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INTELLECTUAL PROPERTY. [*This entry contains three subentries, on intellectual property in medieval and post-medieval Roman law, in Southeast Asian law, and in United States law. For discussion of intellectual property in English common law, see Copyright in English Common Law.*]

United States Law

The history of the law of intellectual property (IP) is the story of legal protection for products of the human mind. The history of IP law in the United States is the story of such protection in what was once a fledgling nation with little intellectual property of its own, but is now the world's leading creator and purveyor of such property and related goods.

According to the World Intellectual Property Organization (WIPO), "intellectual property" refers to "creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce." WIPO's predecessor organization, ultimately known as the Bureaux Internationaux Réunis pour la protection de la Propriété Intellectuelle (BIRPI), was formed in 1893 by member states of the 1883 Paris Convention and the 1886 Berne Convention to advance transnational protections for industrial property, literature, and art. In the United States, the term "intellectual property" first appeared in a judicial decision in *Davoll v. Brown*, 7 F. 197 (Massachusetts, 1845), but gained general circulation only after adoption of the Stockholm Convention establishing WIPO in 1967.

Use of the umbrella term "intellectual property" imposes only seeming order on what is, in reality, an unruly field of study, involving legal concepts as diverse as copyright and patent law; trademark and unfair-competition law generally; trade secrets; the right of publicity (and the related right of privacy); and cyberspace regulation.

The common denominator of these sometimes strikingly dissimilar subjects is that each involves society's regulation of value in the ownership and management of intangibles. How the law proceeded in each area has depended on society's judgment on how best to accommodate multiple goals: affording incentives (commonly, but erroneously, described as "monopolies") for the creation and dissemination of information; providing limiting devices on rights in such information to enable later authors and inventors to build on it by appropriate means; and, above all, assuring reasonable access to the benefits of such information (including, ultimately, entry into the public domain) so as to advance the general welfare.

In each area, U.S. intellectual property law has struggled for decades, even centuries, to achieve an optimal balance among often-competing interests. In the age of the computer and in the face of advancing global harmonization, that challenge is today greater than ever.

Copyright Law. Copyright is the law of expression. Humans have expressed themselves forever. The need for a regime of "copy-right" arose only when technology made possible the replication of creative works not just by monks inscribing illuminated manuscripts one by one but by machines copying printable matter in commercially valuable quantities.

Antecedents of U.S. law. In 1476, William Caxton introduced the printing press into England. The new device created competition among the publishers ("stationers") of the day to purchase authors' manuscripts (or "copies") for printing and vending.

The beginnings of the law of copyright itself—a saga that would culminate, implausibly in light of its inception, in erecting a bulwark against monopoly and censorship—followed in 1556, when the Crown cemented

Copyright Office. Library of Congress employees working at their desks and at the card catalog in the library's copyright office, c. 1920. PRINTS AND PHOTOGRAPHS DIVISION, LIBRARY OF CONGRESS

royal authority to suppress heretical or treasonous matter by partnering with the Stationers' Guild to control all trade in books. Later decrees and licensing acts sustained the system until, by 1694, the Crown's purposes no longer required it.

In 1710, responding in part to entreaties by the publishers, Parliament enacted the Statute of Anne, the first copyright legislation anywhere. Intended to avoid the prior evils of monopoly and censorship, the act temporarily grandfathered the stationers' rights in works already printed. More important, however, the legislation vested in authors themselves the rights, subject to expiration after a term of years, to print and sell new works.

In short, the statute was designed primarily to encourage the creation of new works—and to subject all works, in short order, to entry into what today we call the public domain. The stationers sought to reestablish their claim to perpetual protection, based on the natural rights to their assignors; in 1774, however, the House of Lords, in *Donaldson v. Beckett* (1 Eng. Rep. 837), determined copyright to be created by statutory grant alone.

Copyright in the new nation. While the American Revolution severed the new nation's political ties with England, in ordinary matters the Mother Country's legal norms were accepted with little change. In 1783 the Continental Congress recommended that the new states pass copyright legislation—a matter beyond its own powers—modeled on English law. Twelve did. Experience quickly demonstrated, however, as James Madison observed in article no. 43 of the *Federalist Papers*, that "[t]he states cannot separately make effectual provision for [copyright]."

Thus, in 1787, the Constitutional Convention determined to provide for a uniform federal law for copyrights (and patents). The result was the Constitution's Article I, section 8, clause 8, giving Congress the power "To Promote the Progress of Science and useful Arts, by securing for limited Times, to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." The provision carefully circumvented the problems of the stationers' copyright under the licensing acts, and the state copyright statutes under the Articles of Confederation, by empowering the national legislature to accord to authors (not publishers), and for prescribed times (rather than in perpetuity), a well-established set of rights in new expressions of human intellect.

The first federal copyright act, passed in 1790, was intended (its title said) "for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors [i.e., assignees]" of published

works for a fourteen-year term (with the possibility of renewal). The same Congress drafted the Bill of Rights, including the free press and speech clauses, and forwarded them to the states, which ratified in 1791. A reasonable inference (although not shared by all present-day commentators) is that the founding generation, schooled in the lessons of English copyright, saw in the copyright clause and the First Amendment a coherent and consistent system capable of promoting and protecting creativity by encouraging new works, ensuring freedom of expression, strengthening trade in the marketplace of ideas, and securing the public domain.

