Spring 1984

Frankly, Incredible: Unconscionability in Computer Contracts, 4 Computer L.J. 695 (1984)

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NOTES

FRANKLY, INCREDIBLE: UNCONSCIONABILITY IN COMPUTER CONTRACTS

I. INTRODUCTION

The new Honeywell system was brought on line with high anticipation. Triangle's president Robert Weinstein, present at the first computer run, used a poignant analogy: "A new baby was being born, and I was very concerned with the success of that baby and how healthy it was going to be." But the "delivery" gave immediate cause for concern. The system first tried to print out invoices on a summary form. It was immediately apparent that all of the figures in the first batch were wrong. Weinstein testified: "There was literally a scream and I panicked." Honeywell personnel, murmuring assurances, threw out the first run of invoices and produced a second. This second set was sent out to Triangle's broker-customers. It produced a wave of complaints about billing inaccuracies. These complaints continued every month, "for the rest of the time we were in business."[1]

Triangle Underwriters went out of business in 1975, five years after the Honeywell system was brought on line.[2] A district court jury concluded that Honeywell's failure to provide Triangle with an adequate computer system was the cause of the company's demise.[3] While Triangle's experience may be an extreme example, it reflects a common pattern. As computers have become standard business equipment, many small or medium sized commercial users have sued their vendors after similar delays or failures.

In recent years, a number of users have won on misrepresentation claims. When users cannot prove misrepresentation, however,

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1. Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737, 740 (2d Cir. 1979).
2. Triangle Underwriters, Inc. v. Honeywell, Inc., 651 F.2d 132 (2d Cir. 1981) (appeal after remand).
3. The trial judge, however, did not believe that Triangle had proved proximate causation, and granted a motion to set aside the award except for direct damages. No. 75 Civ. 1333 (E.D.N.Y. Nov. 26, 1980), aff'd, 651 F.2d 132 (2d Cir. 1981).

and must rely on breach of warranty claims, the results are usually discouraging. Even when it is clear that the system has never worked well, users seldom recover for business losses caused by the disruption, because the vendors have protected themselves with contractual provisions disclaiming most warranty liability and excluding most damages.

The result is a harsh one for the disappointed user, and it may seem unfair. He has paid for a product that should process data, received a product that does little or nothing, and finds that the most that he can recover is his direct and incidental losses. For his consequential losses, a potential disaster apparently beyond his control or anticipation, the law affords no remedy.

Two student commentators have recommended that courts bring about a fairer outcome in some cases by applying the doctrine of unconscionability.[4] At least two trial court judges have held that it would be unconscionable to enforce a limitation of remedies clause in a computer contract.[5] A major theme of the pro-user group is that the complexity of computer technology puts buyers at such a disadvantage that courts should make exceptions to established principles of commercial law for their protection. A second theme is that disparity of bargaining strength accounts for the inability of users to obtain more extensive warranty coverage.

Nonetheless, it is the position of this Note that employing unconscionability in the computer field would be a mistake for several reasons. First, the doctrine of unconscionability should be invoked only to help those who, realistically, cannot help themselves. The complexity of the technology does not create this condition in most computer transactions; expertise is available. Moreover, the problem is usually bad business judgment in contracting, rather than unwise purchasing. Second, the allocation of risk is commercially reasonable in light of the uncertain reliability of new systems, the extensive losses that can follow disruption of a business, the danger of invalid claims, the user's ability to minimize his losses, and the inability of vendors to obtain adequate third party insurance.

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4. Comment, *U.C.C. Section 2-719 as Applied to Computer Contracts—Unconscionable Exclusion of Remedy? Chatlos Systems, Inc. v. National Cash Register Corp.*, 14 CONN. L. REV. 71 (1981); Note, *Unconscionability and the Fundamental Breach Doctrine in Computer Contracts*, 57 NOTRE DAME LAW. 547 (1982).

5. Glovatorium, Inc. v. NCR Corp., No. C-79-3393 (N.D. Cal. May 1, 1981), *aff'd on other grounds*, 684 F.2d 658 (9th Cir. 1982); Chesapeake Petroleum and Supply Co. v. Burroughs Corp., 6 Computer L. Serv. Rep. (Callaghan) 768 (Md. Cir. Ct. 1977), *aff'd on other grounds*, 282 Md. 406, 384 A.2d 734 (1978).

II. BACKGROUND

A. THE USER'S STRATEGY

The typical computer contract case involves the sale or lease[6] of a package consisting of hardware, software, and services.[7] Frequently, hardware or software is not delivered on time or does not initially work at an acceptable level. In other cases, the system works well at first, but problems arise weeks or months later. Generally, the vendor will be allowed a certain amount of additional time for delivery or corrections. Problems are usually resolved within a reasonable time. In some cases, however, the process goes on for months or even years. At some point, the user may decide that he has waited long enough and will attempt to stop making payments and sue the vendor.

The complaint will usually contain tort claims for misrepresentation as well as claims for breach of contract or breach of warranty.[8] In preparing contract claims, the user will find that the standard contract contains the following terms: (1) a limited express warranty that the equipment will be free from defects in materials and workmanship for a certain period of time; (2) a lim-

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6. There are six ways for a business to use computers: (1) purchasing; (2) renting; (3) leasing—often from a third party, which may be only a financing agency; (4) time-sharing—the user has terminals linked by telephone to the vendor's computer, and pays for the time it uses the computer; (5) service bureau—the user's records are carried to the vendor to be processed, with the output carried back or mailed to the user's customers; (6) facilities management—the user has a computer on the premises, operated by an independent company.

7. The term hardware refers to the equipment. Software refers to the programs, consisting of systems software, which controls the functioning of the system, and applications programs, which perform specific functions, such as an inventory program. Systems software is generally supplied by the hardware vendor. Applications software is often provided by the user or a third party. It may come in the form of a standard package, a modified package, or an individually written program.

8. If products are not delivered or the user wishes to reject them, he will sue for breach of contract under UNIFORM COMMERCIAL CODE § 2-712 (1978) [hereinafter cited as U.C.C.], or § 2-713. If the user does not wish to reject the products, or is unable to, he will sue for breach of warranty under § 2-714. Each section authorizes consequential damages as defined in § 2-715.

Some users are now adding counts for other statutory violations. *See, e.g.*, Computer Sys. Eng'g, Inc., v. Qantel Corp., 571 F. Supp. 1365 (D. Mass. 1983) (distributor awarded $2,336,742 compensatory damages for fraud and breach of contract, which was doubled under MASS. GEN. LAWS ANN. ch. 93A (West 1983), the Massachusetts Unfair Trade Practices Act); Airprint Sys., Inc. v. Burroughs Corp., No. 81 C 2119 (N.D. Ill. Aug. 20, 1981) (Illinois Consumer Fraud and Deceptive Business Practices Act). *See also* Benn & Michaels, *"Multi-Programming" Computer Litigation*, 64 CHI. BAR REC., July-Aug. 1982, at 32, 43-44 (discussing possible application of the Lanham Act, 15 U.S.C. § 1125(a)(1982)).

ited express warranty that the programs will conform to specifications or be free of errors; (3) an integration clause stating that there are no other agreements; (4) a disclaimer of implied warranties; (5) a limited remedy of repair or replacement, at the vendor's option, in the event the express warranty is breached; (6) a limitation of any direct damages to the purchase price; and (7) a separate exclusion of consequential damages.

The user's[9] attack on these terms will generally be in four parts.[10] First, the user must establish some warranty liability of the vendor for the performance of the system.[11] Second, he must prove that the vendor has breached the warranty. Third, he must show that the limited remedy has failed in its essential purpose.[12] Finally,

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9. There are three groups of businesses bringing computer suits: (1) middlemen, such as distributors and Original Equipment Manufacturers (OEM's, who actually assemble and program systems rather than making them); (2) end-users who use the system to process their own data; and (3) service bureaus, who are end-users but use the system to provide data processing services for others.

10. The typical case discussed here is based on Article Two (Sales) of the Uniform Commercial Code. Article Two governs "transactions in goods." U.C.C. § 2-102 (1978). When an agreement purports to be a lease, courts will apply Article Two if they believe that the transaction has the same effect as a sale. *See, e.g.*, Citicorp Leasing, Inc. v. Allied Institutional Distrib., Inc., 454 F. Supp. 511 (W.D. Okla. 1977). *See also* Bancorp Leasing and Fin. Corp. v. Brunner, No. 29347 (Or. Ct. App. Nov. 9, 1983).

11. U.C.C. §§ 2-313 (express warranty), 2-314 (implied warranty of merchantability), 2-315 (implied warranty of fitness for a particular purpose) (1978).

This Note does not address the possibility of challenging disclaimers of implied warranties as unconscionable. There has been a debate among commentators over whether or not the U.C.C. permits this challenge. Professor Leff wrote: "It appears to be a matter of common assumption that section 2-302 [unconscionability] *is* applicable to warranty disclaimers. I find this, frankly, incredible." Leff, *Unconscionability and the Code—The Emperor's New Clause*, 115 U. PA. L. REV. 485, 523 (1967). He believed that warranty disclaimers were regulated exclusively by the more specific language of U.C.C. § 2-316 (1978). Professor Ellinghaus, however, believed that U.C.C. § 2-302 (1978) does apply because it is "an ultimate bill-of-rights provision in the field of sales." Ellinghaus, *In Defense of Unconscionability*, 78 YALE L.J. 757, 795-96 (1969). For a non-constitutional view of why the section may apply, see J. WHITE & R. SUMMERS, HANDBOOK OF THE LAW UNDER THE UNIFORM COMMERCIAL CODE 476-77 (2d ed. 1980).

12. *See* U.C.C. § 2-719(2) (1978), which reads in full: "Where circumstances cause an exclusive remedy to fail of its essential purpose, remedy may be had as provided in this Act." U.C.C. § 2-719 comment 1 reads in part:

> [I]t is of the very essence of a sales contract that at least minimum adequate remedies be available. If the parties intend to conclude a contract for sale within this Article they must accept the legal consequences that there be at least a fair quantum of remedy for breach of the obligations or duties outlined in the contract . . . [U]nder subsection (2), where an apparently fair and reasonable clause because of circumstances fails in its essential purpose or operates to deprive either party of the substantial value of the bargain, it must give way to the general remedy provisions of this Act.

the user will probably need to challenge the exclusion of consequential damages as unconscionable under Uniform Commercial Code (U.C.C. or Code) section 2-719(3).[13]

B. UNCONSCIONABILITY

Analysis of unconscionability claims is difficult because there is no general agreement on what the term means, what policies the doctrine serves, or how a court is to make its decision. U.C.C. section 2-719(3) contains no definition of unconscionability.[14] Comment one, in a portion presumably addressing both limited remedies and unconscionability, merely states that a contract must offer "minimum adequate remedies" and "a fair quantum of remedy."[15] Section 2-302, the Code's general section on unconscionability, does not define the concept either.[16] The comments to this section are not

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Courts have found two situations in which failure might occur. In the first, the goods have defects that are not discoverable (or, more properly, are difficult and expensive to discover) upon receipt. *E.g.*, Wilson Trading Corp. v. David Ferguson, Ltd., 23 N.Y.2d 398, 297 N.Y.S.2d 108, 244 N.E.2d 685 (1968) (a time limitation unreasonable under U.C.C. § 2-607 causes failure of essential purpose). In the second, the seller does not provide the buyer with a defect-free product within a reasonable time. Some courts have held that there is a failure of essential purpose in this situation only when the seller's failure to repair is willful, negligent, or dilatory. *E.g.*, Jones & McKnight Corp. v. Birdsboro Corp., 320 F. Supp. 39 (N.D. Ill. 1970). The majority of courts take the opposite position. *E.g.*, Beal v. General Motors Corp., 354 F. Supp. 423 (D. Del. 1973) (purpose of limited remedy is to limit the seller's liability while giving him the opportunity to make goods conform to the warranty, and to give the buyer conforming goods within a reasonable time). *See generally* J. WHITE & R. SUMMERS, *supra* note 11, at 465-71; Eddy, *On the "Essential" Purposes of Limited Remedies: The Metaphysics of UCC Section 2-719(2)*, 65 CALIF. L. REV. 28 (1977).

13. While some courts have held that this exclusion fails automatically when the limited remedy fails, *e.g.*, Koehring Co. v. A.P.I., Inc., 369 F. Supp. 882 (E.D. Mich. 1974), most have required an independent inquiry at this point. *E.g.*, County Asphalt, Inc. v. Lewis Welding & Eng'g Corp., 323 F. Supp. 1300 (S.D.N.Y. 1970), *aff'd*, 444 F.2d 372 (2d Cir. 1971), *cert. denied*, 404 U.S. 939 (1971).

14. U.C.C. § 2-719(3) (1978) states: "Consequential damages may be limited or excluded unless the limitation or exclusion is unconscionable. Limitation of consequential damages for injury to the person in the case of consumer goods is prima facie unconscionable but limitation of damages where the loss is commercial is not."

15. *See supra* note 12.

16. U.C.C. § 2-302 (1978) states:

(1) If the court as a matter of law finds the contract or any clause to have been unconscionable at the time it was made the court may refuse to enforce the contract, or it may enforce the remainder of the contract without the unconscionable clause, or it may so limit the application of any unconscionable clause as to avoid any unconscionable result.

(2) When it is claimed or appears to the court that the contract or any clause thereof may be unconscionable the parties shall be afforded a reasonable opportunity to present evidence as to its commercial setting, purpose and effect to aid the court in making the determination.

very helpful.[17] Courts and commentators have developed varying interpretations, agreeing only on the division of the doctrine into two aspects, procedural and substantive.[18] "Procedural unconscionability" refers to unfairness in the process of reaching an agreement, while "substantive unconscionability" refers to the unfair results of the agreement.

