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Copyright Protection and the Information Explosion

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I. Introduction

The United States Copyright Law is designed to promote progress in the arts by granting writers exclusive control over their writings for a limited period of time.[1] The constitutional mandate does not specify who may qualify as an author and what may qualify as a writing. Such details are left for legislative and judicial interpretation. The question arises, whether a compilation of data, having commercial value, selected from information generally in the public domain, qualifies as a "writing" within the meaning of the Copyright Law. The corollary is whether the Copyright Law is capable of protecting intangible property comprising selectively arranged information.

II. History of Copyright Law

A. Early Development

Copyright Law was developed to grant the artist exclusive control over the product of his creative genius. This right gave the artist exclusive control over his work product. It was intended to be an incentive for the artist to create by granting him a valuable property right. It also was intended to prevent mutilation of the artistic work by future owners of the property[2] which might derogate the artist's reputation.

The author or artist[3] was considered a special person, endowed with a supernatural gift for creating artistic work. The copyright was given to the individual, to encourage further creativity. The property that resulted was considered to be different from the property created by ordinary labor and commerce. It became part of the culture

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1. U.S. CONST. art. I, § 8.
2. M. NIMMER, CASES AND MATERIALS ON COPYRIGHT 499 (2d ed. 1979).
3. For simplicity, the term "artist" includes both author and artist.

and was endowed with the prestige of a national heritage.

While the artist was creating artistic works, it was still necessary for him to be supplied with the ordinary requirements of life (food, shelter, clothing and family support) as well as the raw materials necessary to carry out his craft (studio, canvas, paint, brushes, marble, models and assistants). Particularly in the formative stages of his career, before he became famous and his works were accepted as valuable, it was important that the artist have some financial support. Since all prospective artists were not equally competent (some never would become accepted), it was necessary to create a pool, from which the more gifted artists would surface as their talents developed.

Thus, the Copyright Law became a vehicle for blending financial rewards with creative skill. The system was self-balancing, since the right of exclusive control over the artistic property was valuable only if the underlying property was in commercial demand. If the property was valuable, the artist's reward was commensurate. If the property was not valuable, granting the artist a copyright monopoly did not constitute a burden on society.

In addition to the exclusive right to reproduce the copyrighted work, many societies granted the artist the right of "patrimony."[4] He was assured the right to be identified as the creator of the work. He was also entitled to a moral right, *droit moral*, preventing mutilation or distortion of his work by future owners of the property embodying his creative expressions.[5]

B. Copyright Law and the Advent of the Printing Press and Other Technologies

Control over reproduction of copyrighted works was manageable until the invention of the printing press in the fifteenth century. For the first time it became relatively easy to reproduce multiple copies of literary works in large volume. While the printing press increased the supply of copyrighted works available for commercial sale, it also permitted plagiarism to exist on a widespread basis. Most countries of major economic importance adopted some form of copyright law to prevent publishers from reproducing literary works without compensation to the author.[6] Generally the laws were broad enough to include artistic as well as literary works.

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4. E. PLOMAN & L. C. HAMILTON, COPYRIGHT: INTELLECTUAL PROPERTY IN THE INFORMATION AGE (1980) [hereinafter cited as PLOMAN & HAMILTON].

5. This concept is recognized in many European countries, but generally is not recognized in the United States.

6. Some 89 countries were members of the Universal Copyright Convention or the Berne Union, or both. L. Abelman & L. Berkowitz, *International Copyright Law* in THE COMPLETE GUIDE TO THE NEW COPYRIGHT LAW, 355-59 app. (1977).

Philosophically, the European system tended to structure copyright protection to benefit the artist. He was given exclusive control over reproduction of his work, as well as the right of patrimony and *droit moral*.[7] Exceptions to such control were limited to instances having a strong public interest. Doubts about whether copyright protection existed or was enforceable generally were resolved in favor of the artist.[8]

The English system, from which the United States derives its Copyright Law and practice, emphasizes the right of freedom of expression, limited only by those restrictions necessary to provide incentive to artists to continue creating new works. In this system, doubts as to copyrightability or enforcement are resolved in favor of the public interest. The system permits the broadest latitude of free expression, unfettered by a previous claim of private copyright protection.[9]

Despite these philosophical distinctions, both systems overlapped to cover works which are primarily commercial in nature, rather than embodying an element of creative genius. New technological developments qualified as artistic media, capable of supporting copyright protection on work products resulting from the output of essentially mechanical devices.

