275 P.2d 15 (1954). See *supra* note 60 and accompanying text.

103. 92 Ill. App. 3d 351, 416 N.E.2d 45 (1980). See *supra* note 78 and accompanying text.

for his expertise and skill at installing elevators. The plaintiff in *Hinojasa* was not faced with difficult problems of proof as to the defendant, and so was not operating under conditions that justify the application of strict products liability. In a similar spirit, the court in *Lowrie v. City of Evanston*<sup>104</sup> considered the adequacy of alternative remedies available to the plaintiff. The court apparently thought that the plaintiff's case lacked conditions analogous to those justifying strict products liability, and therefore decided that a parking structure was not a product.<sup>105</sup>

## V. COMPUTER SOFTWARE AND THE RULES

Where does this leave the software supplier? The spectrum of software sales is incredibly broad. At one end, software is sold in the form of programming instructions encoded on memory-chip boards (such as game cartridges) or on magnetic storage media (such as disks or tapes). After the program is written and checked out, it is duplicated by the hundreds or thousands in operations that take seconds. The programming is developed to solve a common problem and to perform tasks desired by a large group of users. Usually, these items are pre-packaged and sealed before sale and delivery. At the other end of the spectrum, software is purchased from a consultant, who works closely with the customer in defining the problem to be solved and in developing a suitable program. The resulting software is specifically tailored to the customer's circumstances and computer configuration, satisfying his particular needs.

The sale of software that solves a shared problem is especially appropriate for the first of the case rules dealing with mass marketing, since it employs methods of mass production and mass marketing, is delivered as a finished product, and is an off-the-shelf purchase. Such software is advertised on television and in newspapers and trade publications, where both the advertising and the product are designed to appeal to a mass market; many sales are conducted through mail order with no direct human interaction. Such sales are directly analogous to the sale of mass-produced items of a distant manufacturer based on consumer reliance, sales that necessitated the doctrine of strict products liability.

Consider the consumer who purchases a new automobile. The details of construction and operation are largely a mystery to him.

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104. 50 Ill. App. 3d 376, 365 N.E.2d 923 (1977). See *supra* note 74 and accompanying text.

105. See also *Mastro v. County of Schenectady*, 74 A.D.2d 976, 426 N.Y.S.2d 187 (N.Y. App. Div. 1980), deciding that strict products liability was not applicable to a parking lot with allegedly defective traffic control provisions.

Such details are beyond the comprehension and control of the typical consumer, who relies on the manufacturer's specifications. In addition, the consumer has no opportunity to bargain with the manufacturer regarding such specifications or regarding responsibilities and liabilities. As a result of these considerations, society has decided that it is not proper for the consumer to shoulder the burden of showing how the manufacturer breached its duties in the event of harm.<sup>106</sup>

These considerations should also apply to software that is sold under similar circumstances. The operating and programming decisions involved in developing a software package are beyond the comprehension, control, and concern of the typical consumer. Consumer reliance is high in these areas. There is no opportunity to bargain with the producer of the software. These considerations support the application of strict products liability to such transactions.

For example, suppose a software vendor sells a word processing program nationwide through distribution to retail outlets and mail-order companies. Suppose further that a purchaser uses the program to create files of recipes and that the program eliminates the data for one ingredient or step in the preparation of a particular meal due to an undetected program error. If the resulting meal is poisonous, so that the program purchaser's dinner guests become ill, should the software vendor be liable?<sup>107</sup> The transaction occurred in the mass market, there was consumer reliance on the producer, and neither party knew of the defect. There is no obvious danger in the product that may bar defendant's liability. The transaction itself is of such a nature that strict products liability should apply.

We must distinguish the issues of the proper legal doctrine, the determination of liability, and the determination of damages. For example, this type of injury may not be foreseeable to the typical developer of word processing software. But foreseeability relates to liability and damages, and is thus a question for the jury. We must also distinguish between foreseeable use and foreseeable injury.<sup>108</sup>

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106. See *supra* note †.