Developments through 1976. The next two centuries saw major legislative and judicial developments in U.S. copyright law in response to stunning increases in creativity and revolutionary advances in communicative technologies.

Doctrinally, the nineteenth century produced a series of court decisions critical to the future of the law. In *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591 (1834), the Supreme Court ratified the statutory-grant basis of copyright in the United States. The decision concerned a dispute between past and present officials of the Court over whether, in reporting its opinions, such persons (directly or by assignment of the justices) obtained exclusive rights to publish them; established that only the people can "own" the law; and provided the predicate for the present-day statutory rule that works of U.S. government employees cannot be copyrighted. The Court also gave impetus to a congressional obsession with copyright formalities (ultimately, notice, deposit, and registration) as prerequisites to protection that would haunt American and foreign authors alike for two centuries.

Two great cases—*Folsom v. Marsh*, 9 F. 342 (Cir. C. 0. Mass 1841) and *Baker v. Selden* 101 U.S. 99 (1880)—reinforced the connection created by the Founders between copyright and free expression. In *Folsom*, Justice Joseph Story, riding circuit in Massachusetts, first described the fair-use privilege. Under that doctrine, later creators may utilize reasonable portions of preexisting copyrighted material in creating their own original works. *Baker*, a decision of the Supreme Court itself, traditionally has been identified as the origin of the idea/expression distinction. That principle assures that, even while copyright law provides economic and other incentives for the creation of new expression, the underlying ideas conveyed by such works remain in the public domain and free for others to employ.

Congress, too, was busy. It made new types of works subject to protection, including prints, music, drama, photographs, and fine art. In *Burrow-Giles v. Sarony*, 111 U.S. 53 (1884), the Supreme Court gave its approval to such expansions of the categories of protectable "Writings" (including those produced using new technologies). Congress also recognized additional rights to perform drama and music and to prepare derivative works, lengthened the initial term of protection to twenty-eight years, and in 1897 centralized the government's copyright activities by establishing the Copyright Office within the Library of Congress.

Equally notable was what Congress did *not* do in the nineteenth century, during which European authors and publishers pressed for an international copyright regime, establishing various minima of protection, as the predicate to a world market in books. The European drive led to the adoption of the 1886 Berne Convention for the Protection of Literary and Artistic Works, but not in the United States. American publishers had thrived for decades by publishing piratical copies of British best sellers. Accordingly, the United States did not adhere to Berne, although it began establishing bilateral copyright relations with other countries, basically on U.S. terms, beginning in 1891.

In 1909, Congress codified the existing maze of prior copyright acts and made significant revisions (such as extending the renewal term to twenty-eight years); these, together with subsequent amendments, would govern U.S. copyright for nearly seventy years.

Among the more notable judicial decisions in the run-up to comprehensive recodification in 1976 were *Bleistein v. Donaldson*, 188 U.S. 239 (1903; an opinion by Justice Holmes, concerning copyrights claimed in circus posters, that originality, not individual judges' tastes, determines protectability); *Bobbs-Merrill v. Straus*, 210 U.S. 339 (1908; the "first sale" doctrine, under which the sale of a physical copy of a work such as a book exhausts the copyright owner's economic rights as to that particular copy); and *Mazer v. Stein*, 347 U.S. 401 (1954; recognizing protection for the artistic design of a lamp base, the Court making clear, however, that copyright owners are provided exclusive economic rewards only a means to the end of advancing public welfare).

The 1976 act and beyond. In the aftermath of World War II, the United States found itself not only militarily and politically dominant but also increasingly powerful in such core copyright industries as books, motion pictures, recorded music and, later, TV programs, home videos, and software. Not yet willing to accept the Berne Convention, the United States nonetheless joined UNESCO's new Universal Copyright Convention, a "baby Berne" with less exacting minima, in 1955. In the same year, the Copyright Office began studies for a thorough revision of U.S. copyright law. By 1976, the necessity of taking at least preliminary steps toward reconciling Title 17 with Berne was manifest.

Passage of the Copyright Act of 1976 (effective January 1, 1978) could be described as a watershed. It more resembled, however, a tectonic shift—a largely quiet event in which the entire landscape subtly alters.

Many of the 1976 act's revisions, including codification of such judge-made doctrines as the idea/expression distinction and fair use, reflected organic developments within the United States. Others, however, manifested the growing desire to accommodate Berne. Most notably, federal copyright would henceforth arise automatically, and would attach to published and unpublished works alike (thereby preempting state protection for the latter) upon the fixation of original expression in any tangible medium of expression. Concomitantly, the act loosened historic requirements of strict adherence to copyright formalities. In addition, and consistent with Berne, a term of protection based on the life of the author plus fifty years replaced the familiar American scheme of relatively confined original and renewal terms.