The various forms of procedural unconscionability include unfair surprise, deceptive sales practices, unequal bargaining position, and various types of incompetence such as illiteracy or relative lack of sophistication. The two forms or scopes of substantive unconscionability are over-all imbalance and "component unconscionability." The latter refers to situations where the contract as a whole might be enforceable if certain unfair terms were struck. It is usually said that both aspects must be present for a finding of unconscionability.[19]

The debate over the proper definition and role of unconscionability is to some extent political.[20] It reflects differing beliefs about

17. *Id.* at comment 1 includes these remarks:

The basic test is whether, in light of the general commercial background and the commercial needs of the particular trade or case, the clauses involved are so one-sided as to be unconscionable under the circumstances existing at the time of the making of the contract . . . . The principle is one of the prevention of oppression and unfair surprise [citation omitted] and not of disturbance of allocation of risks because of superior bargaining power.

This is followed by ten cases, cited by name, that illustrate the "underlying basis" of the section. *Id.* at comment 2 permits a court to refuse to enforce the contract as a whole, or to "strike any single clause or group of clauses which are contrary to the essential purpose of the agreement."

18. *See generally* Leff, *supra* note 11; Ellinghaus, *supra* note 11; Spanogle, *Analyzing Unconscionability Problems*, 117 U. PA. L. REV. 931 (1969); Murray, *Unconscionability: Unconscionability*, 31 U. PITT. L. REV. 1 (1969); Eddy, *supra* note 12; J. WHITE & R. SUMMERS, *supra* note 11, at 147-73, 471-85.

19. *E.g.*, J. WHITE & R. SUMMERS, *supra* note 11, at 164; Spanogle, *supra* note 18, at 947 (discussing a sliding scale).

In Earman Oil Co. v. Burroughs Corp., 625 F.2d 1291 (5th Cir. 1980), the court applied the five considerations for finding unconscionability established under Potomac Elec. Power Corp. v. Westinghouse Elec. Corp., 385 F. Supp. 572 (D.D.C. 1974), *rev'd and remanded on proc. grounds*, 527 F.2d 853 (D.C. Cir. 1975), as listed by the user: "(i) examination of the negotiation process as to length of time in dealing; (ii) the length of time for deliberations; (iii) the experience or astuteness of the parties; (iv) whether counsel reviewed the contract; and (v) whether the buyer was a reluctant purchaser." 625 F.2d at 1299-1300. This same formula was followed in Office Supply Co. v. Basic/Four Corp., 538 F. Supp. 776, 778-89 (E.D. Wis. 1982).

In Chatlos Sys., Inc. v. National Cash Register Corp., 635 F.2d 1081 (3d Cir. 1980), the Third Circuit considered disparity in bargaining power, disparity in sophistication, surprise, forseeability of the type of damage, and good faith in efforts to cure (noting that the last-named factor was not determinative). 635 F.2d at 1086.

20. The drafters of U.C.C. § 2-302 (1978) were initially concerned with form con-

when a court should or should not respect "freedom of contract." Most courts or commentators accept the fundamental policy of protecting persons who are incompetent or otherwise at a procedural disadvantage.[21] The disagreement concerns which persons are at a true disadvantage in contracting, rather than simply being bad at it or being faced with commercial realities.

Courts tend to consider businessmen as a class to be competent and have generally restricted unconscionability to transactions involving consumers.[22] This distinction is based on separate consumer and businessman paradigms. Consumers are ignorant of commercial and legal matters, and they only occasionally buy a particular durable good. Businessmen, by contrast, are intimately associated with products, sales, and contracts. The few cases in which courts have found unconscionability in commercial settings suggest that a small firm or investor may sometimes conform more to the consumer paradigm than to the businessman paradigm when dealing with a larger company. Thus farmers,[23] gas-station dealers,[24] in-

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tracts, which raise problems about the buyer's assent to boilerplate. They were unable to describe the bargaining procedures that would insulate a contract from review. They then moved to a concern with contracts that are so one-sided as to be unconscionable per se, regardless of the procedural aspect. This proposition, however, might have proved unacceptable to "important backers of the Code (not to mention legislatures) . . . ." Leff, *supra* note 11, at 501. Ultimately, the drafters avoided these problems by adopting a compromise version that did not reveal any policies or purposes. This is why Professor Leff referred to his article as "a study in statutory pathology." *Id.* at 485.

21. "[O]ne might define 'procedural unconscionability' more narrowly to mean only those difficulties that it is particularly hard for the disadvantaged party to surmount . . . ." Gordley, *Equality in Exchange*, 69 CALIF. L. REV. 1587, 1633 (1981).

22. *E.g.*, County Asphalt, Inc. v. Lewis Welding & Eng'g Co., 323 F. Supp. 1300, 1308 (S.D.N.Y. 1970), *aff'd*, 444 F.2d 372 (2d Cir. 1971), *cert. denied*, 404 U.S. 939 (1971). *See* J. WHITE & R. SUMMERS, *supra* note 11, at 170.

In most computer cases, courts have brushed aside unconscionability claims with the briefest of remarks about the routine enforcement of such terms and the presumption that agreements between businessmen are reasonable. *See, e.g.*, Samuel Black Co. v. Burroughs Corp., No. 78-3077-F, slip op. at LEXIS screen 14 (D. Mass. Dec. 18, 1981); Investors Premium Corp. v. Burroughs Corp., 389 F. Supp. 39, 45 (D.S.C. 1974); Bakal v. Burroughs Corp., 174 Misc. 202, 343 N.Y.S.2d 541, 544 (N.Y. Sup. Ct. 1972); Westfield Chem. Corp. v. Burroughs Corp., 6 Computer L. Serv. Rep. (Callaghan) 438, 440 (Mass. Super. Ct. 1977).

Because of this judicial tendency, even the users seem not to take unconscionability very seriously. *See, e.g.*, AMF Inc. v. Computer Automation, Inc., No. C-3-81-223, slip op. at LEXIS screen 14 (S.D. Ohio Oct. 12, 1983) (referring to the distributor-plaintiff's "eleventh hour claim" that the remedy limitation was unconscionable).

23. Bank of Indiana v. Holyfield, 476 F. Supp. 104 (S.D. Miss. 1979); Majors v. Kalo Laboratories, 407 F. Supp. 20 (M.D. Ala. 1975); A & M Produce Co. v. FMC Corp., 135 Cal. App. 3d 473, 186 Cal. Rptr. 114 (1982).

24. Johnson v. Mobil Oil Corp., 415 F. Supp. 264 (E.D. Mich. 1974); Weaver v. American Oil Co., 257 Ind. 458, 276 N.E.2d 144 (1971).

surance agents,[25] picnic-grove owners,[26] and various other relatively unsophisticated self-employed persons have been able to win the judge's sympathy.

III. PROCEDURAL UNCONSCIONABILITY

Those persons who advocate applying the unconscionability doctrine in some computer cases believe that these cases present blatant examples of procedural unfairness. They charge that users sign contracts by which the users assume almost all risks only because of deceptive sales practices that create unfair surprise, unfamiliarity with the technology, or lack of competition.

A. UNFAIR SURPRISE

Consider first the charge of unfair surprise created by deceptive sales practices.[27] The claim is based on a common pattern in computer transactions. In most reported computer cases, the user is a small or medium sized business. Many of these users are unable to assess their electronic data processing (EDP) needs and choose the right system by themselves. This may be because they are involved in their first EDP transaction, because they are too small to have their own EDP staffs, or because their EDP personnel do not have the knowledge necessary for purchasing.

The general practice has been that the vendor assesses the user's EDP needs and chooses the system.[28] The vendor's sales representative investigates the user's business, surveys its data processing requirements, develops solutions, and recommends the proper hardware configuration and application programs. In the

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25. Allen v. Michigan Bell Tel. Co., 18 Mich. App. 632, 171 N.W.2d 689 (Ct. App. 1969) (non-U.C.C. case, decided on public policy grounds).

26. Industralease Automated & Scientific Equip. Corp. v. R.M.E. Enter., 58 A.D.2d 482, 396 N.Y.S.2d 427 (App. Div. 1977).

27. *See* Comment, *supra* note 4, at 105 n.169.

28. During the 1960's, the major vendors used a sales method known as "bundling." They offered the complete package of goods and services, including the survey and recommendation, for a single price. This sales method prevented comparison of hardware prices and gave the user the feeling that he was getting the services free. In 1969, IBM announced a policy of unbundling, and it now charges separately for various services. Some vendors still bundle, and, one way or another, all vendors offer some kind of survey as part of their sales effort. *See* F. FISHER, J. McKIE & R. MANCKE, IBM AND THE U.S. DATA PROCESSING INDUSTRY 23-25, 172-79 (1983); J. AUER & C. HARRIS, COMPUTER CONTRACT NEGOTIATIONS 4 (1981); R. BERNACCHI & G. LARSEN, DATA PROCESSING CONTRACTS AND THE LAW 241 (1974); K. FISHMAN, THE COMPUTER ESTABLISHMENT 136 (1981).

course of this process, the salesman often assures the user (i.e., the person negotiating for the user company) that the proposed system will perform certain functions, will produce certain benefits, or will be suitable for the user's requirements, and that the vendor will provide various services.[29] These representations can be made orally or by written proposal. Frequently they are made in side letters, before or contemporaneously with the signing of the contract. The contracts themselves frequently make no mention of these representations.[30] They may contain no reference at all to software or services.[31] They contain only the limited express warranty, the integration clause, and the disclaimer of implied warranties.

Why does the user sign? Because, it is said, the salesman "exploits the 'three R's' of selling: rapport, rationale, and relationship."[32] In the course of assisting the user in selecting a system, the sales representative develops a personal relationship with the user's executives or data processing staff. Often under pressure and unfamiliar with EDP technology, the user's personnel are grateful to have someone provide them with the system, the financing plan, and the contract. The result is that the user adopts an attitude of trust and reliance, and an informal atmosphere pervades the transaction. There is often little serious negotiating by the user, and no resort to technical or legal advice from other sources. Most importantly, the user does not pay much attention to the terms of the contract. The

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29. *See, e.g.*, Iten Leasing Co. v. Burroughs Corp., 684 F.2d 573, 575 (8th Cir. 1982); Clements Auto Co. v. Service Bureau Corp., 444 F.2d 169, 175 (8th Cir. 1971); Conway Publications, Inc., v. Data General Corp., No. C82-1862A, slip op. at LEXIS screens 4-5 (N.D. Ga. Aug. 17, 1983); Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp. 738, 741 (D.N.J. 1979), *aff'd in part, rev'd in part and remanded*, 635 F.2d 1081 (3d Cir. 1980); Teamsters Security Fund v. Sperry Rand Corp., 6 Computer L. Serv. Rep. (Callaghan) 951, 956 (N.D. Cal. 1977); Burroughs Corp. v. Hall Affiliates, Inc., 423 So. 2d 1348, 1350 (Ala. 1982); Schatz Distrib. Co. v. Olivetti Corp. of Am., 7 Kan. App. 2d 676, 677, 647 P.2d 820, 822 (1982). National Cash Register Co. v. Modern Transfer Co., 224 Pa. Super. 138, 141-42, 302 A.2d 486, 487-88 (1973).

30. For example, in W.R. Weaver Co. v. Burroughs Corp., 580 S.W.2d 76 (Tex. Civ. App. 1979), the user had Burroughs draw up a brief document entitled "Statement of Installation Conditions." The two standard contracts made no mention of the statement.

31. In Carl Beasley Ford, Inc. v. Burroughs Corp., 361 F. Supp. 325, 333 (E.D. Pa. 1973), *aff'd mem.*, 493 F.2d 1400 (3d Cir. 1974), a Burroughs salesman testified that the company instructed its salesmen not to incorporate programming agreements into the written equipment contract. Often, the contract does not even list the hardware components being purchased. In APLications, Inc. v. Hewlett-Packard Co., 501 F. Supp. 129, 135 n.6 (S.D.N.Y. 1980), the court noted in dictum that if the integration clause in the OEM contract were given effect, the buyer would be "in the absurd position of contracting to purchase an unidentified, undescribed computer, whose specifications are nowhere stated or referred to in the contract."

32. J. AUER & C. HARRIS, *supra* note 28, at 12.

user may note the discrepancy between the written terms and the earlier promises, but trusts the salesman. The salesman does everything he can to encourage this attitude and to de-emphasize the contract.[33] The salesman uses the "We don't need to write that down, you can trust me" ploy.[34] He assures the user that the unfavorable terms will not be asserted, and gives him various explanations of why it would be inconvenient to alter the standard contract.[35] If the user does ultimately sue the vendor, however, the vendor will almost certainly assert those terms.

In some cases arising from this pattern, users have been able to prove that the vendor has committed the tort of misrepresentation.[36] In a few cases, courts motivated by a sense of unfairness, and perhaps a sense of incredulity, have allowed the users to avoid the harsh terms of the standard contract. They have done this by finding non-integration in the standard contract and allowing parol evidence of other agreements,[37] by interpreting the exclusion of

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33. *Id.* at 22-23.

34. *Id.* at 12.

35. *Id.* at 22-38.

36. A tort cause of action offers the user a number of advantages. First, he will probably be allowed to introduce parol evidence of extrinsic representations because "fraud is a magic word." APLications, Inc. v. Hewlett-Packard Co., 501 F. Supp. 129, 134 (S.D.N.Y. 1980). *But see* Management Assistance, Inc. v. Computer Dimensions, Inc., 546 F. Supp. 666, 671-72 (N.D. Ga. 1982) ("a party with the capacity and opportunity to read a written contract, who executes it, not under any emergency, and whose signature was not obtained by trick or artifice cannot later claim fraud in the inducement"). Second, the contractual remedy limitation will not be enforced unless the court finds that the user affirmed the contract after discovering the fraud. *See* Walker, *Computer Litigation And The Manufacturer's Defenses Against Fraud*, 3 COMPUTER/L. J. 427 (1982). Third, the statutory limitations period will probably be longer. Fourth, punitive damages are available.

