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BOOK REVIEW

COPYRIGHT: PRINCIPLES, LAW AND PRACTICE

By Paul Goldstein.[1]
Boston: Little, Brown & Co. 1989. Volumes I, II & III, pp. 724, 706, & 991, respectively. $275 for the three volume set.

Reviewed by G. Gervaise Davis III[2]

INTRODUCTION

Thirty-two years ago, when I graduated from law school, only two relatively small groups of lawyers were interested in copyright law. Most lawyers who dealt with copyright law belonged to patent law firms or legal groups specializing in the publishing, broadcasting, and entertainment industries. As recently as eleven years ago, the prestigious members of the National Commission on New Technological Uses of Copyrighted Works ("CONTU") could not agree on a suitable legal doctrine for the protection of computer program property rights. They decided, by a majority vote, to rely on copyright law.

Today, both large and small law firms world-wide have intellectual property or high technology groups composed of attorneys specializing in technological applications of the law of copyright. The personal computer, the increasing importance of software, and the full force of the Information Age have all contributed to the rapidly increasing importance of copyright law.

Now, in two volumes of text, together with a third volume of statutes, treaties, tables, and indices, Professor Paul Goldstein has presented the legal profession with a well-written exposition of the state of American copyright law. He has also provided the reader with most of the background materials needed to understand the history and present state of this now dynamic area of the law.

He describes this large body of statutory and case law in a highly professional manner. In so doing, however, he invites a comparison with

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1. Stella W. and Ira S. Lillick Professor of Law, Stanford University. Professor Goldstein is also a counsel to the San Francisco law firm of Morrison & Foerster.

2. Founding Principal, Schroeder, Davis & Orliss, Inc., Monterey & San Jose, California.

the long established reference work, *Nimmer on Copyright* ("*Nimmer*").[3] As an intellectual property lawyer, my professional library includes many other books on copyright and computer law, but none has, to date, been more indispensable than *Nimmer*. With the rising cost of legal publications, the practicioner must seriously consider whether a new treatise is worth purchasing.[4] Goldstein's *Copyright* ("*Goldstein*") attempts to expound upon a field already dominated by a recognized classic. Only time will tell whether it will replace *Nimmer* as the reference work of choice in the field of copyright law.

I. MECHANICS

A. Index and Coverage

The structure and organization of a treatise are important factors for those who intend to use it. Seemingly minor details can make usage of a reference work either a pleasure or a burden. Therefore, some general comments about the format, indices, and tables of *Goldstein* are in order.

One of my frustrations with *Nimmer* has always been that it has one of the worst indexes I have ever seen for a law book of its size. It makes the West Key Number System look simple and useful. One of the first things I did upon receiving *Goldstein* was a quick review of its Table of Contents and index. I searched for topics of use to computer lawyers, then spent several hours looking over the forty-one page index and accompanying materials in the third volume.

Goldstein's index has more than twice as many entries as *Nimmer's*. Happily, *Goldstein's* publisher has improved upon the haphazard, and somewhat dated, scheme of *Nimmer's* index. It includes entries for

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3. M. NIMMER & D. NIMMER, NIMMER ON COPYRIGHT (1989). The original author was Melville B. Nimmer, late Professor of Law, University of California, Los Angeles (1923–1985). Editing of the treatise has now been taken over by his son, David Nimmer, of Counsel to Irell and Manella, Los Angeles.

4. Law books are becoming impossibly expensive to own and maintain. Often, the yearly supplements of law books may cost up to half of the original book's cost. Furthermore, filing these supplements and pocket parts becomes more expensive every day. Filing loose-leaf supplements is also an error-prone exercise in deciphering different publishers' pagination and numbering systems.