107. Compare *Cardozo v. True*, 342 So. 2d 1053 (Fla. Dist. Ct. App. 1977), where plaintiff bought a recipe book from defendant and followed one of the recipes. While preparing a meal using the Dasheen plant, plaintiff ate a small slice of the plant's roots and became ill for several days, despite receiving medical care. The book contained no warning that uncooked Dasheen roots are poisonous and plaintiff claimed that this inadequacy breached the implied warranties of the book seller. The court held that, absent knowledge of the danger, the implied warranty of the seller did not extend to the material communicated by the book's author or publisher.

108. See L. FRUMER & M. FRIEDMAN, *PRODUCTS LIABILITY*, § 16A[4][d] at 3B-83

If the use of a product is foreseeable, including foreseeable misuse, the producer is liable for all proximately caused injuries, foreseeable or unforeseeable.<sup>109</sup> Thus, in the hypothetical poisonous meal, if the defect existed in the software as delivered and the consumer had not altered its function, the software vendor should be held liable.

It could be argued that because such risks are unknown, it would be impossible for a word processing software developer to insure against harms, thus defeating the argument for strict products liability that says that such persons can insure against harms and thereby pass the costs on to consumers.<sup>110</sup> This may be true, but it does not detract from the strength of the reasons supporting strict products liability that consider the relative positions of the parties and any consumer reliance.<sup>111</sup> Furthermore, the developer has far better information than the consumer about risks of software error and is in a better position to avoid the harm.

Uses and harms other than a consumer keeping recipes and making poisonous meals are easy to envision. For example, consider the sale of medical monitoring or diagnosis software for use in emergency rooms or critical care facilities. If the software is delivered with the computer and included in the price, the question of products liability as applied to the seller of the unit as a whole is not very difficult because the sale of the software may be characterized as incidental to the sale of the hardware.<sup>112</sup> But what about the vendor who supplies software in a separate contract, perhaps to update

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(1983). Consider, for example, *Williams v. RCA Corp.*, 59 Ill. App. 3d 229, 376 N.E.2d 37 (1978); *Anderson v. Associated Grocers, Inc.*, 11 Wash. App. 774, 525 P.2d 284 (1974). In *Williams*, a guard attempted to call for assistance with his two-way portable receiver while pursuing an armed robber. The radio malfunctioned and he was shot while attempting to apprehend the robber unassisted. Dismissal of complaint affirmed; the intervening criminal act broke the chain of causation and was not foreseeable. In *Anderson*, a banana spider bit an employee who was unloading produce. Summary judgment for defendant was affirmed because there was no proof that either the bananas or the carton were defective.

109. L. FRUMER & M. FRIEDMAN, *supra* note 108, at 3B-83.

110. *See supra* note †.

111. *Id.* In addition, the argument is reminiscent of the rule for damages in contract actions, rather than in tort actions. The general rule for tort actions is that one is liable for all damages proximately resulting from the activity, while for contracts the general rule is that one is liable for all damages that were reasonably foreseeable at the time of contracting.

112. Under the "dominant purpose" rationale, the sale of the computer hardware takes precedence and, as a product, results in the imposition of strict products liability. *See, e.g., Carl Beasley Ford, Inc. v. Burroughs Corp.*, 361 F. Supp. 325 (E.D. Pa. 1973) (the provisions of the U.C.C. applied where delivery of software was incidental to the sale of hardware).



and increase the capabilities of the more popular units? The developers and marketers of this software know precisely what it will be used for. They know the risks and the harms that may occur, and can thus purchase insurance against these events. Undoubtedly, a large part of the cost of such software is due to the cost of liability insurance, just as a large part of a doctor's bill is to cover the cost of the doctor's malpractice insurance. In addition, the programmer is in a good position to detect and eliminate defects in the program: using simulation techniques, he can determine precisely what a program will do given certain inputs. The uncertainty of doctors' treatment was a factor that the court in *Hoven v. Kelble*<sup>113</sup> used to deny application of strict liability to the diagnosis that a doctor provides. This uncertainty does not surround a computer program that activates an alarm when a patient's heart rate falls outside of specific parameters.