37. *E.g.*, Chelsea Indus., Inc. v. Accuracy Leasing Corp., 699 F.2d 58, 60 (1st Cir. 1983) (lessee's option to purchase); Acme Pump Co. v. National Cash Register Co., 32 Conn. Supp. 69, 73, 337 A.2d 672, 676 (Ct. Common Pleas 1974) (oral representations concerning capabilities); Southern Hardware Co. v. Honeywell Information Sys., Inc., 373 So. 2d 738, 740 (La. Ct. App. 1979) (delivery date); Wang Laboratories, Inc. v. Docktor Pet Centers, Inc., 422 N.E.2d 805, 807-09 (Mass. App. Ct. 1981) (acceptance standards); Security Leasing Co. v. Flinco, Inc., 23 Utah 2d 242, 244, 461 P.2d 460, 461-62 (1969) (programming).

See also Lovable Co. v. Honeywell, Inc., 431 F.2d 668 (5th Cir. 1970) (Edenfield, J., dissenting). The dissenting judge thought that there was at least enough ambiguity concerning integration to admit a pre-contract letter as parol evidence.

> The contention of Honeywell, adopted by the majority, is that it was to do little more than to furnish certain naked pieces of equipment . . . that it did not promise that it would accomplish any result whatsoever or even print a single line . . . . I simply cannot conceive of two capable businessmen negotiating for the sale or lease of a computer except on the basis of what it would do.

Id. at 677.

consequential damages narrowly,[38] or by finding technical defects in the risk-shifting terms.[39] In most cases, however, courts enforce the terms strictly. The question then becomes whether or not the sales practices described, though not fraudulent, rise to a second level of unfairness, to what Professor Leff called "quasi-fraud,"[40] justifying judicial intervention on the grounds of unfair surprise.

The answer is that if there is surprise, it is not "unfair," for two reasons. First, the problem, being legal rather than technical, is of a kind that a careful user should be expected to avoid. Second, when the user cannot establish misrepresentation because of the misrepresentation of fact or scienter elements, it is worth noting (even though it should not strictly be relevant) that the vendor probably did not intend to disappoint or take advantage of the user.

1. *Nature of the Surprise*

The first reason concerns the nature of the surprise. "Unfair surprise" refers to the existence of terms, often hidden in fine print, of which the nondrafting party was unaware. The charge here, however, is that the vendor is asserting terms that were clearly stated in the contract, but that the user did not notice or chose to ignore these contract terms because of the personal relationship developed by the salesman. The surprise was not the existence of certain terms, but the fact that the vendor really meant what it said in writing.

If the U.C.C. helps those who cannot help themselves, then it should not help the users in this instance. While it may be a psychological fact that working closely with a more knowledgeable person can lead to warm feelings, which in turn can lead to trust and informality, the prudent user can maintain a business relationship. No matter how effective the vendor's tactics may actually be, the vendor has not set up the user for any surprise that the user could not avoid with proper care.

The only argument that can be made in support of the user is that the relationship between the parties justified the user's lack of self-protection. This would be akin to arguing that the vendor has breached a fiduciary duty. Such a theory is wholly inappropriate in a commercial transaction, even one in which the buyer must depend

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38. *See, e.g.*, Applied Data Processing, Inc. v. Burroughs Corp., 394 F. Supp. 504 (D. Conn. 1975) (exclusion of "consequential damages" was intended to apply only to "special damages"—those arising because of unique circumstances—not to "general damages"—those that naturally follow a breach).

39. *E.g.*, Jaskey Fin. and Leasing Corp. v. Display Data Corp., 564 F. Supp. 160 (E.D. Pa. 1983) (disclaimer of implied warranties did not mention "merchantability").

40. Leff, *supra* note 11, at 487.

upon the seller's technical expertise. The courts have addressed the proper relationship between vendors and users in a number of contexts and have generally agreed with this position.

In *Great Lakes Credit Union, Inc. v. NCR Corp.*,[41] for example, a case involving the modification rather than the formation of a contract, the issue was justifiable reliance. Eight months after the parties had entered into a leasing agreement, an NCR accounts manager presented the user's president with a seven page Universal Agreement. Above the space for the user's signature, in bold print, was this line: "Furnishing of the equipment, programs and/or services is done only in accordance with and pursuant to our agreement dated [today]." This was followed, still in bold print, by a declaration that the warranty and remedy terms of the new agreement superseded all such previous terms.[42] The accounts manager told the user that the document was for the internal use of the vendor, and would not affect the relationship of the parties.[43] Relying on that assurance, the user signed the document without reading it. The user later argued that an arbitration clause added by the Universal Agreement was unenforceable because the vendor had misrepresented the effect of the Agreement on their relationship.[44]

The court found that, since there was no question of unequal knowledge or means of knowledge, the user could not have justifiably relied upon the alleged misrepresentation.[45] With "the most cursory examination"[46] he could have discovered the truth, but had instead chosen "blind reliance."[47] The court saw no justification for this.

> Nor was the relationship such between Great Lakes and NCR so as to warrant the great trust that Tesdahl apparently reposed in Fornero. Although Great Lakes relied on NCR's expertise in computer technology, there is no doubt that the parties dealt as businessmen at arm's length . . . . [A] confidential or trust relationship does not arise merely because the parties are in a debtor-creditor relationship, or because one party believes in the honesty and integrity of the other.[48]

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41. No. 79 C S198 (N.D. Ill. Aug. 11, 1980).

42. Slip op. at LEXIS screen 4.

43. *Id.* at 3.

44. *Id.* at 6.

45. *Id.* at 8.

46. *Id.* at 9.

47. *Id.* at 10.

48. *Id.* at 11-12. In Wang Laboratories v. Docktor Pet Centers, 422 N.E.2d 805 (Mass. App. Ct. 1981), the user testified that a representative of Wang told him that DPC "had to sign the lease agreement . . . to keep the documentation and paper flow going." *Id.* at 807. In Management Assistance, Inc. v. Computer Dimensions, Inc., 546

Not every court agrees, however. In *Dunn Appraisal Co. v. Honeywell Information Systems, Inc.*,[49] for example, the Honeywell salesman recommended a 62/40 system. The president of the user company then spoke with someone working for another vendor. This person advised the president against the proposed system because it was not a "logical step" from his current system, and would create serious conversion costs.[50]

> Nevertheless, Dunn [president of Dunn Appraisal] and Saneholtz [president of SIS, a subsidiary] chose to rely upon Reimer, [a salesman] whom they knew and trusted. As Saneholtz later testified, Reimer was familiar with SIS's business operations and he (Saneholtz) knew that Reimer had the best interests of SIS at heart. As found by the district court, a relationship of trust and confidence existed between them.[51]

This conclusion is difficult to support. It is especially surprising when one realizes that the subsidiary for which the system was bought was a computer service bureau.[52] Nevertheless, the Sixth Circuit chose to affirm the finding of fraud, without mentioning justifiable reliance except to list it as one of the elements of fraud.[53]

Most courts have been less sympathetic to users. Whether considering warranties, fraud, malpractice,[54] or negligent misrepresen-

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F. Supp. 666 (N.D. Ga. 1982), the would-be OEM claimed that he signed the first equipment contract because the vendor had misrepresented its intention to sign a volume discount agreement. The court stated this simple rule: "One cannot close his eyes and blindly rely upon the assurances of another absent some fiduciary relationship or emergency." *Id.* at 672. The prior dealings between the parties had made the reliance especially unreasonable. One vendor executive had told the buyer that the OEM agreement was a "firm contract," but a month later the vendor returned the contract unexecuted. When the buyer later asked why, he was told that the contract was "in the mail." *Id.* at 675. Professor Leff once wrote that "some people would sign a contract even if 'THIS IS A SWINDLE' were embossed across its top in electric pink." Leff, *Contract as Thing*, 19 AM. U. L. REV. 131, 157 (1970).

49. 687 F.2d 877 (6th Cir. 1982).

50. *Id.* at 879.

51. *Id.*

52. *Id.* at 878.

53. *Id.* at 882. The vendor had promised to convert all 400 of the users programs at no extra charge. The contract said 250 programs. The user testified that he was told "not to worry, that was just put there to satisfy the front office . . . ." *Id.* at 879. In Glovatorium, Inc. v. NCR Corp., No. C-79-3393 (N.D. Cal. May 1, 1981), *aff'd on other grounds*, 684 F.2d 658 (9th Cir. 1982), the trial judge held the remedy limitation to be unconscionable. In part, this was because the judge believed that "the purchaser relies on the reputation of NCR, and its experience, its competence, the fact that its been making computers for a long time. All of those things would lead a purchaser to put his trust in NCR." Reporter's Transcript at 6, as quoted in Zammit, *Contracting For Computer Products*, 22 JURIMETRICS J. 337, 349 (1982).

54. *See, e.g.*, Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737, 746 (2d Cir. 1979). *See also* Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp.

tation,[55] they have been less inclined to treat vendors as owing a quasi-fiduciary duty.

In these various contexts, most courts have understood that computer vendors and commercial users have a business relationship. Based on that understanding, they should not apply unconscionability to protect "surprised" users from the consequences of their own carelessness.

2. *Vendor's Intentions*

The second reason for not finding unfair surprise concerns the intentions of the vendor. Although unconscionability should focus on the buyer's ability to obtain fair terms, people are almost inevitably influenced by the seller's culpability. Therefore, it needs to be pointed out that when the user cannot prove misrepresentation because of the misrepresentation of fact and scienter elements, the vendor probably did not intend to take unfair advantage of the user.

The sources of the vendor-user conflict are competition and technological progress. Vendors are under pressure to sell products that are still being developed, and to underestimate the time needed for completion of the project.[56] Vendors sometimes respond to this pressure by deliberately making untrue claims.[57] In those cases, an

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738, 740 n.1 (D.N.J. 1979), *aff'd in part, rev'd in part and remanded*, 635 F.2d 1081 (3d Cir. 1980).

55. *E.g.*, Black, Jackson and Simmons Ins. Brokerage, Inc., v. IBM Corp., 109 Ill. App. 3d 132, 440 N.E.2d 282 (1982). *See also* Penn v. Metro Data Co., No. 81 C 3051, slip op. at LEXIS screens 20-22 (N.D. Ill. Jan. 21, 1983) (seller had no fiduciary duty to correct buyer's misapprehensions concerning venture with seller's former employee).

56. Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp. 738 (D.N.J. 1979), *aff'd in part, rev'd in part and remanded*, 635 F.2d 1081 (3d Cir. 1980) provides a double example of how vendors respond to pressure. The user's president signed a Systems Service Agreement for the purchase of an NCR 399 Magnetic Ledger Card System. He then had discussions with a Burroughs salesman, who informed him that ledger cards were not as effective for data storage as the newer disc method. At that point, the NCR salesman, afraid that Burroughs would unhook the account, offered to sell Chatlos its 399/656 Disc System, and made numerous representations concerning the proposed system. 479 F. Supp. at 741. In its misrepresentation claim, Chatlos attempted to establish scienter on the basis of NCR's failure to disclose the fact that the disc system was experimental and that Chatlos was to be a "control site." *Id.* at 748.

57. For example, the SEC has charged the Paradyne Corporation with obtaining an $84 million contract from the federal government by re-labelling a Digital Equipment Corporation minicomputer with the Paradyne logo and then using the machine as a demonstrator model. The company also allegedly rigged "an empty box with blinking lights" to simulate an encryption device. The SEC says that Paradyne then began working furiously to develop the two pieces of equipment on time, but failed. *SEC Sues Paradyne Over Contract Fraud*, Computerworld, Apr. 4, 1983, at 93, col. 2.

action for misrepresentation should provide an adequate remedy. Usually, however, vendors hope to perform as promised. They know that delays or initial problems are common, and that a small number of users will experience severe problems. Nonetheless, they enter into a transaction believing that the user will probably be satisfied. If major problems do arise, the vendors are disappointed too. In such situations, vendors should be regarded as engaging not in fraud or quasi-fraud but rather in "optimism with self-protection." Therefore, how a court treats the first two elements of the misrepresentation claim will be relevant to its treatment of the unconscionability claim.

Misrepresentation of Fact: The user must first prove that the vendor represented a fact,[58] relating to the present or past, that was material, and that the representation was false. When users allege that vendors made representations concerning the suitability, capabilities, or benefits of a system, courts often choose to interpret the alleged statement as an expression of opinion or a prediction, which relates to the future. Although opinions can be the basis of a misrepresentation claim when the vendor has superior access to the facts,[59] the courts are generally aware of the difficulties involved in predicting computer performance.[60] Because the courts take relative sophistication into account, there is a limit on the salesman's right to express opinions that he knows to be speculative but which the user may reasonably interpret as representations of fact.[61]

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58. The representation element can be satisfied by affirmative representation, fraudulent concealment, or failure to disclose material facts when under a duty to do so. The duty to disclose arises, inter alia, when the seller has exclusive access to the facts. *See* Strand v. Librascope, Inc., 197 F. Supp. 743 (E.D. Mich. 1961); Xerox Corp. v. ISC Corp., 632 P.2d 618 (1981).

59. W. PROSSER, HANDBOOK OF THE LAW OF TORTS 720-24 (4th ed. 1971).

60. *E.g.*, Westfield Chem. Corp. v. Burroughs Corp., 6 Computer L. Serv. Rep. (Callaghan) 438 (Mass. Super. Ct. 1977). The court held that a proposal referring to "substantial man-hour savings" related to the future. The court cited five factors that affect man-hour savings, and found that none of them was susceptible of knowledge when the proposal was written. *Id.* at 442. *See also* Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp. 738, 748 (D.N.J. 1979), *aff'd in part, rev'd in part and remanded*, 635 F.2d 1081 (3d Cir. 1980) (the court characterized NCR's representations as "overly optimistic, not fraudulent").