In this context, the owner of *Goldstein* should be happy to see that the book is not loose-leaf compression bound like *Nimmer*, but hard-bound in a maroon plasticized fabric. The disadvantage of this format is that sooner or later, the growth of the law will result in two entirely new volumes for each original, each costing more than the entire original set. The lawyer/reader always seems to be on the short end of the exchange with the legal publishing industry.

subjects like "reverse engineering," "source code," "sound tracks," "video cassettes," and a number of other computer terms not found in *Nimmer*. Perhaps this new competition will force the publisher of *Nimmer*, Matthew Bender, to undertake a re-indexing project for that work.

Most indicative of the changes over the past twenty years is Professor Goldstein's increased emphasis on subjects of contemporary legal interest. These include works for hire, moral rights of authors, misappropriation of intellectual property, and the idea/expression dichotomy. A numerical comparison, for example, of index entries under "idea/expression" shows forty entries for *Goldstein*, and ten for *Nimmer*; "trade secrets," twenty for *Goldstein*, two for *Nimmer*. Additionally, *Goldstein* includes twenty-seven entries on the 1988 Berne Convention which brought United States copyright law in line with copyright law in a number of other countries. On the other side of the ledger, the lessening importance of a work's publication leads to fifteen entries on that subject in *Goldstein* and two pages of listings in *Nimmer*. Professor Goldstein devotes a significant amount of space to entries dealing with modern technology at the expense of the performing arts and other areas of fading importance in modern practice. He addresses such important practical issues as discovery, jury trials, expert testimony in scientific subjects, and other procedural issues. *Nimmer* is comparatively weak in these areas.[5]

B. Berne and Effective Dates

Professor Goldstein dates his preface March 1, 1989, recognizing that the United States adopted the terms implementing the Berne Convention into its copyright law on that date. Professor Goldstein makes a number of references to the "Berne House Report" of 1988 and the "Berne Implementation Amendments," neither of which are in the otherwise excellent collection of source materials in Volume III. This legislative history would be useful to readers and would certainly be an appropriate addition to a treatise of the scope of *Goldstein's*. Similarly, Appendix B-1, entitled "International Copyright Relations of the United States," is merely a reprint of the Copyright Office's Circular 38a of June 30, 1987, with an editor's note that the U.S. now belongs to Berne. It is unclear why the publisher's staff did not research and correct the changes to this table for the short period between 1987 and 1989.

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5. Purists will be glad to know that there is no entry in either work under the heading "look and feel [of software]," a popular expression with the media but meaningless in the law. *Goldstein* does, however, include the term "total concept and feel," coined in Roth Greeting Cards v. United Card Co., 429 F.2d 1106 (9th Cir. 1970).

All authors must face the age-old problem of time-dependent materials. However, readers should at least be warned when the author knows of new materials which might obsolesce the information he presents. Professor Goldstein does not indicate whether his treatise includes all necessary references to the changes wrought by the Berne Convention. Some of these changes are quite significant. They include elimination of the notice requirements for post-March 1, 1989 publications and the registration requirement for non-United States published works. "There ought to be a law" that legal authors specify the last date to which their publications are accurate. The problem which here confounds Professor Goldstein is the one which his work seeks to address—the ever-changing law of copyright.

C. Numbering Systems

One final mechanical issue relates to the numbering system of sections in the treatise. Professor Goldstein has chosen the so-called military numbering system, whereby section numbers comprise decimals and digits (i.e., § 6.2.1.3), rather than digits and bracketed alphabetic characters as in *Nimmer* (i.e., § 2.01[A]). There is merit to either approach, but I prefer *Goldstein's* choice. These numbers and the typeface are all easy to read, and the off-ivory paper is a pleasure for aging lawyer eyes. The pica size of *Nimmer* seems to me to be slightly larger, perhaps eleven point, to *Goldstein's* ten point, but they are not significantly different.

In short, with the few noted exceptions, the mechanical aspects of this set are generally excellent.