An early example of such copyright recognition involves the art of engraving. A significant improvement in the printing press was the capability of reproducing pictorial and graphic representations, in addition to alpha-numeric characters. Early technology developed a chromolithograhic process. The engraver carved a mirror image of the representation into a block of metal. Ink then was applied to the block of metal, and a reproduction of the engraving was stamped on paper to form the copy. Frequently the subject matter of the pictorial representation was in the public domain, for example, a classical painting. The question arose whether the engraver was also an artist. Was the reproduction of an artistic work of sufficient creative merit within the meaning of the Copyright Law, to permit copyright protection of the engraving? The Supreme Court answered affirmatively in *Bleistein v. Donaldson Lithographing Co.*[10] The Court held that

7. *Supra* note 5.

8. PLOMAN & HAMILTON, *supra* note 4, at 26.

9. *Id.* at 26-27.

10. 188 U.S. 239 (1903). *See also* Alfred Bell & Co. v. Catalda Fine Arts, 191 F.2d 99 (2d Cir. 1951),in which the subject of infringement involved mezzotint engravings of paintings by famous masters, like Gainsborough's "Blue Boy" among others. The mezzotint process involves roughening the surface of a copper plate with a tool having closely spaced teeth. The outline of the painting is traced on the surface of the copper plate, for example by use of carbon paper. The engraver, using a scarifying hand tool, then scrapes the picture onto the copper plate. Light and shading effects are obtained by the depth of the scraping on the roughened surface. Ink is applied to the plate and trial prints are taken. Alterations are made, if necessary. Appropriate colors of ink are applied to the proper areas, and the plate is capable of

the artistic skill of the engraver was equal to the artistic skill of the painter, and thus the engraver's work was subject to copyright protection. While others were free to make their own engravings of the same classical masterpiece, they were not free to copy the original engraving. The Court concluded that, although engraving involved a media different from painting, it was still capable of producing artistic works worthy of copyright protection.

A similar conclusion was reached regarding the technique of photography. The earliest use of the camera was considered to be a mere mechanical replication of the scene occurring in front of the lens,[11] involving neither artistic genius nor artistic creation. Photography was considered a trade, not an art. Gradually society recognized that selective use of light, camera angle or choice of subject and other photographic techniques involved a degree of intellectual skill that rivaled the artist's choice of paint and subject matter. The United States Copyright Office eventually added photographs to the list of copyrightable subject matter, and the courts approved.[12]

The protection of sound recordings as copyrightable subject matter similarly got off to a rather poor start. In an early decision by the United States Supreme Court,[13] the justices considered a piano roll, but were unable to recognize it as a "writing" capable of protection under the copyright laws. This decision provided precedent for the continued refusal of statutory copyright on the records and tapes produced by the music publishing industry. While common law copyright always was available for such products, the billions of dollars worth of recordings spawned by the music publishing industry were not protected under the federal system of copyright registration until February 15, 1972.[14]

A more recent controversy on copyrightability of technological innovation revolves around the protection of computer software.[15]

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printing a reproduction of the original masterpiece. The engraver renders his interpretation of the original work. The Court found that this was sufficient originality to qualify for copyright protection.

11. Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53 (1884). The Court noted that a strong argument could be made for the proposition that the ordinary protection of a photograph was not copyrightable because it was simply a manual operation using instruments and preparations to transfer visible representations of existing objects. The Court, however, declined to rule that copyright protection could never be obtained on photographs.

12. 17 U.S.C. § 5(j) (1909); Bleistein v. Donaldson Lithographing Co., 188 U.S. 239 (1903).

13. White-Smith Music Co. v. Apollo Co., 209 U.S. 1 (1908).

14. The amendment to the Copyright Act of 1909 rendering sound recordings subject to copyright protection became effective Feb. 15, 1972.

15. The 1976 Copyright Act, 17 U.S.C. § 117 (1976), originally stated that the status of computer programs prior to the Act was not changed by the Act, without defining this status. This resolved an impasse between the proponents and the opponents of granting copyright status to computer software. The Act subsequently was amended to state that computer programs qualify for copyright protection.