By contrast, in Dunn Appraisal Co. v. Honeywell Information Sys., Inc., 687 F.2d 877 (6th Cir. 1982), the court held that "[g]eneral representations that data processing equipment will be suitable for a customer's operations, based upon familiarity with both the equipment's capabilities and the customer's needs, are statements concerning present facts." *Id.* at 882.

61. *E.g.*, APLications, Inc. v. Hewlett-Packard Co., No. 77 Civ. 5937 (RLC), slip op. at LEXIS screen 10 (S.D.N.Y. July 21, 1981), *aff'd*, 672 F.2d 1076 (2d Cir. 1982) (OEM, an expert in APL language, should not have interpreted description in brochure as a representation of fact). The significance of relative sophistication in distinguishing

When a statement is properly characterized as an opinion, the user's reliance reflects more on his own poor judgment than on the vendor's intent.[62]

Scienter: The user must also prove scienter, i.e., that the vendor knew the representations to be false or showed a reckless disregard for the truth.[63] In attempting to establish scienter, the user can point to the vendor's knowledge of specific problems, the vendor's beliefs about the actual capabilities of the product, or the fact that the product was still being developed. It may be difficult for a user to show what the members of a large manufacturing company are aware of, but there are several types of evidence that will reveal awareness of potential or doubts as to claims. These include sales literature, internal documents, general product failures,[64] and testi-

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between representations of fact and opinions is often considered under the heading of justifiable reliance.

62. Judge Learned Hand described this situation cogently in Vulcan Metals Co. v. Simmons Mfg. Co., 248 F. 853 (2d Cir. 1918):

There are some kinds of talk which no sensible man takes seriously, and if he does he suffers from his credulity. If we were all scrupulously honest, it would not be so; but, as it is, neither party usually believes what the seller says about his own opinions, and each knows it. Such statements, like the claims of campaign managers before election, are rather designed to allay the suspicion which would attend their absence than to be understood as having any relation to objective truth. It is quite true that they induce a compliant temper in the buyer, but it is by a much more subtle process than through the acceptance of his claims for his wares.

Id. at 856. In Shivers v. Sweda Int'l, Inc., 146 Ga. App. 758, 247 S.E.2d 576 (1978), the user, a CPA, stated that it had been "unreasonable," "naive," and "very stupid" of him to rely upon the salesman's representations. He explained that the salesman had had an "hypnotic effect" upon him.

63. W. PROSSER, *supra* note 59, at 700. In those states that allow actions for innocent misrepresentations, the user must still prove that the vendor's conduct was willful, wanton, and malicious to win punitive damages. This is similar to proving scienter. *See, e.g.*, Burroughs Corp. v. Hall Affiliates, Inc., 423 So. 2d 1348 (1982).

64. The most significant example of a general product failure is the Burroughs minicomputer cases. A small user in Illinois, Quality Books, found Burroughs unresponsive to complaints about its B-800. After warning the company, its attorneys placed a small ad in the Wall Street Journal, asking whether other users felt that "overly zealous computer sales people may have misrepresented the Burroughs B-800 or similar product lines" to them. The ad received more than 400 responses. Within a year, 160 users of Burroughs B-80, B-800, and B-700 minicomputer systems had filed suits. Burroughs counter-sued Quality Books for injurious falsehood, interference with business relationships, and violation of deceptive trade practice statutes. *See* Gordon, Starr & Weathers, *Special Problems In Computer Contract Litigation*, in CONTESTING COMPUTER DISPUTES 417-19, 474-83 (1981); *Angry Computer Users Sue Burroughs for Snags*, Wall St. J., Oct. 17, 1980, at 33, col. 6. The original parties apparently settled their case, Quality Books, Inc. v. Burroughs Corp., No. 80 C 5525 (N.D. Ill.), in early 1983. *Hint Settlement In Burroughs Suit*, MIS Week, Mar. 23, 1983, at 6, col. 1.

In the course of these cases, certain internal Burroughs' documents came to light.

mony by employees (past or present). When the user cannot pro-
duce one of these types of evidence, the fact that the vendor
misrepresented something still may not be a sign of bad intent.

The fact that vendors practice optimism with self-protection,
while many users practice optimism without self-protection, may
cause problems for those users. This state of affairs, however, is not
the type of insurmountable disadvantage or "oppression" in which
unconscionability principles should protect businessmen.

B. RELATIVE SOPHISTICATION

The pro-user writers charge that even when users are clearly
aware of the terms, i.e., understand the allocation of risk, there may
still be procedural unconscionability because the users do not have
the technical sophistication to understand the magnitude of that
risk.

Differences in the degree of sophistication between sellers and
buyers is a recognized form of procedural unconscionability. Courts
are normally satisfied that the parties are able to deal on an equal
basis if they both have some commercial sophistication.[65] The pro-
user writers criticize this traditional approach for making the wrong
inquiry. They believe that courts should ask whether or not the
user is familiar with the technology.[66]

In the recent case of *Glovatorium, Inc. v. NCR Corp.*,[67] the dis-
trict court judge held a limitation of liability clause to be uncon-
scionable, stating that

> if there was ever a case of unconscionability, this is the classic case.
> The very idea of marketing the product was to—it was targeted at
> the first-time computer user, that is people who didn't know—not

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They revealed company awareness of problems with file-handling, multi-program-
ming, downtime and complaints, software system deficiencies, and disk crashes. *See
Burroughs B800 Case Going Back To Court*, Computerworld, Aug. 9, 1982, at 5, col. 1;
Burroughs Guilty of Fraud In Suit Filed by B800 User, Computerworld, Nov. 29, 1982,
at 1, col. 2; *Suits Cite Burroughs Memos*, MIS Week, Mar. 2, 1983, at 6, col. 1.

These cases have had a major impact on the course of computer contracts
litigation.

65. *E.g.*, Badger Bearing Co. v. Burroughs Corp., 444 F. Supp. 919, 923 (E.D. Wis.
1977) ("Although the plaintiff was less knowledgeable concerning computers than the
defendant, as a businessman he must be deemed to possess some commercial sophis-
tication and familiarity with disclaimers."), *aff'd mem.*, 588 F.2d 838 (7th Cir. 1978).

66. "A purchaser unfamiliar with the subject-matter of a transaction cannot bar-
gain intelligently with a stronger party. He has no way of knowing whether the terms
of the contract bear a reasonable relationship to the risks involved." Comment, *supra*
note 4, at 102.

67. No. C-79-3393 (N.D. May 1, 1981), *aff'd on other grounds*, 684 F.2d 658 (9th Cir.
1982).

only didn't know anything about computers, but had no experience with them, and didn't know what the consequences would be of an inadequate product . . . NCR was under a special obligation in dealing with the first-time computer user.[68]

What justification is there for making familiarity with subject-matter the test of relative sophistication in computer cases?

Three things are true. First, persons who are not familiar with EDP technology and vocabulary are potentially at a great disadvantage in computer transactions. Second, even after several decades of development, there is still a substantial danger that a particular system will not work very well when installed, or even after lengthy corrections. This means that the user who is not well-acquainted with the technology may make a serious purchasing mistake by underestimating the risk that he is assuming. Third, there have been commercial cases in which courts have found procedural unconscionability on the basis of relative sophistication. For example, in *Johnson v. Mobil Oil Corp.,*[69] the court found an exclusion of consequential damages in a gas-station dealership agreement to be unconscionable. The major procedural problem was that the dealer had had very little education, to the point of being close to functionally illiterate.[70] For this reason, Mobil had an "affirmative duty to obtain the voluntary, knowing consent of the other party."[71]

But these three facts do not justify placing a fence around the less knowledgeable users, whom vendors are then obligated to educate or provide with unique warranties. To stretch the *Johnson* rationale by saying metaphorically that "most first-time users are 'illiterate' in their comprehension of industry jargon"[72] is to miss the point. A modern economy is characterized by its enormous specialization of functions. A businessman necessarily deals in many areas that are unfamiliar to him. His prime responsibility is acquiring or assembling the appropriate persons or expertise in each area. Literacy is the minimum requirement for all of these other tasks.

Expertise is a commodity that the market supplies, and EDP expertise is no exception. As an alternative to relying on the vendor, the user has several options. He can use the services of an independent consultant,[73] or he can hire his own EDP employees.

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68. Reporter's Transcript at 4, as quoted in Note, *supra* note 4, at 551.

69. 415 F. Supp. 264 (E.D. Mich. 1976).

70. *Id.* at 266.

71. *Id.* at 269.

72. Comment, *supra* note 4, at 103.

73. Computer consulting is performed by software houses, accounting firms, management consulting firms, and individual consultants, the last group being "mostly moonlighting professors and dethroned executives in between jobs (above a certain

The user is likely to encounter these persons in the future anyway, since it is common for the user to perform or arrange his own application programming, and businesses over a certain size generally have their own EDP departments. If the user were to take advantage of these specialists before signing the contract, no problem of relative sophistication need exist.

If the company, or the transaction itself, is not large enough to justify these costs,[74] the person negotiating for the user can at least learn some rudiments of EDP, enough to buy a system intelligently. Choosing a system and understanding its capabilities does not necessarily require great technical expertise, especially now when smaller companies can buy the smaller, simpler mini and microcomputers.[75]

The commercial user generally has the incentive and the opportunity to acquire expertise before obtaining a computer system. For this reason, his unfamiliarity with EDP does not make him so "helpless in the marketplace"[76] that unconscionability should protect him from his own mistakes. Except for the smaller transactions (in which less sophistication is required anyway), there is usually no

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level there is no unemployment in the computer industry, just a lot of consultants)." K. FISHMAN, *supra* note 28, at 268.

The categories of consultant and software developer overlap to a considerable extent, which can lead to conflicts of interest. Another problem is that consultants may tend to be more familiar with business management than with the technical aspects or vice versa. "Information systems designers were often not such good technicians. But those with the talent to do sophisticated software didn't have the client skills. They smelled bad and spoke Greek." *Id.* at 274, quoting Frederic Withington.

There is also a large group of companies known as "contract professionals," who help users in implementing projects rather than advising them. *See* Snyders, *Contract Pros Can Get You Out Of A Bind*, COMPUTER DECISIONS, Aug. 1981, at 57.

74. A consultant's rates depend upon such factors as the complexity of the system, the length of the contract, the consultant's experience and skills, the amount of travel required, and whether the consultant is hired on a time and materials basis or a fixed costs basis. At the upper end of the field—assisting in systems design and selection—the better paid consultants earn $60 to $100 an hour. For software development, average fees were recently estimated at $40 to $48 an hour. *Economy Signals Consulting Upsurge*, MIS Week, Apr. 27, 1983, at 2, col. 4.

75. Minicomputers are generally sold to "smart users" who can perform their own programming. The basic equipment costs between $20,000 and $150,000, with a complete system costing as much as $300,000. "Small business computers" are generally sold to "dumb users" who are more concerned with cost and ease of programming than with rapid response. These computers cost between $5,000 and $100,000. Microcomputers are now becoming very popular with business users, often being connected to mainframes or minis. The smallest of the micros, the personal computers, may sell for under $2,000. K. ISSHIKI, SMALL BUSINESS COMPUTERS 63-89 (1982).

76. IBM Corp. v. Catamore Enter., 548 F.2d 1065, 1076 (1st Cir. 1976) (upholding the validity of a time limit for bringing actions), *cert. denied*, 431 U.S. 960 (1977).

reason for the user to purchase in the stand-alone mode.[77]

C. Unequal Bargaining Position

A third charge made by pro-users is that, even if users do understand the contract and the risks, they cannot obtain a fair allocation of risks: "[T]he computer industry is dominated by a few large companies whose form contracts are the industry standard. Thus, customers have no choice but to accept these terms, and considerations of commercial reasonableness have not been given play because the industry has so decided."[78] This is the adhesion contract or exploitation theory of the warranty, and the charge must be critically investigated.[79]

1. *Competition*

The traditional theory of the adhesion contract is that when there is only one seller of a product, or when all of the sellers offer the product on the same terms, the sellers enjoy a superior bargaining position. The sellers offer the terms on a take-it-or-leave-it basis, and the buyer must accept the terms or do without. Unilateral setting of terms replaces negotiation.[80]

This does not describe the typical business computer transaction. First, because the systems are fairly expensive, and because they must be individually tailored to the user's business, there are

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77. Some commentators take the view that the legal standard should change with the general level of computer sophistication. *See, e.g.*, R. BERNACCHI & G. LARSEN, *supra* note 28, at 163, written in 1974. "Obviously, as data processing equipment and services are used more extensively, the courts will expect users to be more familiar with data processing foibles and failings . . . ." *See also* Comment, *supra* note 4, at 103 ("There is a gradual awakening among businessmen that computers are fast becoming a mandatory discipline."). Since the expertise is available now, there is no reason for courts to apply a "gradual awakening" standard.

One should also note that there are currently two opposite trends affecting the sophistication of commercial users. On the one hand, more people, businessmen included, are learning about EDP. On the other hand, as simpler, less expensive computers become available, the class of users expands to include progressively smaller businesses. One should expect to see suits from the smallest businesses capable of suffering consequential damages as the result of computer failure.

78. Comment, *supra* note 4, at 112.

79. The mysterious line in U.C.C. § 2-302 comment 1 (1978) says that the section is concerned with "oppression and unfair surprise [citation omitted] and not with the disturbance of allocation of risk because of superior bargaining power." Professor Ellinghaus, *supra* note 11, at 766-77, interprets this to mean that "*mere* disparity of bargaining strength," by itself, is not enough for a finding of unconscionability. There must be something more, such as deception or substantive unfairness.