II. SUBSTANTIVE REVIEW

A. Style

Professor Goldstein writes crisply in a profession known for its notoriously poor writers and champions of legalese. His style and selection of examples are excellent. Perhaps because he has not yet established the reputation of Professor Melville B. Nimmer, Professor Goldstein includes less personal opinion in his treatise. Professor Nimmer, in contrast, never hesitated to provide his own strong opinions for the reader's enjoyment.[6] This practice makes *Nimmer* a more interesting

6. For example, a passage from *Nimmer* discussing the so-called "New Property Right" theory relating to inclusion of earlier works in a derivative work states: "This conclusion is neither warranted by any express provision of the Copyright Act, nor by the rationale as to the scope of the protection achieved in a derivative work. . . . The *Ricordi* opinion, then

work to read, but perhaps a less scholarly one.

B. Community Property, A Conspicuous Omission

One difficult element of literary criticism is commenting on the author's omission and inclusion of particular materials. Having written a work in this field, I also know that many conscious decisions about omitting certain discussions and including others are, in the end, arbitrary.

However, as a California lawyer, I was struck by the fact that Professor Goldstein does not address the effect of state community property laws on federal copyright law. Nor does the Table of Cases list *In re Marriage of Worth*,[7] which held that community property laws apply to the ownership of copyrighted works. This issue should be of great interest to lawyers in the entertainment and computer industries, both of which do substantial business in community property states such as California.

C. Preemption and Conflict of Laws

Professor Goldstein devotes a chapter to the interplay of state and federal law in the copyright context.[8] Because copyright is an area of exclusive federal competence, federal copyright laws generally preempt conflicting state laws.[9] Although his discussion of preemption and state law is generally adequate, I was surprised by some omissions relating to particular state doctrines like the community property doctrine discussed above.

D. Trade Secrets and Reverse Engineering

Professor Goldstein also includes brief sections on trade secret law and its potential overlap with copyright law (§§ 15.10–.12). I wish, though, that he had devoted more discussion to the unresolved question of whether a computer program's author can rely simultaneously on trade secret law to protect his written source code, and on copyright law

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quite properly repudiated the "new property right" theory." *Nimmer*, *supra* note 3, at § 3.07[A].

7. 195 Cal. App. 3d 768, 241 Cal. Rptr. 135 (1987).

8. *See* Chapter 15, consisting of over 200 pages, in which he describes the relationship of copyright law to trade secret law, unfair competition issues, the right of publicity, and moral rights. It also contains some materials on the related Semiconductor Chip Protection Act of 1984, Pub. L. No. 98–620, Title III, 98 Stat. 3335, 3347.

9. *See* 17 U.S.C. § 301 (1988).

to protect his published object code. The Copyright Office takes the position that source code and object code are one and the same work. This view, however, is inconsistent with much of the modern understanding of computer programming. Professor Goldstein points out that once object code is deposited with the Copyright Office pursuant to copyright registration, even in abbreviated form, it may be hard to argue that the program's source code is a trade secret (§ 15.11.2.2).

Another problem related to trade secrets is that of "reverse engineering."[10] Even if the source code of a program is claimed as a trade secret, it is possible for a competitor to recreate that source code by disassembling and listing the published object code of the program.[11] Some American manufacturers have tried to curtail this practice by distributing their programs with so-called "shrink wrap" licenses containing prohibitions on "viewing" their object code.[12] Although no American cases deal directly with this issue, the European Economic Community has recently considered the question in some detail. A recent EEC Staff Directorate Proposal would make the unauthorized viewing of object code an infringement of a computer program's copyright. This kind of protection would impose significant barriers on manufacturers of compatible software that can interract directly with or substitute for existing software. Absent published information about communications protocols, file formats, entry points, and similar information, it is extremely difficult to create related software that would, for example, read and write a Lotus 1–2–3 ".WK1" file. Often, the only way to ascertain the structure and other necessary specifications of a program is by disassembling and viewing portions of it. Although it is not beyond the scope of exceptions such as the fair use doctrine, such legitimate use of copyrighted object code is surely not copyright infringement.[13] Explicitly allowing the decompilation of copyrighted programs, however, might open the door for a flood of computer program "clones."