These aspects of the 1976 act came to fruition in 1988, when Congress enacted the Berne Convention Implementation Act (effective March 1, 1989), definitively eliminating statutory formalities, such as affixation to copies of the © symbol, as prerequisites to copyright protection (and otherwise purporting to conform U.S. law to Berne's requirements). Further related measures, prompted largely by international-trade considerations, followed. These included, in 1990, copyright for architectural works and limited moral-rights protections for artists (specifically, rights to have their works attributed to them and to preclude copies from being mutilated or distorted); "restoration" of protection for works of foreign authors previously denied U.S. copyrights under the North American Free Trade Agreement (NAFTA) in 1992 and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS, the result of the Uruguay Round of the General Agreement on Tariffs and Trade) in 1994; and further elongation of copyright duration to life plus seventy years under the Copyright Term Extension Act (CTEA) in 1998 (this enhancement of copyright holders' interests was opposed by public-domain advocates but justified by proponents as necessary to benefit the U.S. economy by harmonizing domestic-term provisions with European Union protections).

Simultaneously, new technological developments exerted great influence on the 1976 act and subsequent legislation. These had been foreshadowed in 1964, when the Copyright Office first protected digital works, and were confirmed in 1976, when Congress enacted statutory language securing to copyright owners the right to exploit their works by all technological means "now known or later developed." Two decades later, the impact of new technologies and continuing new treaties culminated in passage in 1998 of the Digital Millennium Copyright Act (DMCA).

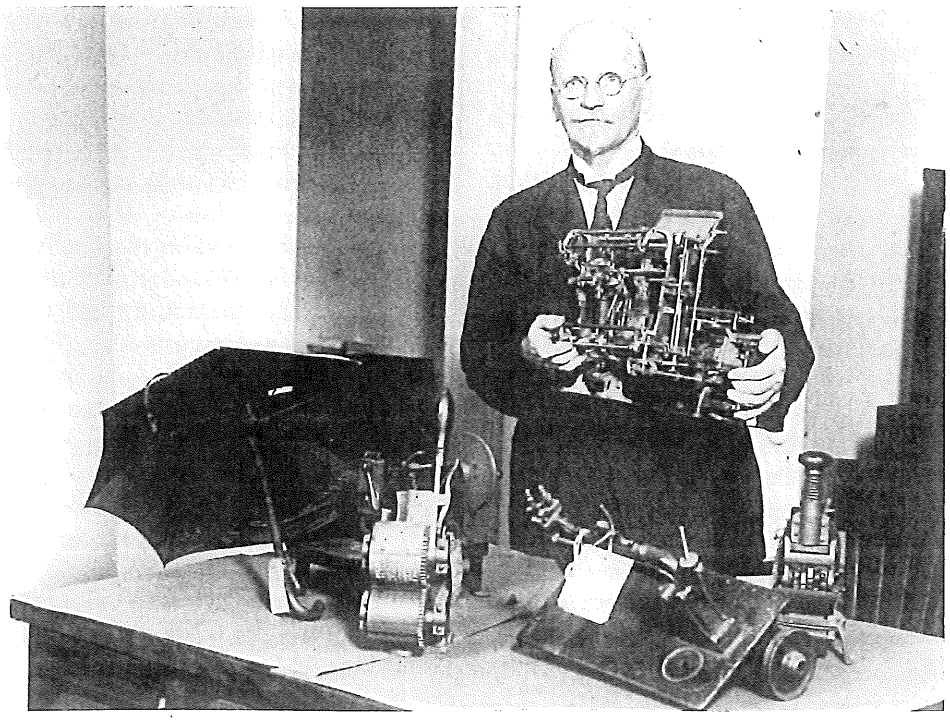
The combination of such pressures has pushed Congress to adopt many of its most recent innovations, including the DMCA's recognition of technological protection measures for digitized works, under constitutional powers (including regulation of commerce) outside the copyright clause. Although often derided as "paracopyright" and sometimes inconsistent with basic copyright-law principles (e.g., no fair-use provision in the DMCA), these enactments continue to be collected alongside the Copyright Act itself in Title 17.

Finally, the Supreme Court has been busy since 1976. Some cases, such as *Campbell v. Acuff-Rose*, 510 U.S. 569 (1994; fair use), masterfully restated ancient doctrines, while others, such as *Sony v. Universal City Studios*, 464 U.S. 417 (1984; videocassette recorders and copyright infringement), awkwardly but effectively advanced technological progress in the communication of copyrighted works.

Two cases, however, stand out. In the greatest of the twentieth-century decisions, *Feist v. Rural Telephone*, 499 U.S. 340 (1991; no copyright in telephone white pages), Justice O'Connor, for a unanimous Court, magisterially reaffirmed "authorship" as the constitutional sine qua non for copyright protection, thereby preserving the public domain against claims of copyright ownership in works of minimal originality. But in the most controversial of the new millennium's decisions, *Eldred v. Ashcroft*, 537 U.S. 186 (2003; upholding CTEA under the "limited times" provision of the copyright clause), a majority deferred to Congress in permitting significant copyright-term extension, while at the same time noting the continued, offsetting vitality of "copyright's built-in free speech safeguards."

These two decisions highlight the problems Congress and the courts confront in U.S. copyright law's third century. In the face of radically new technologies, worldwide pressures for the harmonization of intellectual-property law, and the often palpable tension among the interests of creators, disseminators, and the public, lawgivers must address copyright owners' inevitable demands to expand their rights further, and must somehow subordinate such pressures to copyright law's historic antimonopoly, anticensorship role as the First Amendment's ally in America's commitment to freedom of expression. The task will not be easy.