80. Kessler, *Contracts of Adhesion—Some Thoughts About Freedom of Contract*, 43 COLUM. L. REV. 629 (1943).

generally extensive negotiations. It is true that these negotiations usually culminate in the signing of a standard contract, but the transaction is still more than the simple offer and acceptance envisaged by the exploitation theory.

Second, vendors do not generally display the inflexibility that the exploitation theory associates with oligopoly. Although the upper end of the computer industry is dominated by a small number of manufacturers,[81] there is still intense competition. Vendors are willing to make concessions on such terms as price, acceptance standards, maintenance, length of warranty terms, and even warranties of minimum performance and reliability. They will not, however, make broad warranties of suitability or accept liability for consequential damages.[82] The only exceptions to this rule are for the largest corporations and the government.[83]

The logical inference is that vendors are inflexible on warranty and remedy terms because they consider themselves unable to offer more at prevailing prices.[84]

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81. During the 1960's, the principal manufacturers were "Big Blue" (IBM) and the "Seven Dwarves": Honeywell, Control Data Corp., Burroughs, National Cash Register (NCR), Univac (Sperry Rand), GE, and RCA. During the 1970's, GE and RCA sold their EDP operations (to Honeywell and Sperry-Rand, respectively) and Xerox made a brief but disastrous foray into the field. The remaining firms still dominate the mainframe and minicomputer markets. *See generally* F. FISHER, J. McKIE & R. MANCKE, *supra* note 28; K. FISHMAN, *supra* note 28. Some industry observers believe that there are really two markets, one consisting of loyal IBM users, the other being fought over by the "dwarves." K. FISHMAN, *supra* note 28, at 155-57.

82. For example, in Office Supply Co. v. Basic/Four Corp., 538 F. Supp. 776 (E.D. Wis. 1982), the user's president was asked in his deposition whether he tried to have Basic/Four modify the warranty provisions: "A: Well, I argued with him, but it was to no avail. Nothing." *Id.* at 785. During the period that Office Supply was shopping for a system, however, Basic/Four was actively competing with Qantel for the sale, and offered Office Supply a double capacity disc at no extra charge, as well as agreeing to a price concession on a disc drive. *Id.* at 788. In addition, the user had compared contracts and found that Basic/Four offered a 90-day warranty while Qantel offered a one year warranty. *Id.* at 784.

As was true with the issue of relative sophistication, the growing ability of individuals or small firms to afford computers may encourage courts to find procedural unconscionability on the basis of unequal bargaining power. *Compare* Horning v. Sycom, 556 F. Supp. 819 (E.D. Ky. 1983) (forum selection clause requiring dentist in Kentucky to bring claims in Wisconsin, in contract that represents "the best job of boiler-plating since the building of the Monitor," is "bordering on unconscionability" and will not be enforced, *id.* at 821) *with* D'Antuono v. CCH Computax Sys., Inc., No. 83-04475 (D.R.I. Sept. 19, 1983) (forum selection clause requiring accountant in Rhode Island to bring claims in California is reasonable).

83. J. AUER & C. HARRIS, *supra* note 28, at 183.

84. Because of the nature of the data processing field, and the immensely expensive consequences of a defective part, defective software, or a negligent installation or maintenance job, it is probably fair from a business point of

The Comment quoted above as saying that the industry sets the terms also explains, in the context of sales practices, that "[t]he industry is fiercely competitive . . . ."[85] The Comment quotes a computer law consultant on the subject of spreading risks through warranties: "The computer industry is intensely competitive and it is therefore virtually impossible for a vendor to build into published prices the necessary premiums to become an insurer of success, even if the highly subjective notion of success could be adequately defined."[86] It is not immediately apparent what economic theory this argument appeals to. It is usually said that competition puts pressure on sellers to exceed one another in giving the customers what they want, in the form of lower prices, wider variety, or better quality. So long as the demand for warranty coverage exists, as the pro-user writers insist, vendors should be able to include the premium without pricing themselves out of the market. They should, in fact, be compelled to do so. If demand will not support the higher prices, the reason will be either a lack of interest on the part of users, or market imperfections, as discussed below. The fact that a small number of firms dominate the industry or set the "industry standard" does not change the inherent logic of competition.

2. *Alternative Explanations*

The market power theory suggests that the greater the concentration in an industry, the more sellers will use their superior economic position to exploit buyers, as with the use of warranty disclaimers and remedy limitations. Some commentators, however, who reject the idea of the adhesion contract as a form of procedural unconscionability, point to empirical evidence refuting that theory.[87] These critics have offered alternative explanations of why warranty coverage is so limited in some industries, despite the willingness of

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view to have realistic limitations on vendor's liability for indirect or consequential damages. Vendors are universally obstinate on this subject and those exculpations from liability are generally found to be non-negotiable.

D. BRANDON & S. SEGELSTEIN, DATA PROCESSING CONTRACTS 53 (1976). "Most vendors are appropriately concerned about accepting unknown warranties implied by law, and resolutely refuse to eliminate the disclaimer provisions under any circumstances." J. AUER & C. HARRIS, *supra* note 28, at 186.

85. Comment, *supra* note 4, at 94.

86. *Id.* at 111 n.207, quoting Brooks, *Settlements*, in CONTESTING COMPUTER DISPUTES 585 (1981).

87. Professor Priest, for example, analyzed warranties offered with many different classes of durable consumer goods. He found no correlation between the size of a firm's market share and the restrictiveness of its warranty coverage. Nor did he find any correlation between industry concentration and restrictive warranty coverage. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1320-25 (1981).

some buyers to pay for greater coverage. Using product analogies, they have shown how market imperfections can create "low quality" contracts that the parties cannot bargain away. At least two of these explanations may be relevant to business computer transactions.

a. *Fixed Costs Of Production*

Because it is the marginal buyer, not the average buyer, whose valuation affects demand, it is not profitable for sellers to offer more than a certain range of products or quality. For this reason, markets often fail to satisfy minority preferences.[88]

In the case of remedies in computer contracts, this may not be a problem. First, it should not cost much to vary the terms of a standard contract. At a minimum, vendors would only need to add a choice between two terms regarding consequential damages—yes or no. Even individualized limits on liability should not be too costly to create. The additional transaction costs of negotiating the remedy provision would probably not be an obstacle because negotiations are generally extensive already. There might be additional costs in administering different contracts, but contracts vary widely as it is, and the vendor's obligations are already established by the warranty term.

Second, it is not known how many users are willing to pay for the expanded remedy. Because so many users are still too unsophisticated to appreciate the risks, those who do understand the benefits of more warranty and remedy protection may be a small minority, whose preferences would not justify the costs of offering more choice. On the other hand, it is said that "[t]he possibility of a computer failure haunts most businessmen."[89]

Even if the users who recognize the benefits are a minority, this state of affairs may be avoidable. Given the usual length of negotiations and the vendors' powers of persuasion, vendors should be able to convince users that the risks justify paying the higher price. By all accounts, however, these risks are precisely what vendors do not want users to know about. If vendors have the ability to influence demand, then it is unilateral decisions and not market imperfections that account for the lack of demand.

In support of the vendors, however, it should be pointed out that many users, despite having some awareness of the risks, are too cheap to pay for additional protection. Warranty coverage is a contingent, intangible benefit that adds nothing to the operation of the

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88. Comment, *Unconscionability in Standard Forms*, 64 CALIF. L. REV. 1151, 1177 (1976).

89. Comment, *supra* note 4, at 73 n.8.

system. To the extent that competition in the computer industry focuses on price, performance, and reliability, there is little economic justification for offering a wider range of warranty and remedy terms.[90]

b. *Classes Of Risk*

The second theory that might explain limited warranty and remedy terms without resort to exploitation theories is based on the nature of a warranty, which is, in part, an insurance policy included in a sale.[91] The sale price includes an insurance premium, based on the average risk that the seller assumes with each warranty given—probability of loss times magnitude. Sellers might try to segregate the buyers of a product into different classes of risk, but this is difficult, with the result that they may have to lump all the buyers of a product into a single class.[92] This creates a problem:

> Where consumers differ substantially in the incidence or magnitude
> of a loss . . . there may be no single premium attractive to a suffi-
> cient number to justify offering coverage. Put another way, the in-
> crease in the premium required for coverage of such losses may be
> greater than the benefit of coverage to large numbers of consumers
> . . . .[93]

In this way, differences in risk can account for restricted warranty coverage. Risk will vary the most in the case of consequential damages incurred by businesses. It is probably for this reason that consumer product warranties commonly disclaim all liability if the product is put to commercial use,[94] in sharp contrast to what the exploitation theory would predict. One of the most distinctive features of computers is their non-specificity. Since they can process data of any sort, they can be central to the operation of most commercial enterprises. The computer manufacturer therefore finds it espe-

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90. *See* Schwartz & Wilde, *Intervening In Markets On The Basis Of Imperfect Information: A Legal And Economic Analysis*, 127 U. PA. L. REV. 630, 659-62 (1979) (discussing degrees of consumer comparision of contract terms and the effect upon competition); Comment, *supra* note 88, at 1154, 1168, 1177 (discussing neoclassical economic models, according to which agents in a modern economy express their preferences by reacting to posted prices); *DEC Offers New PC, No Strings Warranty*, MIS Week, Oct. 5, 1983, at 1, col. 2 (vendor offers Investment Protection Plan with its new personal computer, including generous service policy and "no questions asked" return policy, in hope of drawing attention to its confidence in the quality of the product). DEC is the second largest computer manufacturer, earning more than $4 billion in 1982. *The Datamation 100*, DATAMATION, June 1983, at 96, 102.

91. Priest, *supra* note 87, at 1307-19.

92. *Id.* at 1314-15.

93. *Id.* at 1318.

94. *Id.* at 1331-32.

cially difficult to match a product to a narrow range of possible commercial losses.

Because competition among vendors over price, quality, and other contract terms is so sharp, and because these theories may explain the inability of vendors to pass along the added costs, courts should not infer the unconscionable use of superior bargaining power from the limited range of warranty and remedy terms.

IV. SUBSTANTIVE UNCONSCIONABILITY

If a court does find procedural unconscionability, the next question is which terms are too unfair to be enforced. The remedy term is often challenged. Because different vendors offer the same term, users must choose between a single allocation of risk or no purchase at all. One cannot assume, however, that the only choice available is an unfair choice. Under the heading of substantive unconscionability, the issue is whether or not this standard allocation is commercially reasonable.

A product warranty can have both repair and insurance contract functions. The standard computer warranty serves only the repair function, because the exclusive remedy is repair or replacement, with the vendor committed to a best-efforts standard. The maintenance contract is basically an extension of the warranty. Even when the limited remedy fails, the user cannot recover most of the losses that result from the breach. Thus, the users bear most of the risks of serious failure.

Pro-user commentators treat the warranty terms as peripheral to the transaction. They believe that the standard terms allow the vendors to evade their "fundamental obligation . . . to provide a system that operates properly and is suitable to the user's needs."[95] The problem with this assumption is that it ignores basic principles of economics. The more that a seller provides, the greater its costs are. These costs are reflected in the purchase price. The seller's obligation is to provide whatever the contract says will be provided at that price. In the case of expensive and complex technology, which is often new or customized, reliability is central to this obligation. Rather than "eviscerating" the "core,"[96] the limited warranty helps

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95. Note, *supra* note 4, at 552.

96. U.C.C. § 2-302 (1978), which originated in Karl Llewellyn's concern with the "battle of the forms" between businessmen, places two substantive limits on assent to boilerplate in form contracts. First, the terms must be consistent with the "iron essence" of the "transaction-type" known as the sale of goods. Second, the boilerplate must not "alter or eviscerate the reasonable meaning of the dickered terms." These two rules add up to a principle of protecting the nondrafting party's reasonable

to define the vendor's obligation.

Therefore, courts must still inquire into the "commercial purpose, setting and effect" of the terms, as required by U.C.C. section 2-302(2). There are several important points that vendors can make to justify the exclusion of consequential damages. They demonstrate why it would be costly for vendors to provide this remedy, and why users may not need it.

A. THE VENDORS' ABILITY TO PROVIDE THE REMEDY

The pro-user writers believe that the vendors, large companies with high profits, could easily afford to incur liability for consequential damages if they were forced to do so.[97] There are several reasons, however, even beyond the fundamental unreliability of new hardware and software,[98] why providing this remedy may be very costly for the vendors. These include the danger of invalid claims and the inadequacy of third party insurance available to them.

1. *Invalid Claims*

One reason that vendors are reluctant to be insurers of success is the problem of invalid claims. Liability for consequential damages would compound this risk in two ways. There would be higher litigation costs because more users would have incentive to sue, and the consequences of a finding of a breach of contract would be more drastic.

There are three types of invalid claims. In some cases, the per-

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expectations. K. LLEWELLYN, THE COMMON LAW TRADITION 360-72 (1960); Ellinghaus, *supra* note 11, at 796; Leff, *supra* note 11, at 506.

The British courts have expressed a similar idea in the doctrine of fundamental breach, which has been summarized in this way: "Every contract contains a 'core' or fundamental obligation which must be performed. If one party fails to perform this fundamental obligation, he will be guilty of a breach of the contract whether or not any exempting clause has been asserted which purports to protect him." (footnote omitted) Guest, *Fundamental Breach of Contract*, 77 L. Q. REV. 98, 99 (1961). In two cases, Canadian courts have applied the doctrine to computer transactions, with little discussion. Burroughs Business Mach. Ltd. v. Feed-Rite Mills Ltd., 42 D.L.R.3d 303 (Man. C.A. 1973), *aff'd mem.*, 64 D.L.R.3d 767 (Can. 1976); Public Util. Comm'n of Waterloo v. Burroughs Business Mach. Ltd., 34 D.L.R.3d 320 (Ont. High Ct. 1973), *aff'd*, 52 D.L.R.3d 481 (Ont. C.A. 1974).