Curiously, Professor Goldstein makes no mention of "clean rooms" as a means for reverse engineering computer software, nor of the only two

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10. Reverse engineering is the process of creating a compatible work by taking apart and reproducing the function of another work.

11. Disassembly is the process of translating low-level machine language instructions into a higher-level form. Listing is the process of displaying that code in a medium intelligible by a human, such as on a hard paper copy or a computer display.

12. A shrink wrap license is a printed license agreement visible through the plastic shrink wrap of a program's packaging. Manufacturers of software hold that the purchasers of software become bound by the terms of the license once they tear open the wrap to use the program.

13. "Fair use" comprises a non-infringing use of a copyrighted work for criticism, comment, news reporting, teaching, scholarship, or research. *See* § 10.

District Court opinions to approve of such use.[14] As the subject is of considerable importance to the Silicon Valley computer industry, which is the area where Professor Goldstein practices, it is a baffling omission.

E. Protecting Operating Systems

In light of his omission of these reverse engineering issues, it is even more puzzling that Professor Goldstein devotes a number of pages to the argument that computer operating system software should not be protected by copyright (§ 8.5.1.2). He contends that there is no justification for allowing a "generous" infringement standard for operating systems because there is no public need for "variety" in operating systems. The only requirement for a compatible operating system, he claims, is that it function identically to another operating system. While nearly everyone in the industry, with the possible exception of IBM and Apple, would agree that the copyright problems raised by the need for operating system compatibility are severe and complex, Professor Goldstein's analysis oversimplifies the issue.

In his discussion, he goes so far as to suggest that "courts should permit even the literal copying of operating systems" (p. 132). He concedes that such a system might deny any copyright protection to operating system authors. Nonetheless, he finally concludes that it would be desirable "to limit protection for operating systems to literal takings and to excuse defendants who depart, however cosmetically, from the plaintiff's literal expression" (pp. 132–33). His own footnote (n. 55, p. 133), however, acknowledges that the Third Circuit declined to distinguish between applications programs and operating systems for purposes of copyright.[15] Because the final decision issued after his publication date, Professor Goldstein cannot discuss *NEC v. Intel*[16] which found microcode (an organizational level below operating system software) to be proper subject matter for copyright protection.

A far better argument, based on public policy as well as sound copyright principles, is that all computer software is copyrightable per se, but that the scope of protection must be limited to creative expression. In

14. A clean room is a method of compatible software development in which the programmers do not have access to the software they are trying to imitate. If programmers have no access to a copyrighted work, they cannot be found to have copied it. *See* NEC Corp. v. Intel Corp., No. C-84-20799 (N.D. Cal. 1989); Pearl Sys. v. Competition Elec., 8 U.S.P.Q.2d 1520 (S.D. Fla. 1988).

15. Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1249-54 (3d Cir. 1983).

16. NEC Corp. v. Intel Corp., No. C-84-20799 (N.D. Cal. 1989).

section 2.15.2, Professor Goldstein joins the growing number of authors, including this reviewer, who have criticized the Third Circuit's decision in *Whelan Associates v. Jaslow Dental Laboratory*.[17] He quite properly identifies *Whelan* as an erroneous application of the idea/expression dichotomy.[18] *Whelan* gives overly-broad protection to the "structure, sequence, and organization" of the plaintiff's program, and concludes that the idea of that program was to establish "an efficiently managed dental laboratory" (p. 210). The result of this expansive definition, in Professor Goldstein's view, was to classify everything else in the program (including its overall structure, sequence, and organization) as expressive of that idea and hence protected by copyright (§ 8.5.2.2).