Patent Law. Whereas technological innovation has a deep impact on copyright law, patent law is the law of invention. Patent practice may be a specialty open only to a few. In everyday application, however, patent law touches almost every aspect of our lives, from our morning toasters to the vehicles we use in our daily commutes, to the computers that pervade our offices and homes. The critical trade-off between inventors and the public is that while the public is provided access to commercial embodiments of inventions as well as to other information about them, patentees retain the right to exclude others from making, using, offering for sale, or selling patented inventions within, or importing them into, the United States for a limited period.



At the Patent Office. Thomas E. Robertson, commissioner of patents, with patented machinery, tools, and umbrella, 1930. PRINTS AND PHOTOGRAPHS DIVISION, LIBRARY OF CONGRESS

From precursors through the 1790 act. Unlike copyright, U.S. patent law has plausible antecedents in the laws of nations other than England. In 1474, for example, the Venetian Republic codified laws designed to foster native and imported industries by granting patentees the exclusive right to practice their art for specified terms of years.

The lineal precursor of American patent law, however, was the English Statute of Monopolies (1624). Like the Statute of Anne, which it foreshadowed, this must be understood principally as a reaction to abuses by the Crown, which by the beginning of the seventeenth century had awarded court favorites many monopolistic grants covering long-established and publicly beneficial goods and industries. While curbing such practices, the statute did permit the Crown to award "letters patent" (from the Latin term referring to an "open letter" from the sovereign "to all whom these presents shall come" and specifying the privilege accorded to the patentee). Typically, such privileges were granted for fourteen years (as were copyrights under the Statute of Anne) "to the true and first inventor" engaged in the "making of any manner of new manufactures within this realm" so long as "they be not contrary to the law or mischievous to the state."

The Revolutionary era gave special impetus to the encouragement of inventions and manufacturing in America. Boycotts preceded the war, the war itself eliminated English competition, and independence brought new challenges, including the need to encourage export industries. The 1780s produced a tide of state-created private patents, raising the specter of interstate conflicts among competing inventors.

For good reason, then, the Constitutional Convention of 1787 undertook to confer on the new federal government the authority to grant patents. James Madison submitted a list of powers "as proper to be added to those of the General Legislature," including one "[t]o encourage, by premiums and provisions, the advancement of useful knowledge and discoveries." As ultimately reported to the convention at the urging of Madison and Charles Pinckney, Article I, section 8, clause 8 empowered Congress to enact patent legislation "[t]o promote the Progress of . . . the useful Arts, by securing for limited Times, to . . . Inventors, the exclusive Right to their . . . Discoveries." This language was approved unanimously.

The first Congress quickly enacted the first patent act, signed by President Washington on April 10, 1790. Unlike the private patents that preceded it in the states, the new law was a general act, providing for the issuance of patents "for any useful art, manufacture, engine, machine or device, or any improvement therein not before known or used." If the claimed invention could be demonstrated to the satisfaction of a patent board (technically, the Commissioners for the Promotion of Useful Arts) to be "sufficiently useful and important," a patent for up to fourteen years would issue.

From 1790 to 1952. While the main outlines of American patent law were sketched by the 1790 act, the

new system was not without oddities. The patent board consisted of three persons—the secretaries of state and war and the attorney general (with Thomas Jefferson's State Department assigned to administer the system and Jefferson himself serving as the first "patent examiner")—but the system quickly proved unworkable. In 1793 Congress deleted the examination for usefulness and importance, substituting a registration system that made issuing patents basically a clerical function.

By 1836, the flaws of this replacement system—chiefly duplicative, fraudulent, and worthless patents—had become manifest. By an act of July 4, 1836, Congress reinstated the examination requirement, to be administered through the filing and formal scrutiny of applications by a separate Patent Office within the Department of State (it was later transferred to Commerce). The system required examination for novelty and usefulness, including a search of "prior art" (what had been invented or used before). Congress also established a statutory requirement that patents be claimed "in full, clear, and exact terms, avoiding unnecessary prolixity," and confirmed an earlier judicial requirement in *Evans v. Eaton,* 20 U.S. (7 Wheat.) 356 (1822) that the inventor provide a disclosure sufficient to enable persons having ordinary skill in the relevant technology to make and use the claimed discovery without undue experimentation. The term of patent was fixed at fourteen years, with a renewal term of seven years (this was increased to seventeen years, with no renewal, in 1861). With only occasional revision (including the 1870 act requiring that patentees define their proprietary interest in a distinctly drafted claim), this statutory structure would remain basically unchanged for over a century.

In the interim, many critical aspects of patent law received construction in the courts. The enthusiasm of the judiciary for upholding challenged patents fluctuated dramatically. Many decisions enunciated fundamental concepts, for example, *Hotchkiss v. Greenwood,* 52 U.S. 248 (1850; nonobviousness standard for patentability, denying grant to devices that, although literally new, would be obvious to person of ordinary skill in relevant art) and *Winans v. Denmead,* 56 U.S. 330 (1853; doctrine of equivalents, holding device not literally covered by patent's language to be infringing if it obtains substantially the same result in substantially the same way).

By the late nineteenth century, the Supreme Court, burdened by patent appeals and wary of abuses in the system, began pronouncing many patents invalid for "want of invention." With the establishment in 1891 of regional courts of appeal that reduced the docket and the advent of a more business-friendly attitude on the Court itself, patents enjoyed greater favor for almost forty years. Beginning in the 1930s, however, rising concerns about patent clarity and breadth and overreaching practices by patentees had restored the Court's hostility toward patents. Justice Robert Jackson once noted: "[T]he only patent that is valid is one which this Court has not been able to get its hands on." (*Jungersen v. Ostby & Barton Co.,* 335 U.S. 560 [1949]).