97. "The computer industry cannot be heard to argue that these exclusion clauses are necessary for survival; profits in the industry are high." Comment, *supra* note 4, at 111.

98. *See generally* B. BEIZER, SOFTWARE TESTING TECHNIQUES (1983); R. LONGBOTTOM, COMPUTER SYSTEM RELIABILITY (1980); M. PHISTER, JR., DATA PROCESSING TECHNOLOGY AND ECONOMICS 168-77, 210-18, 437-43 (2d ed. 1979); G. MYERS, SOFTWARE RELIABILITY (1976).

formance of the system, while disappointing to the user, does not constitute a breach of the limited express warranty. In other cases, the problem would be serious enough to constitute a breach but the user is at fault. Finally, there are cases in which a third party is at fault. All three possibilities are present in any warranty claim, but they are especially difficult to prove or disprove in computer cases because of the complexity of the technology.

Breach: The standard system purchase contract contains only an express warranty that the hardware will be free from "defects in materials and workmanship" and that the software will be free from errors. These vague standards lead to disputes concerning the nature of various problems.

A case discussing this problem in detail is *Bruffey Contracting Co. v. Burroughs Corp.*[99] There the court observed that the warranty against defects in materials and workmanship was not self-defining. Because of the explicit integration clause, it declined to refer to other statements made to Bruffey to supply content to the phrase. It therefore interpreted the warranty as applying to manufacturing defects, i.e., defects in the parts and their assembly.[100]

Burroughs, the vendor, suggested alternative sources of the malfunctions. The court responded:

> Bruffey need not identify with precision the cause of the computer's malfunctions; it is sufficient that it has shown a breach of warranty. In this instance, however, the warranty is very limited. Thus, while plaintiff need not necessarily identify the precise technical cause of the malfunctions, it must show that the cause was defects in equipment and workmanship.[101]

The court concluded that Bruffey, the user, had failed to prove this, especially since some problems had continued after parts were replaced and adjustments made.[102] It noted also that "the nature of the system is that no one could say with certainty in every case what caused a malfunction."[103]

The user's experts suggested that the computer's design was defective. They found that it was unable to withstand the heat en-

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99. 552 F. Supp. 769 (D. Md. 1981).

100. *Id.* at 772.

101. *Id.* at 773 (citation omitted).

102. *Id.* at 774.

103. *Id.* There was also a dispute over the meaning of the term "expendable" parts, which were excluded from the warranty altogether. Burroughs interpreted the term as including circuit boards containing chips and connectors. Bruffey suggested that this definition was overbroad because it included the parts most likely to need replacement. The court found Burroughs' position reasonable, and not unconscionable, because it allocated to the buyer the risk of loss from parts "so tiny it is virtually impossible to determine the cause of failure." *Id.* at 773.

countered in general office use, and that the machine's vibration shook the printed circuit boards loose. The court regarded this testimony as relevant to implied warranties of merchantability and suitability, but irrelevant to the case at bar, where the vendor's only liability was from the limited express warranty.[104]

In some transactions, vendors include more extensive warranties concerning minimum levels of performance and reliability. In these cases, warranty claims may lead to disputes over the levels actually achieved by the system.[105]

Users At Fault: During the warranty period, the vendor is responsible for the operation of a system that is installed in the user's office, operated by the user's employees, and possibly programmed by the user. Because the vendor does not have exclusive control over the system, it is faced with warranty claims when users cause problems.

One major problem affecting computers is hostile environment. Heat adversely affects hardware reliability.[106] For example, internal junction temperatures directly affect the reliability of integrated circuits. Excessive heat may be part of the office ambience, or it can be caused by the machine itself, if poorly ventilated. Dust can block filters and airways, raising internal temperatures, or it can interfere with magnetic media.[107] Low relative humidity can cause discharges of static electricity, while high relative humidity can lead to

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104. *Id.* at 774.

105. In Badger Bearing Co. v. Burroughs Corp., 444 F. Supp. 919 (E.D. Wis. 1977), *aff'd mem.*, 588 F.2d 838 (7th Cir. 1978), Burroughs stated in a written proposal that its E6000 would provide Badger "[m]ore work, in less time and more meaningful management information than ever before possible." *Id.* at 921. The court concluded that, while the computer had been subject to mechanical problems, it was usually operative and most programs did accomplish their tasks faster than the previous manual system. For example, the payroll process could be done in two hours a week. *Id.* at 924. For this reason, the representation was not false. In APLications, Inc. v. Hewlett-Packard Co., No. 77 Civ. 5937 (RLC) (S.D.N.Y. July 21, 1981), the vendor (explaining that it "did not like to have outsiders in its laboratories") performed a simulation for the buyer, and reported that the proposed system would complete a certain operation in four to ten seconds. The response time turned out to be fifteen to twenty minutes. Slip op. at LEXIS screens 6-7. *See also* Consolidated Data Terminals v. Applied Digital Data Sys., Inc., 708 F.2d 385, 388-89 (9th Cir. 1983) (after buyer became distributor, manufacturer lowered written specifications for terminals from 1920 characters per second to 190).

106. *See* Schepps Grocery Co. v. Burroughs Corp., 635 S.W.2d 606 (Tex. Ct. App. 1982) (problems traced to fluctuations in temperature and humidity); Whieldon, *Keep Your Computer Comfortable*, COMPUTER DECISIONS, July 1983, at 148; *Downtime Linked to Air Conditioning Ills*, Computerworld, Oct. 31, 1983, at 25, col. 1.

107. *E.g.*, Byrd Tractor, Inc. v. Burroughs Corp., 7 Computer L. Serv. Rep. (Callaghan) 969 (E.D. Va. 1977)(dust collecting on photoelectric cell broke a circuit, leading machine to act as if ledger card had broken the circuit).

moisture entering poorly sealed components and causing corrosion.[108]

The user may damage the hardware by turning off the power when the machine is not in use. When the power is turned back on, it creates a thermal shock that may hurt delicate components. Similar problems can be caused by fluctuations in the power current.[109] Users also cause problems through their handling or operation of the system.[110] One of the greatest problems is the Garbage In, Garbage Out phenomenon (e.g., improperly input data or the use of improper materials).[111]

Third Parties At Fault: In the computer industry today, many vendors do not "bundle" their products and services.[112] Compatibility is slowly increasing.[113] Modularity, the capacity for addition or replacement of individual hardware components, has greatly increased. Many systems or components are purchased from middle-

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108. R. LONGBOTTOM, *supra* note 98, at 44.

109. *See* Whieldon, *Take Charge Of Power Problems*, COMPUTER DECISIONS, Mar. 1983, at 160.

110. *E.g.*, Convoy v. Sperry Rand Corp., 7 Computer L. Serv. Rep. (Callaghan) 1021 (D. Or. 1977) (parties disputed whether user's application programs or vendor's discs were responsible for "elusive bug"), *aff'd in part, rev'd in part and remanded*, 601 F.2d 385 (9th Cir. 1979); Honeywell, Inc. v. Lithonia Lighting, Inc., 317 F. Supp. 406 (N.D. Ga. 1970) (user incorrectly wired voltage meter at installation and improperly intermixed two programs); *Federal Jury Sifts Charges In Suit Against Data General*, MIS Week, Jan. 12, 1983, at 6, col. 1 (vendor traced problems to damage caused when computer was dropped off truck and then dropped down flight of stairs, as evidenced by insurance claim).

111. *E.g.*, Iten Leasing Co. v. Burroughs Corp., 684 F.2d 573 (8th Cir. 1982) (operators entered data improperly); Clements Auto Co. v. Service Bureau Corp., 298 F. Supp. 115 (D. Minn. 1969) (operators transposed 27-digit part numbers in inventory reports), *aff'd in part, rev'd in part*, 444 F.2d 169 (8th Cir. 1971); Acme Pump Co. v. National Cash Register Co., 32 Conn. Supp. 69, 337 A.2d 672 (Ct. Common Pleas 1974) (vendor blamed bookkeepers' inexperience and "their resistance to a machine that might curtail or eliminate their jobs").

The classic case must be Rossi Quality Foods, Inc. v. Friden, Inc., 4 Computer L. Serv. Rep. (Callaghan) 660 (N.D. Ill. 1971). The operators of the billing machines cut the paper tape at the end of each day and then Scotch taped it together. The melting Scotch tape formed a gummy surface over the service bureau's optical reader. The operators also taped long-hand notes onto the paper tape, filled in the six character field for dates incorrectly, and fed check numbers into the accounts receivable system instead of invoice numbers. *Id.* at 683-85.

112. *See supra* note 28.

113. One of the major developments in the computer industry in recent years has been the growth of "plug compatible" computers and peripheral products, which make it simpler to assemble a system from hardware components made by different vendors. *See* F. FISHER, J. McKIE & R. MANCKE, *supra* note 28, at 286-303, 415-17.

men such as distributors, OEM's, or turn-key suppliers.[114] As a result, many business computer systems are now provided by more than one vendor. Further, hardware vendors often sub-contract with or recommend software firms, raising the problem of joint liability.[115] Some systems are maintained by independent firms.[116] There are also questions of privity when a user sues a vendor for problems that may have been caused by the middle-man who sold the system. This diffusion of responsibility is likely to accelerate disputes over fault.[117] Exacerbating the problem even more, there is the possibility of suing the consultant.[118]

Exclusive Remedy: The three preceding sections concerned claims that are invalid because the vendor being sued has not breached the warranty. There are also cases in which there is a breach but the user is still not entitled to consequential damages, regardless of the unconscionability issue. This occurs when a court

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114. *See* Whieldon, *Choosing The Right Turnkey Mini Supplier*, COMPUTER DECISIONS, Oct. 1980, at 51.

115. *See, e.g.*, Accusystems, Inc. v. Honeywell Information Sys., Inc., No. 80 Civ. 5710 (DBB) (S.D.N.Y. Oct. 26, 1982) (buyer alleged oral agreement to create broad ranging joint venture between vendor and OEM, who prepared software); Samuel Black Co. v. Burroughs Corp., No. 78-3077-F (D. Mass. Dec. 18, 1981) (vendor filed third party suit against software subcontractor); Suntogs of Miami, Inc. v. Burroughs Corp., 433 So. 2d 581 (Fla. Dist. Ct. App. 1983) (clause absolving vendor for liability concerning third party software held ineffective against fraud claims); Wang Laboratories, Inc. v. Docktor Pet Centers, Inc., 422 N.E.2d 805 (Mass.App.Ct. 1981) (Wang accepted "systems responsibility," which included standing behind contractual agreements between Wang and the third party software firm).

116. *See* Roman, *Third Party Maintenance: First-Class Service with a Second-Class Name*, COMPUTER DECISIONS, Dec. 1983, at 164.

117. *E.g.*, Office Supply Co. v. Basic/Four Corp., 538 F. Supp. 776 (E.D. Wis. 1982). The court found that there had been two programming defects. The vendor had corrected one shortly after the warranty had expired, while the other appeared after that period. The inference was that the latter defect had been caused by the user's own programmer or by an independent programmer who had been hired to correct the earlier problems. *See* Martin, *Surviving In A Multi-Vendor Shop*, COMPUTER DECISIONS, Aug. 1981, at 124.

118. In Convoy Corp. v. Sperry Rand Corp., 7 Computer L. Serv. Rep. (Callaghan) 1021 (D. Or. 1977), *aff'd in part, rev'd in part and remanded*, 601 F.2d 385 (9th Cir. 1979), Convoy sued its consultant for negligence, fraud, breach of contract, and breach of implied warranties. It sought $516,000 in out-of-pocket expenses, plus consequential and punitive damages. The parties settled for $354,500 without apportionment among the claims. Convoy then sued the vendor and won $216,000. 7 Computer L. Serv. Rep. (Callaghan) at 1022-23. On appeal, the vendor argued that the award was a double recovery to the extent that it represented consequential and punitive damages. The Ninth Circuit remanded to determine the total damages provable against the two defendants. 601 F.2d at 389. The court did not express an opinion on the vendor's right to equitable contribution from the consultant. *Id.* at 389 n.1. On remand, the judgment was not reduced. 672 F.2d 781 (9th Cir. 1982).

decides that the limited remedy of repair or replacement has not failed of its essential purpose.[119] In such a situation the user will not recover any damages.[120]

2. *Insurance*

Another consideration when considering the vendor's ability to provide the remedy is the vendors' ability to transfer their liability to a third party insurance company at a reasonable cost.

Vendors of computer hardware or software, as well as consultants and companies providing other services, can obtain errors and omissions (E&O) insurance, a type of professional liability coverage.[121] The E&O insurance currently available has large deductibles and is rather narrow, in part because of the difficulty in determining when and how problems arise. It protects the insured from claims made against it in the course of providing data processing services, including claims for nonperformance and negligent misrepresentation. Some carriers limit coverage to the processing of "financial records."[122] The contract often requires the carrier to defend the

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119. *E.g.*, Garden State Food Distrib., Inc. v. Sperry Rand Corp., 512 F. Supp. 975 (D.N.J. 1981) (vendor's failure to replace parts within a reasonable time did not cause failure of limited remedy when remedy provided for refund in such an event).

120. Professor Eddy points out that it is reasonable to expect standard goods to be defect free. "As one moves into the realm of industry or commerce, however, the goods sold become more complex and more frequently custom-designed. Accordingly, a 'best efforts' standard becomes increasingly plausible." Eddy, *supra* note 12, at 77. He makes the same point about the fundamental breach doctrine, observing that the "end bargain" depends upon the transaction type. With standard goods, the goal is defect-free goods. "Where, however, the *type* of transaction is different, it may be commercially reasonable to view a limitation to repair as an 'end in itself.' " *Id.* at 71 n.154. Unfortunately, "all but automobiles and turbines are 'undecided cases.' " *Id.* at 80 n.178.