Debugging a computer program is a slow, painstaking process often continuing after initial deliveries of software.<sup>114</sup> It may be argued that this fact takes such software out of the context of mass marketing and more into the realm of tailor-made products that are the result of a service transaction. Two considerations support the continued application of strict products liability. First, when dealing with equipment that is critical for the continuation of human life, thorough check-out and testing should be expected; the developers have knowledge of the tasks the software will perform. Judicious use of conditional statements and error checking codes can greatly minimize the chance of danger to life. In addition, debugging a program is similar to the process whereby automobile manufacturers recall cars to repair defects discovered after the cars have been in use. General Motors' recently developed X-cars have already been the subject of numerous recalls, to cite one example. This type of "debugging" by recall does not prevent the application of strict products liability to cars. Of course, one must remember that recalling cars and debugging software are similar only when both are marketed through channels of mass distribution and are purchased off-the-shelf as finished products.<sup>115</sup> In summary, if one uses mass mar-

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113. 79 Wis. 2d 444, 256 N.W.2d 379 (1977). See *supra* notes 47-48 and accompanying text.

114. See *Pezillo v. General Tel. & Elec. Information Sys.*, 414 F. Supp. 1257, 1265 (M.D. Tenn. 1976) (stating as a general proposition that approximately 80% of a programmer's time in implementing a program is spent debugging); R. BERNACCHI & G. LARSEN, *DATA PROCESSING CONTRACTS AND THE LAW* 132-34 (1974) (idealistic to expect that software be delivered error-free).

115. Neither should a vendor be able to claim that software is an unavoidably dangerous product, as some states have declared in the case of blood for transfusion or of

keting methods to bring software to the consuming public, characterized by off-the-shelf purchases of finished items, strict products liability should apply. In addition, the more that the risks of harm from use are known, the more likely liability for such harm will follow.

The fact that an item is consumable was considered by the *Ransome*<sup>116</sup> court. This characteristic is important in considering whether an item is a product or the result of a service. Thus, the *Ransome v. Wisconsin Electric Power Co.* court decided that electricity is a product. While the mass marketing test is dispositive, the "consumability" test is at most persuasive; it should not be sufficient to impose strict liability. For example, one consumes a home by subjecting it to wear and tear by living in it. Yet, a home builder will not be subject to strict products liability until he develops a tract, selling pre-selected floor plans through the use of advertising and model homes. The consumability test seems most apt for situations where there are elements of mass distribution, but no transfer of an item in the sense of a chattel. In the software context, the greatest application of this test would be where software is transmitted via telephone transmission lines through the use of modems. But does one consume anything in such a situation? It seems that the mass market test makes this question moot if the software is sold via mass marketing but transferred to purchasers via telephone lines. In any case, the electrical signal received over the telephone lines is not really consumed, rather, the changes in magnitude of the signal are interpreted. Therefore, this test should not greatly concern software vendors.<sup>117</sup>

Software consultants should be most concerned about the consequences of being hired for their special skill. In *Gagne v. Bertran*,<sup>118</sup> liability was not imposed on a soil tester because he had been hired for his special expertise. Similarly, one hired to analyze a particular problem and develop a computer program would seem to fall into this exempt category. These are not distant manufacturers turning out finished products. The fact that the customer is tak-

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life-saving drugs. Those items are necessary for life to continue and their potentially harmful side effects cannot always be eliminated or predicted with any certainty. A programmer knows how his program operates, or at least is able to know the precise order of operation by using appropriate debugging techniques.

116. 87 Wis. 2d 605, 275 N.W.2d 641 (1979). See *supra* note 88 and accompanying text.

117. Of course, programmers who transmit their programs over telephone lines to friends and members of user groups are not strictly liable. Although they would be using a means of mass marketing, they would not be sellers as required by RESTATEMENT (SECOND) OF TORTS § 402A (1965).