Patent law in the modern era. Mid-twentieth-century U.S. patent law faced many challenges. In the 1952 Patent Act, Congress met two of them. First, the act dealt with the sprawling state of existing patent law (including the addition of ornamental designs and asexually reproduced plant varieties as protectable subject matter in 1842 and 1930), rearranged statutory provisions, codified judicial doctrines and Patent Office practice, and consolidated the result in Title 35 of U.S. Code. The familiar contours of the law—including novelty, utility, nonobviousness, clear claiming, enabling disclosure, and a limited term (based on priority of invention)—remained.

In addition, however, Congress shaped the provisions codified in a manner designed to overcome the courts' seeming hostility to patents during the Depression era—effectively negating, for example, prior judicial suggestions that patentability requires a high "flash of creative genius" threshold. Specifically, the 1952 act replaced the subjective standard for "invention" with the objective requirement of "nonobviousness," revived restrictions on indirect infringement (that which induced or contributed to direct infringement) and roll-back misuse, made clear that claiming was "peripheral" in nature (setting forth the outer boundaries of protected territory), and allowed for patenting any subject matter—products and processes, inventions and discoveries—that meets the other statutory requirements for protection. Subsequent decisions like *Graham v. John Deere Co.,* 383 U.S. 1 (1966; reconciling nonobviousness, as codified, with case precedent) seemed to indicate that Congress and the Supreme Court had again achieved a détente in the interpretation of patent law.

The regional courts of appeal, however, continued to render disparate decisions—a situation inimical to a uniform national law and productive of forum shopping. In 1982, Congress moved decisively, creating a Court of Appeals for the Federal Circuit (CAFC) with exclusive appellate jurisdiction over patents (as well as other matters unrelated to intellectual property law). The result, through the end of the century, was at least relatively greater harmony (and a bias in favor of patents) engineered by the CAFC—for seventeen years led by Judge Giles S. Rich, the principal drafter of the 1952 act—in the great bulk of patent cases that never reach the high court. In those that do, the Court has been prepared to reexamine even core issues of CAFC doctrine, as in *KSR International v. Teleflex,* 550 U.S. 398 (2007; definition of "nonobviousness" requirement).

Increased costs of invention, commercialization, and protection in a globalizing economy have produced

important changes in business organization as well as within the patent system. Corporate entities, with in-house inventors and acquired patent portfolios, increasingly predominate, as suggested by the almost nine-to-one ratio of corporate to individual patent issuances in 2005. Alternative methods of dispute resolution are increasingly popular, with but a few score infringement actions litigated to judgment annually.

In confronting the challenge of international harmonization, patent proved luckier than copyright. Perhaps because its roots lay in English and non-English soil alike, U.S. patent law accommodated itself more readily to cooperation with other countries, beginning with acceptance in 1887 of national treatment under the 1883 Paris Convention for the Protection of Industrial Property. More recent adherences include those to the 1970 Patent Cooperation Treaty (setting an application procedure for multinational patent acquisition) in 1978 and to TRIPS (standardizing eligible subject-matter and patentability requirements and adopting a twenty-year expiration dating from application) in 1994.

Lastly, recent cases have sought to reconcile decisional law with the terms of the 1952 act and the perceived urgent needs in science and business. Notable examples deal with patentability for genetically engineered organisms in *Diamond v. Chakrabarty* (447 U.S. 303, 1980), for software in *Diamond v. Diehr* (450 U.S. 175, 1981), and for business methods in *State Street Bank and Trust v. Signature Financial Group* 149F. 3d 1368 (CAFC, 1998)—all notable extensions of what Jefferson once called the "embarrassment" of exclusive patent rights. Invention lives—in the courts!

Trademark Law. Trademarks, like copyrights and patents, have formed a principal subject of U.S. intellectual property law since the nation's beginnings. Yet more than a century ago, the first American treatise on trademark law could observe, with only slight exaggeration, that "[t]he right of property in trademarks does not partake in any degree of the nature and character of a patent or copyright, to which it has sometimes been referred—nor is it safe to reason from any supposed analogies existing between them."

Origins and distinctions. Copyright and patent protect creative people ("Authors" and "Inventors") and their creations ("Writings" and "Discoveries"). To be protected under U.S. law, however, a trademark does not depend, according to the Supreme Court, "upon novelty, invention, discovery, or any work of the brain. It requires no fancy or imagination, no genius, no laborious thought." (*Trade-Mark Cases*, 100 U.S. 82 [1879]).

Rather, trademarks protect, against subsequent users, the first person—he, she, or it—who employs a distinctive mark in commerce, when the use of the same or a similar mark for the same or related goods or services would produce a likelihood of confusion among consumers. Trademark law contains no policy to incentivize the creation of new trademarks, nor does it subject a mark owner's rights to a fixed term of protection. Historically, it has been trade regulation, pure and simple.