See Chatlos Sys., Inc. v. National Cash Register Corp., 635 F.2d 1081 (3d Cir. 1980) (remedy failed when vendor could not correct errors in system specifically programmed for user with growing data processing needs); AES Technology Sys., Inc. v. Coherent Radiation, 583 F.2d 933 (7th Cir. 1978) (commercial laser not so different from automobile, remedy fails); American Elec. Power Co. v. Westinghouse Elec. Corp., 418 F. Supp. 435 (S.D.N.Y. 1976) (multi-million dollar turbine-generator is not a piece of machinery that simply works or does not); U.S. Fibres, Inc. v. Proctor & Schwartz, Inc., 358 F. Supp. 449 (E.D. Mich. 1972) (buyer of experimental conveyor oven should not have interpreted specifications as creating express warranty), *aff'd*, 509 F.2d 1043 (6th Cir. 1975).

121. *See generally* Woods, *The Insurance Aspects Of Computer Litigation*, 3 COMPUTER L. INST. (USC) XI-6 (1982); Tangorra, *Insurance Against Disaster*, DATAMATION, July 1982, at 70; Lasden, *Edp Insurance: Finding the Right Words*, COMPUTER DECISIONS, Feb. 1980, at 72; James, *Insuring Against Data Processing Losses*, Computerworld, Dec. 5, 1983, at 19, col. 1; *User Suits Give Rise to 'Malpractice' Insurance*, Computerworld, Sept. 26, 1983, at 24, col. 1.

122. Lasden, *supra* note 121, at 81.

vendor or pay the defense costs. It does not cover intentional torts, punitive damages, or harms covered by general liability policies.[123]

E&O insurance for data processors is relatively new, and only a few companies presently offer it. Demand has been light[124] because negligence claims have not been a serious problem.[125] There is a limited range of policies from which to choose and a limited degree of competitive pressure to keep premiums down. Premiums can vary widely. Other companies are reportedly following current developments before deciding whether or not to offer E&O coverage.[126]

Because E&O insurance covers only negligence, it does not appear to offer vendors much assistance in bearing liability for consequential damages arising from warranty claims.

B. THE USERS' NEED FOR THE REMEDY

From the users' point of view, the issue is whether or not the contract offers a "minimum adequate remedy."[127]

There are four types of risk management that a computer user could conceivably choose from to reduce total costs. First, the user could contractually allocate the risk to the vendor through the warranty. Second, he could allocate the risk to an insurance company. Third, he could make "allocative investments"[128] to prevent problems and minimize the resulting disruption. Finally, the user could self-insure, i.e., bear any losses himself.

A business computer contract that does not offer consequential damages may preclude the first possibility. Whether or not such a

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123. E&O insurance covers intangible harms to the property of others, while general liability insurance covers tangible harms, i.e., personal injury and property damage. *See* Centennial Ins. Co. v. Applied Health Care Sys., Inc., No. 82 C 4108 (N.D. Ill. July 5, 1982) (insurer claimed no duty to defend or indemnify vendor when general liability policy covered "property damage," excluding loss of use of tangible property as the result of nonperformance or failure of goods to perform as warranted, and wiring defects in controllers caused random loss of data), *aff'd in part, vacated in part*, 710 F.2d 1288 (7th Cir. 1983).

124. Data processing E&O insurance is the least purchased form of E&O coverage, relative to the risk involved. James, *supra* note 121, at 23, col. 1. One insurance company has identified "product errors and omissions liability" as the new "legal hot button," which should prompt more vendors to seek E&O coverage. *Id.*

125. Users sometimes add a negligence count in addition to their other causes of action. The negligence claim has generally not succeeded to date. Many states do not permit disappointed buyers to circumvent the terms of a contract by bringing tort actions (other than misrepresentation) in cases of solely economic loss. *E.g.*, Office Supply Co. v. Basic/Four Corp., 538 F. Supp. 776 (E.D. Wis. 1982). There are also problems in defining the standard of care and proving breach.

126. James, *supra* note 121, at 22, col. 4.

127. U.C.C. § 2-719 comment 1 (1978). *See supra* note 12.

128. Priest, *supra* note 87, at 1310.

contract offers a "minimum adequate remedy" will depend upon how much self-insurance would cost the user, even if the user were to take reasonable advantage of the two other forms of risk management.

1. *Loss Reduction*

To minimize possible losses, users can take preventive steps to avoid hardware or software failures and corrective steps to minimize the disruption that results from such failures.

a. *Testing*

Ideally, users should attempt to make thorough testing of hardware and software a condition of acceptance.[129] If they have not done so, when the system is installed they should still arrange for testing, whether by the vendor, the EDP department, or a third party.

Testing can help reduce losses in several ways. First, it can discover latent defects. Second, it may reveal at an early stage that the system will never perform adequately or be suitable for the user's needs. Third, it will reduce the time needed to maintain the back-up system, or give the user definite reason to keep that system. Finally, when testing is the basis for acceptance, it gives the vendor incentive to accelerate corrections.

Testing should establish that the hardware components and the individual programs perform as specified, that job-stream programs exchange data properly, and that the system as a whole performs as expected, in its actual environment. These performance tests can generally be conducted in a few hours or days. For some systems, benchmarking can even be done prior to installation, demonstrating whether or not the planned configuration will handle the workload represented by the benchmark programs.[130]

Testing should also establish the reliability of the system. This stage will take longer than performance testing, because reliability

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129. Some contracts state that the system must pass certain tests before the user must accept it and start making payments. Others state that acceptance occurs when the vendor certifies that the system is installed or ready for use. *See* J. AUER & C. HARRIS, *supra* note 28, at 170-71; D. BRANDON & S. SEGELSTEIN, *supra* note 84, at 94; Cowden Mfg. Co. v. Systems Equip. Lessors, Inc., 608 S.W.2d 58 (Ky. Ct. App. 1980).

130. Benchmarks are testing programs designed to represent the much larger programs being contemplated. They are tested on hardware configurations similar to the proposed system. Unfortunately, benchmarking and modelling, the only predictive tools of computer performance evaluation, are also the most expensive, and are not affordable for smaller users. M. MORRIS & P. ROTH, COMPUTER PERFORMANCE EVALUATION 132 (1982).

is a measure of performance over time and testing cannot discover all latent defects immediately. Whereas performance testing is done with carefully compiled test data, reliability testing generally uses live data. It is the actual use of the system over a trial period. This period should normally extend for up to four operating cycles of the various programs, e.g., operating a weekly payroll program for up to four weeks. During the trial period, there should be parallel testing of problems on the new and old (whether electronic or manual) systems.

These tests will not reveal all latent problems.[131] Also, since start-up problems are routine, they may not identify a system as hopeless. Still, testing is an effective way for the user to reduce loss. It is especially effective when it is employed as the basis for acceptance and the user maintains his previous data processing method until the testing is completed satisfactorily.

b. *Parallel System*

Because delay or failure is so common and so costly, the user should not rely upon the vendor's assurances that the system will work smoothly upon installation, or that any problems will be corrected shortly. Instead, he should maintain his previous method of data processing, whether manual or electronic, as a back-up system. Users, however, are often too trusting, too optimistic, or too impatient to take this precaution.[132]

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131. *See, e.g.*, Sha-I Corp. v. San Francisco, 612 F.2d 1215 (9th Cir. 1980) (system passed acceptance test of 30 days at 95% effectiveness, then ceased to operate properly); Renfro Hosiery Mills Co. v. National Cash Register Co., 552 F.2d 1061 (4th Cir. 1977) (system installed in November, 1969; tested from late November to early December; user abandoned old manual system entirely in May, 1970; serious problems first arose in June, 1970). One principal difficulty is that the software contains a vast number of instructions, some of which may not be used for weeks or months after installation. It is also very difficult to devise test data that will "exercise all possible paths through the program." M. MORRIS & P. ROTH, *supra* note 130, at 83. This means that some programming errors may lie undetected for a long time. One solution is to use application program analyzers, a category of software monitors (commercially available programs that "collect statistical information about the distribution of activity caused by the execution of particular programs or sets of programs." *Id.* at 3) that identify the specific instructions in a program that have or have not been used. *Id.* at 83.

132. In Carl Beasley Ford, Inc. v. Burroughs Corp., 361 F. Supp. 325 (E.D. Pa. 1973), *aff'd mem.*, 493 F.2d 1400 (3d Cir. 1974), the user relied on Burroughs' assurances that all of the programs would be delivered on time. At delivery time, only one of the 13 programs had actually been delivered. Nonetheless, Carl Beasley cancelled its arrangement with another firm for the processing of its records. Late delivery and defects caused Beasley to fall behind in its accounting. It was forced to compile records manually, turn over certain data processing to IBM, hire extra personnel to operate a

Running parallel systems during a trial period does involve additional expense. If the user were required to do this for a lengthy period of time when no problems appeared, this measure might not be commercially reasonable. But in most instances, the problem is not latent defects. The failures begin immediately, and are recurring. To some extent, problems are to be expected. The question is how soon the user can expect the vendor to cure them. Consequently, it is reasonable for the user to keep the old system until the new one is performing adequately or is replaced.

c. *Cure or Cover*

Testing and maintaining a parallel system are precautions. They are preventive measures to determine the performance and reliability of the system, to discover defects, and to provide an alternate system of data processing in the event of failure. Once serious problems beyond the usual start-up difficulties do appear, or it becomes clear that the system is inadequate, the user can take corrective measures that may limit losses.

He must decide whether to keep the new system (either allowing the vendor more time to cure the defects or taking over responsibility himself), or to dispose of it and cover by acquiring a replacement. This decision can be the most important factor in limiting loss from a breach of warranty. Unfortunately, it is also the most difficult decision for the user to make.

On one hand, replacement looks attractive. When down time is seriously disrupting the user's business and service calls have become a company ritual, the user may decide that the likelihood of success in the near future is too small to justify the continuing injury and irritation. Further, the time period for bringing legal action, determined by either the U.C.C.'s four year statute of limitations[133] or by a shorter time limit included in the contract, begins when the breach occurs, which usually means when the installation is com-

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second Burroughs machine, and have its accountants reconstruct accounting records for a one year period. 361 F. Supp. at 328-29. In Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737 (2d Cir. 1979), Triangle had been operating an IBM system. When the new system was installed, it abandoned the previous one, "in a step of such technological finality that once the Honeywell system was installed, the IBM data could not be retrieved: 'Honeywell's system erased footprints.'" *Id.* at 741-42 (quoting the user's brief). Triangle charged Honeywell, inter alia, with failing to run a proper parallel system during the changeover period. Because the statute of limitations precluded consideration of the warranty claims, it is not clear who was responsible. In IBM Corp. v. Catamore Enter., 548 F.2d 1065 (1st Cir. 1976), *cert. denied*, 431 U.S. 960 (1977), IBM allegedly advised the user not to keep a parallel system. The user cited this advice as an instance of the vendor's negligence. 548 F.2d at 1071 n.12.

133. U.C.C. § 2-725(1) (1978).

plete.[134] This is an additional incentive for terminating the relationship without further delay.

On the other hand, there are many reasons why the user may decide not to replace the new system. First, the vendor may not allow him to reject or revoke his acceptance of the troubled system.[135] If the user nonetheless believes himself entitled to reject, and stops making payments, the vendor will probably sue or bring a counterclaim. This presents several problems. The court may decide that the U.C.C. does not allow rejection.[136] Further, the user probably cannot reject, regardless of the Code, if he holds the system by a third party lease. In such a case, the manufacturer has sold the system and retains no ownership rights. The user can still bring a warranty claim against the manufacturer because of the warranty transfer in the lease agreement,[137] but that agreement does not allow the lessee to stop making payments in the event of a breach.[138] Given the costs and delays involved in litigation, as well as the uncertainty of the outcome, the user may conclude for a considerable period that the consequential loss does not justify the great expense of paying for two systems.[139]

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134. *Id.* § 2-725(2) states: "A cause of action accrues when the breach occurs." *See* Triangle Underwriters, Inc. v. Honeywell, Inc., 457 F. Supp. 765, 768 (E.D.N.Y. 1978), *aff'd in part, rev'd in part and remanded*, 604 F.2d 737, 741 (2d Cir. 1979). Triangle originally argued that Honeywell had promised to provide it with a "turn-key" system, that would be completely ready for use by a certain date. The lower court then held that this delivery date was the time when the alleged breach occurred. The Second Circuit noticed a change of emphasis: "Triangle argues on appeal that its use of the phrase 'turn-key operation' was possibly 'ill conceived.'" 604 F.2d at 742. The court also applied the majority rule that allowing the seller time for repairs does not toll the statute of limitations. *Id.* at 743.

135. It apparently makes little difference whether a buyer rejects or revokes. J. WHITE & R. SUMMERS, *supra* note 11, at 297.

136. *See* U.C.C. §§ 2-602(1) (rejection), 2-606(1) (acceptance), 2-607(3)(a), 2-608 (revocation of acceptance)(1978).

137. The third party lessor makes no warranties of his own. The parties sometimes sign a sales contract and then switch to a third party lease, with the lessor buying the system from the vendor. In Burroughs Corp. v. Century Steel, Inc., 99 Nev. Adv. 96, 664 P.2d 354 (1983), the court held that privity remained between the vendor and the user. In Kalil Bottling Co. v. Burroughs Corp., 127 Ariz. 278, 619 P.2d 1055 (Ariz. Ct. App. 1980), the court suggested in dictum that the parties' conduct indicated mutual rescission of the sales contract.