Opponents of such copyright protection argue that computer software does not constitute the type of artistic contribution envisioned by the Copyright Law. Proponents of such protection argue that the software merely represents intellectual creativity in a different medium. Court decisions seem to favor granting copyright protection.[16]

Although new artistic media have expanded the concept of copyrightable subject matter, new technology for abetting copyright infringement has expanded at an even greater rate. The advent and ubiguity of inexpensive copying machines has made copyright infringement a cottage industry. Audio tape recorders threaten to destroy the music publishing industry.[17] Video tape recorders were the basis of a major copyright infringement suit recently reviewed by the United States Supreme Court.[18] Inexpensive television adapters permit users to unscramble cable television without paying the required fees. Dish antennas, available as an "off-the-shelf" item, permit a home television set to intercept satellite transmission, while avoiding the cable rental charge.[19] On-line computers enable users to exchange copyrighted works, thereby decreasing the demand for the original, the publisher's profit and the author's royalty.[20]

III. Copyright Protection of Commercially Valuable, Nonintellectually Creative Subject Matter

In addition to new copyright media resulting from technical progress, the scope of copyright protection has been extended to include subject matter of purely commercial value, with little, if any, intellectual contribution.[21] One of the earliest forms of copyright

16. Midway Mgr. Co. v. Bandai-America, Inc., 546 F. Supp. 125 (D.N.J. 1982), in which a New Jersey federal district court ruled that the defendant had infringed the plaintiff's copyright protection on the program dedicated to the operation of a popular video game, promoted under the trademark "Pac-Man."

17. Goldstein v. California, 412 U.S. 546 (1973).

18. Sony Corp. v. Universal City Studios, 104 S. Ct. 774 (1984). In a five to four decision the Court held that the sale of the recorders did not constitute contributory infringement when users of the equipment employed the recorders to record copyrighted programs. The majority also held that the use of the recorders fell within the "fair use" exception of the Copyright Act, since the copyright owners had not demonstrated some likelihood of harm.

A strong dissent by Justice Blackmun stated that the fair use doctrine was intended to be limited to "criticism, comment, news reporting, teaching, . . . scholarship or research" and was never intended to apply to entertainment. *Id.* at 807 (quoting 17 U.S.C. § 107 (1976)). He would have remanded the case to the district court to determine the percentage of legal versus illegal home use recording to resolve the question of contributory infringement. *Id.* at 815 (Blackmun, J., dissenting).

19. PLOMAN & HAMILTON, *supra* note 4, at 81 (discussing the Brussels Satellite Convention's attempt to regulate international "poaching" of satellite signals).

20. Williams and Wilkens Co. v. United States, 487 F.2d 1345 (Ct. Cl. 1973).

21. *See* Schroeder v. William Morrow and Co., 566 F.2d 3, (7th Cir. 1977), in which the court held that the plaintiffs were entitled to copyright protection on a directory containing the names and addresses of suppliers of seeds, plants and other material useful to gardeners. The plaintiff in fact had used other published lists for verification and checking in compiling

protection in the United States covered the formulation of maps. The infant nation relied heavily on sea-going transportation to promote commerce. Copyright protection of maps was granted to encourage and reward cartographers. The purpose was worthwhile, but the material protected was basically a commercial document containing information in the public domain. The question arose whether such a document was properly within copyright protection. The original thrust of the Copyright Law after all was to protect the writer or artist who contributed an element of creative genius.

Since that time, technical, literary and pictorial works, like engineering drawings, models and educational material, have been included in the copyright statute.[22] While no one questions the value of such material, the following issue remains to be addressed: Is copyright protection the proper vehicle for protecting published works, the value of which is acquired through selection and compilation of information otherwise available in the public domain? The emphasis has shifted from protecting the contribution of creative genius to protecting material whose value lies in informational content, without the resolution of this basic question. The following are examples of informational material now afforded copyright protection.

A. Currency Fluctuations

The convertability of foreign currency is central to world trade and banking. Significant efforts are involved in gathering current data on exchange rates, transmitting that data to branch offices, trading currency on the basis of fluctuation and preventing competitors or other traders from getting access to the data. Such information has been held to be protectable under the copyright laws of most countries.[23]

B. Commodity Prices

The volatility of the pricing structure of gold, silver and other precious metals, as well as items like soybeans, coffee, sugar, pork bellies and orange juice, makes the commodity exchange one of the most exciting and speculative investment vehicles in the world. Fortunes are made or lost on a fraction of a point. As with currency fluctuations, current information control is vital. Should such information be protected in the same manner as creative property like the Mona Lisa or the Sistine Chapel?