The use of words or symbols to identify the makers of products can be traced back thousands of years in cultures as diverse as ancient China and medieval Europe. Throughout, the function of such marks has remained constant. Just as a brand like the letter "B" lying on its back might identify cattle from the Lazy B Ranch in the nineteenth-century American West, so today the name TORO (or the image of stylized bull horns) might be employed to "brand" for buyers a cut of beef from a gigantic purveyor of meat products. Yet even the corporate behemoth's rights to peddle TORO-brand filets would survive only so long as its mark remained in continuous use, and would extend only to products plausibly included in its line (not, for example, to similarly identified lawn mowers).

Before the American Civil War, the basic outlines of what today we could call trademark infringement had evolved in case law on both sides of the Atlantic. In *Sandforth's Case* (England, 1584), for example, a competing clothmaker marked woolen goods using the plaintiff's mark; and in *Thomson v. Winchester* (36 Mass. [19 Pick] 214, 1837), the defendant allegedly attempted to pass off inferior medicines employing the plaintiff's name. In both instances, the gist of the claim was that the infringer had duplicated an established mark, in a geographically limited area, with intent to deceive the public as to the origin of goods—in short, had engaged in a specialized form of unfair competition.

Notably, the early U.S. cases were decided in state, not federal, courts, and at common law. Likewise, and in contradistinction to the patent and copyright statutes enacted by Congress in 1790, all pre–Civil War American trademark acts, beginning with New York's in 1845, were state statutes. In the absence of a national marketplace in finished goods, trademark law simply was not a matter of national concern.

From the Civil War through World War II. The Civil War changed the American economy forever. It also gave rise to demands on Congress to enact a federal trademark-registration system, both to facilitate regional or national use of marks and to provide the predicate for international agreements enabling U.S. business to compete abroad.

In 1870, Congress enacted such a statute. But in the *Trade-Mark Cases*, the Supreme Court ruled the act unconstitutional because (1) a trademark was neither a copyrightable "Writing" nor a patentable "Discovery"; and (2) the legislation was not limited to "interstate commerce" as then understood. Congress tried again in 1881, regulating marks used in trade with Indian tribes and with foreign

nations, and in 1905, finally (if in limited fashion) expanding federal trademark registration to interstate commerce. Not until the constitutional revolution of the mid-twentieth century, however, would that concept come to be seen in its modern, expansive form.

World War II initiated a vast expansion of U.S. industry and trade. In 1946, Congress responded with the Lanham Act, codified in Title 15. Besides greatly expanding the range of marks eligible for federal registration and providing for recognition of constructive notice of the registrant's claim of ownership, the Lanham Act introduced a substantive prohibition on unfair competition in section 43(a). In 1975, Congress renamed the Patent Office the Patent and Trademark Office, formally (if belatedly) acknowledging the importance of trademarks in federal law.

Trademark law since the Lanham Act. Although trademark is the branch of intellectual property law most recently recognized by Congress (alongside continuing state common-law and statutory protection), its present embodiment—the Lanham Act, as amended—has remained in force longer than either the 1952 Patent Act or the 1976 Copyright Act. And federal trademark registration (indicated by the familiar ® symbol), not to mention trademark litigation, remains a significant part of U.S. IP practice: in 2005, registrations numbered approximately 154,800 in trademark, compared with 157,700 in patent and 515,200 in copyright.

Longevity, however, is not necessarily stasis. In the courts, for example, important decisions have sought to control harm to U.S. owners caused by unauthorized importations of cheaper, foreign-manufactured goods bearing the same mark into the so-called gray market (*Lever Brothers v. United States*, 981F. 2d. 1330 [D.C. Cir.] 1989), and have expanded the scope of trademark protection to include such "inherently distinctive" trade dress as the overall visual image of a Tex-Mex fast-food restaurant (*Two Pesos v. Taco Cabana,* 505 U.S. 763 1992). Overall, however, judicial developments in trademark have lacked the drama of constitutionally based decisions on copyright and patent issues.

Instead, most advances in modern trademark law have occurred through the legislative process. In 1962, for example, by amendment to the Lanham Act, Congress opened the door to expansion of the "likely confusion" rule to cover confusion as to sponsorship, affiliation, or connection. In 1984 it enacted the Trademark Counterfeiting Act to control domestic sales of goods bearing spurious marks. In 1988 it expanded the traditional contours of the "use" requirement to include "intent to use," reduced from twenty to ten years the term for renewal of federal registrations, reinforced the registration certificate's evidentiary effect, and generally expanded federal unfair-competition law under section 43(a). In 1996 Congress approved an expansive amendment of the Lanham Act to provide a federal claim for the "dilution" of a "famous mark" in trade (and thereby, arguably, established supratrademark rights for benefited brands).

As to the challenges posed to trademark by the Internet and the World Wide Web, notable events have included executive department approval for the creation of the Internet Corporation for Assigned Names and Numbers (ICANN) in 1998 and congressional passage of the Anti-Cybersquatting Consumer Protection Act in 1999.

Lastly, U.S. trademark law has in recent years experienced major internationally related developments. Not surprisingly, given the historic dual nature of trademark protection under state and federal law, the United States did not adhere to the 1891 Madrid Agreement. It did accede in 2003, however, to the Madrid Protocol, which, while not amounting to a regime for international trademarks, does provide an international system for facilitating acquisition of national rights.