118. 43 Cal. 2d 481, 275 P.2d 15 (1954). See *supra* note 60 and accompanying text.

ing possession of an item, arguably a product, is not dispositive. The customer also takes possession of an item in the case of a soil tester, doctor, lawyer, or accountant: either a soil report, a medical opinion, a legal brief, or a financial statement. The major factor, besides the absence of a mass market orientation, is the presence of someone who will provide individualized analysis. The final item is particular to the consumer; the item is the solution to a problem faced by him, rather than the solution to a problem faced by a market segment. Of course, computer programs are easily modified and one program may be the basis for slightly modified programs solving problems of a similar nature. The mass market distinction begins to blur. But the analysis of the individual circumstances was still performed. Soil testers may use standardized procedures, lawyers make use of pleading and practice forms, and accountants use standard forms. It is a question of degree; the hired expert test should be used for its persuasive value. To the extent that a consumer is purchasing individualized advice from one hired for his special problem solving skill, the transaction looks like hiring a soil tester, doctor, or lawyer. Conversely, the more a consumer is interested in purchasing software that is not totally the result of individual analysis, the more the transaction looks like a mass market transaction.

Another consideration regarding the hiring of experts was addressed by the *La Rossa v. Scientific Design Co.*<sup>119</sup> court: the body of consumers affected. The *La Rossa* court declined to impose strict products liability in part because only a small number of employees were affected by the action in question. Consider an air traffic control program. There may be few purchases of such a program or perhaps there may be only one example in existence, yet, thousands of travelers will rely on that program every day.<sup>120</sup> What if disaster strikes? Looking to section 402A of the Restatement, the question becomes who is the ultimate consumer—the airline, the pilot, or the passenger? Where the computer was an integral part of the operation upon which a mass of consumers depend, a court would have little trouble finding that the travelers were the ultimate consumers as they were the party for whose benefit the items were purchased. Considerations of consumer safety and public welfare coupled with the absence of the *La Rossa* circumstances would probably be enough to bring the case within the scope of strict products liability.<sup>121</sup> As with the hired expert and modifications, it is a matter of

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119. 402 F.2d 937 (3d Cir. 1968). See *supra* notes 57-59 and accompanying text.

120. See *Price v. Shell Oil Co.*, 2 Cal. 3d 245, 466 P.2d 722, 85 Cal. Rptr. 178 (1970).

121. Note that, regarding the federal air traffic control system currently being revamped, the federal government has agreed to indemnify or hold harmless hardware and software contractors for their losses due to disaster liability in excess of \$500 mil-

degree. The number of software sales, the number of consumers affected, the degree of consumer reliance, must all be considered.

Another exemption found in the cases is the installer who has no part in bringing the item in question to the consumer. Yet, this exemption is not really applicable to the world of software. A software "installer" is either superfluous (i.e., purchases of floppy disks or game cartridges), or is necessarily associated with the programmer. If a software installer is needed, a rather complex piece of software that contains only object code is probably involved and hence only the program originator or an associate would really know how to get the program working.

## VI. CONCLUSION

The risk of personal injury due to computer programming failure is high because of the sheer pervasiveness of computer use, and because computers often perform tasks that are directly relied upon by humans. The law of strict products liability has not yet been applied to computer software transactions. Because physical injury due to computer actions is imminent, it is likely that the courts will soon be faced with such claims. The law of strict products liability applies only to products, and not to services. The difficulty for courts in deciding a computer claim is that software transactions have elements of both. Therefore, in order to determine when strict products liability will apply to a transaction, one must look to cases in which its application was an issue. From this inquiry it is possible both to determine what factual circumstances are dispositive and to formulate guidelines.

Of central importance to the application of strict products liability is the use of mass marketing techniques (e.g., mass production, large scale distribution of finished products, and advertising) and by off-the-shelf purchases by consumers. Sales of software in the mass marketing context will surely be subject to strict products liability.<sup>122</sup> Software consultants who are hired for their expertise are in many ways analagous to traditional purveyors of services such as doctors and lawyers, who are not subject to strict products liability.<sup>123</sup> In many cases, programmers will be able to make use of this analogy. But where a large body of consumers is affected by the software, courts will be likely to apply strict products liability due to

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lion per occurrence. See *Federal Government Agrees to Indemnify Contractors Against Computer-Caused Air Traffic Disasters*, COMPUTER LAW & TAX REP., May 1982, at 2.

122. See *supra* notes 106-115 and accompanying text.

123. See *supra* note 118 and accompanying text.

overriding mass market connotations.<sup>124</sup> Questions concerning both the consumption of software during use and software installers will not have a great affect in the application of strict products liability.

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124. See *supra* notes 119-121 and accompanying text.