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the directory.

22. 17 U.S.C. § 5(j) (1909).

23. M. NIMMER, NIMMER ON COPYRIGHT 2-164 (1982); *see also* R. GORMAN, *Copyright Protection for the Collection and Representation of Facts*, 76 HARV. L. REV. 1579 (1963).

C. *Weather Forecasting*

A corollary to commodity investment is the advantage of being able to forecast unusual weather conditions and predict their effect on the world's crops. An unexpected freeze in Brazil can result in the price of coffee increasing significantly, with a concurrent increase in the value of coffee futures. A hurricane in Central America can have the same effect on the sugar crop. Favorable weather conditions may indicate a bumper crop. Weather reports comprise literary works which may be protected by copyright.[24]

D. *News Reporting*

Local disaster, civil uprisings, assassinations, stock prices, bond fluctuations and corporate reports can have a profound effect on the economy. Any person or corporation capable of collecting information about these matters and using it for business or investment benefit has a significant advantage over others who do not have access to the information. Although others are entitled to collect the material independently, frequently they do not have the financial capability or resources to do so. Again the value of the material is not disputed. The question is whether the Copyright Law can or should protect literary material whose value lies in its informational content rather than in its creative attributes.

IV. The "Haves" and the "Have-nots"

The economic advantage possessed by the United States, Japan and the more affluent countries of Western Europe has not escaped the notice of the Less Developed Countries (LDC). The LDCs have concluded that such advantage, in part, is attributable to the ownership and control of informational data described above. They also perceive the copyright laws as being counter-productive to the LDCs' attempts to attain parity with the information-rich countries. Efforts toward attaining an international copyright law have been impaired by the LDCs' insistence that any acceptable law would have to contain provisions to correct this inequity. The information-rich countries view such conditions as an attempt by the LDCs to get free access to informational systems that private interests in the developed countries have established and maintained at great cost.

The copyright protection confrontation between the developed countries and the LDCs came to a head in Stockholm, Sweden in 1967. To set the stage, the original international copyright treaty, was signed by most countries in Berne, Switzerland in 1886.[25] The

24. PLOMAN & HAMILTON, *supra* note 4, at 213.
25. *Id.* at 49-51.

treaty guaranteed that each country would give foreign authors and artists the same copyright protection that it gave to its own authors and artists.

While the Berne Union has gone through a series of revisions over the years, the Stockholm Protocol Regarding Developing Countries was the most radical proposal.[26] The Protocol would give broad concessions to developing countries, permitting them to use the copyrighted works from other countries under compulsory licensing systems having terms highly favorable to the developing countries. The effect would be to undermine, if not destroy, the system of international copyrights as it is presently constructed. Furthermore, the Protocol does not provide a specific definition of what constitutes a "developing country." There seems to be sufficient flexibility to permit any country to designate itself a developing country. Thus by sheer numbers, LDCs would be able to achieve an overwhelming majority under the Stockholm Protocol proposal. While the Stockholm Protocol has not been adopted, it brings into focus the diverging attitudes between the "haves" and the "have-nots" regarding copyright protection of informational materials.

V. Proposal

The time has come to consider the propriety of copyright-type protection of the following four types of subject matter: Fine arts and classical literature created by individuals; fine arts and classical literature created by hired employees; commercial art and commercial literature; and informational systems. The copyright subject matter in each of these categories should be given protection commensurate with the objectives of the creation of the work.

A. Fine Arts and Classical Literature Created by Individuals

Works in this category include paintings, sculpture, prose, poetry, plays, musical compositions and similar works embodying literary or artistic craftsmanship created by individuals. The Copyright Law's application to these works should retain the historical incentives to create by granting the individual artists and authors the exclusive rights to their creative expressions for a limited period of time. The term of protection should be based on the life of the author plus a fixed period after the author's death, for example, fifty years, descendable to the heirs as set forth in the current copyright statute. The protection should include the rights of patrimony and *droit moral*, at least during the life of the author.

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26. *Id.* at 61-63.

B. Fine Arts and Classical Literature Created by Hired Employees

Subject matter in this category includes works created by a commercial organization through employees hired to create such works. While the subject matter might be similar to works in the first category, the scope of protection would track the incentive to create marketable products by a commercial enterprise, rather than the personal satisfaction of the artist. Motion pictures are produced primarily for profit, not ego stroking. Again, as in the current statute, a term of seventy-five years from first publication is justified. Rights of patrimony and *droit moral* would not be necessary to protect these commercial rights.