Other Protections for Intellectual Property. Unfair-competition law is the law of commercial morality. It regulates competitive practices that offend contemporary legal standards with regard to any business transaction, including but not limited to those whose subject is intellectual property. As its origins in the law of deceit suggest, trademark infringement traditionally has been described as unjust enrichment because the infringer's illegitimate activity in passing off his goods as another's diverts to him profits rightly belonging to the mark's owner. But the genus "unfair competition" is more diverse than any one species, and is ever evolving.

One of the more entertaining examples is the tort of misappropriation. Generally speaking, intellectual property law does not protect facts or ideas (except where such ideas are novel, concrete, and disclosed in confidence with a reasonable expectation of compensation). Imagine, however, two wire services during World War I, one cabling daily reports to the United States from European battlefields, the other barred therefrom for having offended the British government. Suppose that the latter obtained copies of the former's dispatches, extracted the nonprotectable facts and ideas, and published the resulting stories as its own. Clearly, there could be no finding of copyright infringement, because there was no copying of original expression, or of trademark infringement, because the defendant did not pass off its own goods utilizing the plaintiff's mark.

In *Associated Press v. International News Service*, 248 U.S. 215 (1918), the Supreme Court, applying federal common law, nonetheless held the offending conduct actionable. INS had "reap[ed] where it ha[d] not sown" in "[mis] appropriating . . . the [AP's] harvest" of hot news—or, in other words, had engaged in unfair competition by exploiting as its own an intangible asset produced by the another's time, labor, skill, and money but not protected by traditional (and narrower) forms of intellectual property

law. While defunct under federal law after *Erie Railroad v. Tompkins*, 304 U.S. 64 (1938), the misappropriation tort lives on, sometimes fitfully, under state common law.

Ironically, the *Restatement (Third) of Unfair Competition* (1995) attempted to "restate" misappropriation out of existence, but largely failed to persuade the courts to follow its lead. In other respects, the *Restatement (Third)* remains the preeminent synthesis of current law on the full range of unfair-competition topics as they apply to intellectual property—from those branches that have acquired a dominant federal analogue, such as trademarks, to those that remain fundamentally matters of state common or statutory law, such as trade secrets and the right of publicity.

Trade-secrecy law. A trade secret is economically valuable information—from a cola formula to a device or process or a list of customers, members, or donors—not generally known and held secret, through reasonable precautions, by its proprietor. Trade-secrecy law provides rights of action against those who obtain access to such information through improper means, as by a breach of confidence. Whether the law should emphasize one consideration or the other—the plaintiff's proprietary interest or the defendant's wrongful conduct—has provided a lively subject of debate for courts and commentators alike, with obvious implications for the availability of affected information to the public.

State-created trade-secrecy laws provide a useful alternative to federal patent law for enterprises that do not wish to disclose valuable information and subject it to a limited term of protection. Trade-secrecy law affords broader subject-matter eligibility, as well as protection that endures for so long as the information remains both secret and valuable. Unlike patent law, however, trade-secrecy law regards independent discovery and reverse engineering as unobjectionable, and thus provides rights of narrower scope. In *Kewanee Oil v. Bicron,* 416 U.S. 470 (1974), the Supreme Court held that patent law does not preempt trade-secrecy law.

Modern trade-secrecy law, while not without precursors in the guild era, traces to the Industrial Revolution—and, specifically, to early-nteenth-century equity courts in England and the United States concerned with shaping appropriate protections for valuable information in the face of unethical behavior in newly complex business relationships. Typically, the foundational cases, such as *Newberry v. James* (1817) 35 Eng. Rep.1011 and *Vickery v. Welch*, 36 (19 Pick.) 523 (Massachusetts, 1837), concerned manufacturing processes and formulas for such goods as medicines, dyes, and foods.

By the early twentieth century, divergent developments in the several states in all areas of common law led to creation of the American Law Institute (ALI) and its project to "restate" the law more uniformly. The 1939 *Restatement of Torts* included two sections on trade secrets, which emphasized the commercial-immorality aspect of existing law but sought to debunk the intellectual-property dimension ultimately affirmed in *Kewanee Oil.* The 1978 *Restatement (Second) of Torts* omitted any treatment of trade-secrecy law.

Shortly thereafter, the National Conference of Commissioners on Uniform State Laws approved the 1979 Uniform Trade Secrets Act (a model state statute), which today, with its 1985 amendments, has been enacted by the vast majority of states. Besides reembracing the proprietary underpinnings of trade-secrecy decisional law, the Uniform Act provided consistent definitions of what interests are protected against what behavior, as well as a single statute of limitations, and codified the results of the better-reasoned cases concerning remedies.

Still more recently, the ALI promulgated its 1993 *Restatement (Third) of Unfair Competition,* treating trade secrets (in terms specifically stated to be consistent with both the Uniform Act and common law) alongside trademark, general tort-law misappropriation, the right of publicity, and related doctrines; and Congress enacted the 1996 Economic Espionage Act, making trade-secret misappropriation a federal crime. In the face of rapidly changing technology, competitive practices, and employment patterns, future adaptations of trade-secrecy law surely will follow.

Right of publicity (and privacy). Like trade-secrecy and general misappropriation law, rights of publicity are governed by state rather than federal law and vary from jurisdiction to jurisdiction. Also like those bodies of law, publicity rights rest on dual theoretical bases, implicating both society's desire to encourage the creation of intellectual property to benefit the general welfare and its concern to protect the owners of such property and the public from unjust enrichment by others through unfair business practices.