138. *E.g.*, Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp. 738, 744 n.4 (D.N.J. 1979), *aff'd in part, rev'd in part and remanded*, 635 F.2d 1081 (3d Cir. 1980); Byrd Tractor, Inc. v. Burroughs Corp., 7 Computer L. Serv. Rep. (Callaghan) 969, 975 n.3 (E.D. Va. 1977); Patriot Gen. Life Ins. Co. v. CFC Inv. Co., 420 N.E.2d 918 (1981).

139. *See, e.g.*, Diversified Environments, Inc. v. Olivetti Corp. of Am., 461 F. Supp. 286 (M.D. Pa. 1978)(user continued making payments to avoid jeopardizing its credit rating).

Second, even if the user can reject the faulty system, to cover is still expensive and disruptive. The main problem is lack of compatibility. Generally, a program written for one computer is not transportable, i.e., it cannot be run on another computer. The conversion process can be extremely lengthy and time-consuming. In addition, hardware components from different systems may not interface. Computers or terminals at different locations may not be able to communicate with one another because of networking problems. Data prepared for one system may not be accessible to another.[140] There are also costs involved in retraining employees.

Third, the user must measure all of these expenses against the possibility that, as one court put it, "inventory control [is] just around the corner."[141] The vendor is continually assuring the user that the problems will be resolved shortly. The user is probably not competent to evaluate the veracity or likelihood of success.[142] He does not know what his own employees or an independent consultant might be able to accomplish,[143] and the warranty may disclaim all liability if anyone but the vendor modifies the system.[144] So long

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140. *See, e.g.*, Dunn Appraisal Co. v. Honeywell Information Sys., Inc., 687 F.2d 877 (6th Cir. 1982) (vendor estimated that it would take 16 man-hours to convert one program, 2-4 man-years to convert all 400 programs). With software, the problem is that programs need to be written in different computer languages or dialects for use by different machines. With hardware and networking, the problem is a lack of standards. With data, the problem is the use of different formats. There have been attempts at standardization, promoted by the American National Standards Institute and the federal government. Because standardization helps firms trying to take away other vendors' customers, however, the largest firms, notably IBM, have been very active in resisting it. *See* Johnson, *A Question of Compatability*, Computerworld, Mar. 31, 1982, at 35, col. 1; Stevens, *SNA: IBM Wins Again*, COMPUTER DECISIONS, Mar. 1983, at 144.

141. Clements Auto. Co. v. Service Bureau Corp., 298 F. Supp. 115, 137 (D. Minn. 1969), *aff'd in part, rev'd in part*, 444 F.2d 169 (8th Cir. 1971).

142. In *Clements*, the court was very understanding of the user's failure to mitigate, because "[t]he representations made by SBC were not ones which the ordinary layman eventually could easily determine to be true or false. SBC presented to SM Supply new techniques involving a new technology and a new language." 298 F. Supp. at 137.

143. *E.g.*, Triangle Underwriters, Inc. v. Honeywell, Inc., 651 F.2d 132 (2d Cir. 1981) (user paid $54,000 to independent consultant); Badger Bearing Corp. v. Burroughs Corp., 444 F. Supp. 919 (E.D. Wis. 1977) (user retained systems analyst to discover problems and design new system), *aff'd mem.*, 588 F.2d 838 (7th Cir. 1978); Quad County Distrib. Co. v. Burroughs Corp., 68 Ill. App. 3d 163, 385 N.E.2d 1118 (1979) (user paid $18,700 to another party for software).

144. *See, e.g.*, Office Supply Corp. v. Basic/Four Corp., 538 F. Supp. 776 (E.D. Wis. 1982); Hi Neighbor Enter. v. Burroughs Corp., 7 Computer L. Serv. Rep. (Callaghan) 1603 (N.D. Fla. 1980).

as the user has reason to hope for success he may decide to keep gambling by giving the vendor more time to cure.

The user is in a quandary. The initial promises have not been fulfilled, the disruption continues, and the consequential loss accumulates weekly, but there are several reasons why the user may not wish or be able to replace the system. The most realistic conclusion is that the user has a significant ability to avoid loss, but may not have the necessary information or resources.

2. *Insurance*

If the vendor will not insure the system's success, another possibility is that an insurance company will.

There are several types of insurance coverage available to computer users.[145] Equipment insurance covers the replacement of hardware, if excluded from the user's personal property insurance. Media insurance covers the cost of replacing lost programs or data. Unless there are duplicate tapes available, coverage is based on the cost of recreating the programs or data.

Extra expense insurance covers the additional data processing costs caused by the loss or failure of a system. Coverage is based on a differential formula that is included in the contract. Some expenses, in the form of lost efficiency, are not claimable. For example, if a highly paid programmer is reduced to performing a minor task because the system is down, the loss will not be within the policy, because the programmer is on a fixed salary.

Business interruption insurance covers earnings that are lost while the business is disrupted by "damage to property." The contract defines which risks are recognized as damage and which types of "property" are protected. Decreased production and the recovery of business momentum (i.e., regaining clients) once the data processing operation is restored are generally not covered. Coverage is again based on a differential formula, providing for some or all of the difference in earnings. The coverage is often limited to losses over a very short period, such as two weeks.[146] The primary holders of this coverage are service bureaus.

Equipment, media, and extra expense insurance provide substitutes for direct (cover) and incidental damages. Business interrup-

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145. *See generally* articles cited *supra* note 121. Large firms may be able to include these types of coverage within their blanket corporate policy. Smaller firms can obtain a separate policy for computer-related risks. Personal property or office contents insurance covers damage to the insured's premises and property. It may include damage to computer hardware.

146. Woods, *supra* note 121, at XI-19.

tion insurance provides the only equivalent to consequential damages. It may not be a very close equivalent. Most policies as presently drafted appear to be concerned with the disruption of a continuous operation rather than with problems in the acquisition of new products. It would be most likely to provide a substitute for the contractual remedy in the case of latent or intermittent defects.

Whether or not third party insurance is an effective means of reducing costs also depends upon the premiums. Data processing insurance policies, which are individually tailored, are generally expensive.[147] Smaller users will be able to afford policies, but they will have to accept smaller coverage amounts or higher deductibles. Third party insurance may not be very helpful in reducing costs for the additional reason that premiums are directly related to the protective steps that the user is taking. "The paradoxical thing about insurance is that the less you need it, the more desirable a customer you are."[148]

If third party insurance were to provide an effective means of managing risk, it might make the vendor's remedy limitation not only justifiable but also desirable for both parties. This would be the case if the insurance company had a comparative advantage in insuring against the risks, since the vendor and the user wish to reduce their total costs by allocating the risks to the party that can insure against them most cheaply. It is not clear, however, who has the comparative advantage. The vendor knows the most about computers, and already conducts negotiations with the user. The insurance company, on the other hand, knows more about insurance techniques. Either one may have the advantage in defining and segregating users by classes of risk.

V. POLICY: UNCONSCIONABILITY AS REGULATION

Sections III and IV above have addressed how fair the exclusion of consequential damages is from the point of view of vendors and users. When new legal rules may cause changes in an industry, courts must also ask whether or not the social consequences are desirable. It is likely that holding exclusions of consequential damages to be unconscionable would cause one or more major changes in the computer industry.[149]

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147. According to one insurer, a user with a large EDP operation would pay premiums of 20-25¢ per $100 coverage. Tangorra, *supra* note 121, at 72.

148. Lasden, *supra* note 121, at 84.

149. It is possible that the added costs would not be sufficient to cause vendors to charge more, given the difficulty in passing along costs. Professor Leff believed a seller was likely to explain that the commercial purpose of a suspect clause was to

If vendors were to pay more in damages, they would probably raise their prices, with the additional amount representing an insurance premium.[150] This is sometimes viewed as a good result because it allows sellers to spread risks.[151] If vendors raise prices, however, their products will become less affordable. Some businesses, especially the smaller ones, which are said to have the greatest need for protection, may have to buy less sophisticated systems or buy less often. Unless one takes the extremely paternalistic view that courts should protect businessmen from improvident risk-taking, this would be a sub-optimal result.[152] In effect, the cost of unreliability would be transferred to businesses that are willing to purchase without the contract remedy but are not willing to pay higher prices. It should not be public policy to impede the spread of computerization.[153]

Another possible response to vendors being required to pay more damages is that vendors would resist competitive pressures more. They would take more time to develop and test new products, and would not sell them so far in advance.[154] An improvement in

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increase his profit, and the effect of striking the clause would simply be to reduce his profit. Leff, *supra* note 11, at 544-45.

150. Vendors might simply charge more and pay consequential damages whenever courts find unconscionability. Alternatively, they might include consequential damages as a secondary remedy in the contract, since they would already be charging users the extra amount. This would create greater predictability and control. Vendors might even reduce their liability to some extent by offering damages up to some liquidated sum or by following a differential formula, as insurers do. *See supra* text accompanying notes 145-46. The disadvantage of this idea is that it makes damages more accessible to users.

151. *See* Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1960).

152. *See* Schwartz & Wilde, *supra* note 90, at 667.

153. *See* Chatlos Sys., Inc. v. National Cash Register Corp., 670 F.2d 1304, 1307 (3d Cir. 1982)(Rosenn, J., dissenting) (objecting to the majority's measure of damages under U.C.C. § 2-714(2) and raising the possibility of significant harm to the computer industry), *reh'g denied*, 670 F.2d 1315, 1316 (3d Cir. 1980)(Adams, J., dissenting) (repeating this warning), *cert. denied*, 457 U.S. 1112 (1982).

154. Vendors already have incentive to improve quality because they wish to avoid adverse publicity, because much of their revenue is derived from continuing relationships with users, and because many contracts contain strict acceptance standards. Further, the legal system provides incentive because vendors face the risk of having to pay consequential damages in misrepresentation cases. These cases also raise the added prospect of punitive damages. In Glovatorium, Inc. v. NCR Corp., 684 F.2d 658 (9th Cir. 1982), for example, NCR was required to pay $2 million in punitive damages, representing three days of the company's profits. Benn & Michaels, *supra* note 8, at 37. Whether or not unconscionability would affect quality decisions depends upon how much additional incentive warranty claims would create.

Both misrepresentation and warranty claims are based on a difference between the value of goods as promised and as delivered. To avoid liability for misrepresentation, in which a vendor is found to have deliberately misled the user, vendors may

quality might be a desirable result of regulation. One cannot conclude, however, that any increase in quality is ultimately preferable. The incremental benefits must be weighed against the incremental costs. First, vendors would probably have to raise prices, which again raises the problem of marginal users being unable to afford systems of the same sophistication. Second, it would take more time to provide new products. New hardware, systems software, and application software packages (i.e., standard items) could not be released to the public as soon. Custom application programs also could not be released to individual users as soon. While it is regrettable that products are often released too soon, one cannot conclude that a pace of development influenced by the courts would be more optimal than the pace set by the market.[155]

Another possibility is that the structure of the computer industry would be altered. Liability for consequential damages would have different effects on different vendors. To the extent that it favored the largest companies, who are most able to absorb the added costs (as opposed, for example, to those producing the best products), it would have an anti-competitive effect by creating added barriers to entry or success. It would discourage innovation by making reliability more important in relation to other product attributes. It might also affect vertical structure, conceivably either accelerating or reversing the trend towards differentiation.

Because one cannot conclude that more remedy coverage or better quality would be worth the additional costs in time and money, and because of the unpredictable effects on the industry, the likely social consequences of unconscionability do not make it a desirable form of regulation.

VI. CONCLUSION

Many businesses have suffered great disappointment and loss as a result of signing standard contracts for computer systems. Their experiences have persuaded some sympathetic observers that computer transactions may be so unfair as to justify overriding the traditional freedom of contract rule respecting agreements between

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choose primarily to instruct their salesmen to promise less. In the case of warranties, the standard contract promises little now. Nonetheless, unless all vendors chose to eliminate the warranty against hardware defects and software errors, those vendors that did so might find it hard to compete—assuming that users do consider at least the minimum express warranty and the repair remedy to be significant. This consideration might prompt vendors to respond to warranty actions by improving quality.

155. When there is fraud, the situation is different, because the information available to the users, whose preferences help determine market patterns, is distorted.

businessmen. Despite the attractiveness of their cause, however, they have not clearly established why the rule should be changed.

These sympathetic observers assume that the effects of not enforcing remedy limitations would be positive, overlooking the danger of smaller users being hurt by higher prices, as well as the problem of slower development and the possibility of greater concentration in the industry. They assume that the standard allocation of risk is unreasonable. Yet factors that compound low reliability such as invalid claims and the lack of adequate insurance show why the vendor needs to shift risks. At the same time, the user's ability to minimize his losses by testing and maintaining a parallel system use show why it is fair to shift those risks.

The pro-users attribute lack of choice in warranties to vendor market power, but do not attempt to reconcile this with their emphasis—in a different context—on the intensity of competition among vendors.

Finally, they consider it fundamental that new technology requires new legal rules. Yet they have not shown that even smaller businessmen are unable to bargain intelligently with vendors. The buyer who is not familiar with computers can hire someone who is. Further, many of the errors attributed to unfamiliarity with the technology are actually the result of poor business judgment, i.e., carelessness, in the contracting process. The doctrine of unconscionability should be applied to aid those commercial buyers who are at a bargaining disadvantage because of factors beyond their control, not because they are too trusting. If a businessman cannot prove that he was the victim of misrepresentation, he must point to some more compelling grounds for relief than the fact that he was told he "had to sign the lease agreement . . . to keep the documentation and paper flow going."[156]

David Himelson

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156. Wang Laboratories, Inc. v. Docktor Pet Centers, Inc., 422 N.E.2d 805, 807 (Mass. App. Ct. 1981).