C. Commercial Art and Commercial Literature

The terms "commercial art" and commercial literature" refer to the purpose of the work, rather than to its marketability or distribution. Advertising provides good examples of commercial art and commercial literature. The purpose of advertising warrants granting exclusivity to the author or artist to preclude others from copying for competitive purposes. The end use of the material inherently suggests a lower level of creative artistry than fine art or classical literature. While reasonable persons may differ on the quantity of creative input involved in commercial advertising, no one seriously would contend that advertising writers and illustrations would lack incentive to create unless they were afforded the protection of the copyright laws.

Since this category of works involves products of low level creativity, a shorter term of protection seems reasonable, possibly twenty-five years from publication. Determining the metes and bounds of this category may require some guidance from the courts. Perhaps if the Copyright Office charged a filing fee for works of this category lower than the filing fees of the first two categories, applicants would be inclined to utilize this category. Otherwise, advertising copy writers and illustrators might be tempted to assert that their works in fact are classical literature and fine art.

D. Informational Systems

The protection of informational systems is the most difficult to justify under the copyright laws. Material in this category usually contains little if any, author creativity or originality. Tariff rates, restaurant guides, city directories and similar compilations usually constitute nothing more than an industrious collection of material otherwise in the public domain. The justification for protection stems

from the expense and labor expended by the compiler in providing a valuable product. It would be inherently unjust to permit others to duplicate the work without permission of, or without compensation to, the original compiler. If the copies are employed in competition with the original compiler, the injustice is compounded. The second compiler may gather independently the identical information disclosed in the original directory and in fact, may use the original directory to check accuracy (referred to in the trade as "slipping"). Copying the original work, however, is considered by most courts to constitute copyright infringement.[27]

Copyright protection has been extended to directories not for the traditional reasons of providing incentive for artists and authors to create, but for lack of any other effective means of protecting the compiler of a directory from blatant copying by others. The 1909 Copyright Act specifically provided that "directories" constitute a subclass of material subject to copyright protection. Despite authorization in the statute dating back over seven decades, some courts still are reluctant to grant copyright protection for directories containing statistical information otherwise available in the public domain. Providing alternative protection for such works might motivate courts to grant such protection, especially if a shorter term of protection is granted, for example, twenty-five years from publication. The limited term would not detract from the value of the work in most cases, since most directories become obsolete within twenty-five years. Courts, reluctant to grant seventy-five years protection on directory information, might feel more comfortable granting such protection for a shorter period of time.

A separate type of exclusive protection for informational systems would also include protection for computer programs. The creation of computer programs is a major industry and is expanding at a geometric rate.[28] The weight of authority favors granting copyright protection on computer programs.[29] The Copyright Office accepts copyright applications covering computer programs. An analysis of the decisions leads to the ineluctable conclusion that the courts grant such protection because of the intrinsic value of the product and the investment of time and effort by the programmer rather than to protect the originality and literary skill of the author.

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27. Consumers Union v. Hobart Mfg. Co., 199 F. Supp. 860 (S.D.N.Y. 1961), holding that facts in a directory are copyrightable. *See also* J. Squires, *Copyright and Compilations in the Computer Era: Old Wine in New Bottles*, 24 BULL. COPYRIGHT SOC'Y OF THE U.S.A. 18 (1976-1977) and cases cited therein. Both the 1909 and the 1976 Copyright Acts specifically include directories as constituting copyrightable subject matter.

28. M. Oberman, *Copyright Protection for Computer Produced Directories*, 22 COPYRIGHT L. SYMP. (ASCAP) 1 (1972).

29. *Id.*

Divorcing computer programs from copyright protection and protecting them under a statute directed to informational systems would free the courts from the judicial contortions involved in finding literary creativity in computer programs to justify protecting them under the Copyright Law. The definition and scope of protection could be tailored to the particular needs of the generators and users of informational systems.

VI. Conclusion

The Copyright Law cannot be all things to all people. It serves a legitimate need in protecting and inspiring artists and giving them control over their creative works. To the extent that the Copyright Law has been expanded to cover printed and pictorial material whose real value depends on the compilation of information, rather than on a scholarly or creative contribution, courts should be governed by regulations more truly akin to this function. The creation of a three-tier system, with different regulations and scope of protection for different subject matter, would provide an equitable system.