The right of publicity owes its origin, at least in part, to the right of privacy. The latter—sometimes described as an individual's right "to be let alone"—has been traced to ancient Jewish and Roman law, but had no analogue in English common law. Rather, the American right rests on an 1890 law review article by Samuel Warren and Louis Brandeis. Their advocacy of a modern privacy right initially received a mixed welcome, exemplified by its quick rejection by the New York courts but subsequent limited adoption by that state's legislature. Today, recognition of a right of privacy in one form or another, whether under common law or statutory law, is widespread among the states.

Conventionally, and as reflected in the *Restatement (Second) of Torts*, the right of privacy embraces four aspects of personal privacy: the rights to be protected against (1) unauthorized appropriation of one's name or likeness for the defendant's advantage; (2) unreasonable

intrusion upon solitude; (3) public disclosure of private facts; and (4) portrayal in a false light.

The right of publicity, while related to the first privacy tort, is broader. Whereas the latter is concerned with the emotional or dignitary interests of any person, whether or not in the public eye, the publicity right concerns primarily the competitive capacity of any person (but usually a celebrity) to exploit his or her public persona for profit. Not only name and likeness, but also such aspects of identity as a distinctive voice (as in the use of a singer Bette Midler sound-alike in a commercial) or even a phrase closely associated with a celebrity (as in the use of "Here's Johnny," referring to talk-show host Johnny Carson, to sell toilets), may be protected against unauthorized takings of their commercial value.

The right of publicity first appeared by name in *Haelen Laboratories v. Topps Chewing Gum*, 202 F. 2d 866 (2d Cir.) (1953; player photographs on baseball cards), acquired classic formulation in Melville B. Nimmer's article "The Right of Publicity" (1954), received Supreme Court confirmation in *Zacchini v. Scripps-Howard Broadcasting*, 433 U.S. 562 (1977; telecast of a human cannonball act), and now has been enshrined by the ALI in the *Restatement (Third) of Unfair Competition* (1995). Publicity rights generally withstand claims of preemption by federal copyright law because both their subject matter and the rights protected are distinguishable from Title 17's coverage.

Nonetheless, the exact contours of the right of publicity, including whether such rights, to exist at all, must be exercised during the celebrity's lifetime, and whether their existence should survive the celebrity's death, remain elusive. The answers differ from state to state, depending on the degree to which the right is justified in terms of the plaintiff's personal or economic interests—and, increasingly, what significance is accorded to the nature of the defendant's challenged activity, including the medium of exploitation employed, in relation to any First Amendment rights of access to information the public may enjoy concerning the celebrity's claim to fame.

Cyberspace regulation. If "intellectual property" is an umbrella term, the phrase "cyberspace regulation" conjures up visions of a force field enveloping the globe—and, perhaps eventually, the universe. More to the point, however, the new frontier in question is not a physical place, like the Wild West, that can readily be policed; and not everyone agrees that there should be a sheriff, let alone who the sheriff should be.

Cyberspace is "where" computers communicate with each other via networks. Its "main street" is the Internet, a network of networks that arose from research initiated by the Department of Defense in 1969 as a way to decentralize, and thus render less vulnerable, the U.S. communications infrastructure. Not until 1993, however, when the National Science Foundation commercialized its predecessor network, did the Internet's vast potential for expressive and business communications, through the World Wide Web, e-mail, Listservs, and the like, begin to emerge.

Not all aspects of this online world (not decency, privacy, fraud, or abuse, for instance) necessarily concern intellectual property per se. Others do, and as to these, a pure "no regulation" model is infeasible. Given, for example, the capacity of digital technology and e-mail to reproduce and publicly disseminate copies of copyrighted works in quantities heretofore unimaginable, the normal dynamics of common-law jurisprudence would lead to "regulation" of cyberspace by the courts even if no other actors, domestic or international, stepped forward to participate.

Whether, however, the extension of existing legal devices to cyberspace is a sufficient response to new realities or whether, instead, new legal paradigms unique to cyberspace must be created are different questions. Most examples of cyberspace regulation take into account both traditional models, including activity by national and/or international actors, and code (that is, the software and hardware codifying the rules that determine how people interact in cyberspace). For instance, the 1998 Digital Millennium Copyright Act (so called notwithstanding that it was enacted under the commerce rather than the copyright clause) appears on its face to be simply a piece of national legislation. That legislation, however, was a response to U.S. treaty commitments undertaken via the World Intellectual Property Organization (a UN agency), and its subject matter is technological measures created to protect digitized information, notably in a networked environment.

Similarly, the Internet Corporation for Assigned Names and Numbers may appear at first blush to be merely a not-for-profit entity dedicated to the thankless task of managing domain names on the Internet. But in fact ICANN derives its authority from a 1998 memorandum of understanding with the U.S. Department of Commerce, is governed by a board with members from around the world (including representatives of technical groups with Internet expertise), and necessarily is deeply affected by the limitations, as well as the potential, of the architecture of relevant sectors of cyberspace.

Thus, a definitive characterization of cyberspace regulation, at this stage in its rapid evolution, is impossible. Change is constant; power is shared; no one is, or can be, fully in charge.

[*See also* Commerce Clause *and* Privacy, *subentry on* United States Law.]

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