F. Fact Intensive Works

The fundamental problem with identifying infringement in fact intensive works is the relatively high number of similarities between the unprotected elements of such works.[19] For example, though two case reporters may have many similarities, most of their similarities may be in the public domain, purely functional, or otherwise outside the scope of copyright. The only protectible elements of such works are those arising from creative expression, such as the symbols and colors on a map, the arrangement of cases in a case book, or the organization and presentation of historical materials.[20] Two recent cases decided after Professor Goldstein's cutoff date shed some light on the proper means for determining infringement of a fact-based work. They, along with the precedents from which they were drawn, make plausible the argument that computer operating system software should be treated as a fact-based work for purposes of copyright infringement.

In *Harper House v. Thomas Nelson*,[21] the plaintiff, Harper, assembled and sold a loose-leaf "time organizer" containing various forms and tables. The defendant, Nelson, admitted that he copied Harper's format to some extent in a similar organizer he manufactured and sold. Harper argued that, while some elements of his organizer came from the public

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17. 797 F.2d 1222 (3d Cir. 1986).

18. In traditional copyright parlance, ideas are not protected by copyright, while the expressions of those ideas are.

19. Fact intensive works depend on a highly accurate depiction of reality, limiting the creative expression which they may contain. Maps, directories, case reports, chronicles, and texts all fall into this category. §§ 8.4, 2.14.

20. *See* §§ 8.4.1., 8.4.1.3, 8.4.1.4. Note that the organization of historical materials is protected only if it represents creative effort. Professor Goldstein still criticizes the protection of uncreative "structure, sequence, and organization" granted in *Whelan*.

21. 889 F.2d 197, 12 U.S.P.Q.2d 1779 (9th Cir. 1989).

domain and some might be held largely functional, as a whole it was protectible.

Acknowledging that Harper's work was protectible, Judge Goodwin pointed out that a factual work receives only extremely limited copyright protection. Similarly, he said, copyright infringements of compilations consisting largely of uncopyrightable elements should not be found in the absence of "bodily appropriation of expression." Noting that one of the jury instructions might have led the jury "to focus on whether the two 'books' look alike, not on whether defendants copied protectible expression," he reversed and remanded the trial court's finding for Harper House.

In *Nash v. CBS, Inc.*,[22] the district court rejected the "total concept and feel" approach to comparison of works that originated in *Roth Greeting Cards v. United Card Co.*[23] *Nash* involved alleged similarities between a book concerning the circumstances of John Dillinger's 1934 shootout with the FBI, and a subsequent CBS television program about the same event. The trial court refused to compare the similarities between the works in their entirety by examining their "total concept and feel." It found for CBS on the grounds that when examining only the protectible portions of the original work, the similarities between it and the alleged infringer were insufficient to find the requisite "substantial similarity." While the book, based on historical facts, was copyrightable, the court limited the scope of the copyright to creative expression and not the broad historical ideas on which it was based.

These two decisions should inform future decisions related to computer software copyright infringement. Software is a perfect candidate for treatment as a fact intensive work. The development of the code is constrained by both the computer language chosen and the subject matter of the program. Furthermore, the essential purpose of software is functional, in that the whole point of the program is to enable the computer to do something. The narrow copyright protection of fact-based works should apply whether a work is a printed time organizer system or a computer operating system. Thus, in examining two programs for similarity, the court must be certain to exclude any comparisons of unprotectible "factual" material. If courts adopt this approach, software that is not blatantly pirated from a copyrighted work will not infringe even if it is functionally compatible with a copyrighted work. Given that functional compatibility is a desirable market incentive for innovation in the software field, such an approach would be socially beneficial.

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22. 704 F. Supp. 823 (N.D. Ill. 1989).
23. 429 F.2d 1106 (9th Cir. 1970).

G. Screen Displays

Commendably, Professor Goldstein includes a brief discussion on protection of computer screen displays and user interfaces (p. 211). He correctly notes that several District Courts have failed to appreciate the difference between protecting computer programs and protecting visual displays generated by programs.[24] Unfortunately, he does not go on to point out that, in 1988, the Copyright Office ruled that screen displays do not constitute separate works from the computer programs that generate them.[25] The Copyright Office will no longer grant separate audiovisual copyright registrations for computer screen displays. Programs and the screen displays they produce, however, are different works. Thus the Copyright Office may also be wrong in its approach.

H. Digital Typefonts

Similarly, Professor Goldstein might have discussed the Copyright Office's reluctance to accept digital typefonts for copyright registration on the grounds that they are purely functional.[26] Professor Goldstein does discuss *Eltra Corp. v. Ringer*,[27] which formed the basis for refusing to protect typefonts before they became digital images used on computers and printers. There is, as of this writing, some evidence that the Copyright Office is reconsidering its policy and digital typefont registrations are being granted on some applications long delayed by that office.

I. Works For Hire

Another area of current interest to the computer lawyer is that of "works made for hire," and in particular the question of whether an author must be a formal employee for a business to claim ownership of his work.[28] Computer programmers, especially independent contract programmers, are continually faced with questions of ownership of their programs. Professor Goldstein has a fairly comprehensive section on

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24. *E.g.*, Broderbund Software, Inc. v. Unison World, Inc., 648 F. Supp. 1127 (N.D. Cal. 1986); M. Kramer Mfg. Co. v. Andrews, 783 F.2d 421 (4th Cir. 1986).

25. *See* Copyright Office, Library of Congress, Registration and Deposit of Computer Screen Displays, 53 Fed. Reg. 21,817 (June 10, 1988).

26. A digital typefont comprises a form of digital data which, when processed by a computer, results in the formation of characters on a screen or printer.

27. 579 F.2d 294, 298 (4th Cir. 1978).

28. "A 'work made for hire' is —

(1) a work prepared by an employee within the scope of his or her employment; or

(2) a work specially ordered or commissioned . . ."

17 U.S.C. § 101 (1988).

this subject, tracing its history under both the 1909 and 1976 Copyright Acts (§ 4.3). Though handed down only a few months after Professor Goldstein's release date, the U.S. Supreme Court decision of *CCNV v. Reid*,[29] has already rendered much of this material obsolete. Justice Marshall, writing for the majority, held that the issue of whether the author is to be considered an employee (and thus rendering the work a work for hire) depends not on formalities, but on common law principles of agency and the master and servant relationship. As a result, most independent contract programmers will be deemed the owners of the programs they create, since few such programmers would be considered employees under such a test. In the future, formal written copyright assignments and the termination right under section 203 of Title 17 of the U.S. Code may become key issues for computer lawyers.

CCNV also raises the issue of when a work should be considered a joint work. Professor Goldstein includes an excellent short treatment of the rights and obligations of joint authors, which is one of the few such discussions to be found in legal writings today (§ 4.2.2). Because of the *CCNV* decision, however, this section of *Goldstein* should be used with care, as it could lead the reader astray until the first supplement comes out.

CONCLUSION

Overall, Professor Paul Goldstein has done a fine job of getting his mind and typing fingers around a complex, varied, and rapidly changing subject. This three-volume work is a real contribution to the field, and will be of considerable value to any practitioner working with copyright law. It is up-to-date, clearly written, and well thought-out. That this reviewer found fault with portions of it only indicates that it could, and no doubt will, be improved upon and supplemented.

It must have been extremely frustrating for the author to have three volumes nearly ready for publication, only to have to hold them up awaiting passage of the 1988 Berne Implementation Act. Professor Goldstein has integrated these changes as smoothly as possible, and no doubt will supplement what he has written with more materials and more comments in the forthcoming pocket parts.

What will be most interesting to watch is how David Nimmer and Matthew Bender & Co. respond to this fine new set of copyright books. Which will prevail as the leading treatise in the field is still open to question.

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29. 109 S. Ct. 2168 (1989).