THE PROBLEM WITH INTELLECTUAL PROPERTY RIGHTS: SUBJECT MATTER EXPANSION

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ABSTRACT

This article examines the expansion of the subject matter that can be protected under intellectual property law. Intellectual property law has developed legal rules that carefully balance competing interests. The goal has long been to provide enough legal protection to maximize incentives to engage in creative and innovative activities while also providing rules and doctrines that minimize the effect on the commercial marketplace and minimize interference with the free flow of ideas generally. The expansive view of subject matter protectable via intellectual property law has erased the clear delineation between patent, copyright, and trademark law. This has led to overprotection of intellectual property in the form of overlaps which allow multiple bodies of intellectual property law to simultaneously protect the same subject matter. Such overlapping protection is problematic because it interferes with the carefully developed doctrines that have evolved over time to balance the private property rights in intellectual creations against public access to such creations. This article will examine the competing policies that underlie the various branches of intellectual property law. It will then discuss the expanding domain of subject matter protected by patent, copyright, and trademark law. Finally, it will examine the overlaps that exist under patent, copyright, and trademark law and the resulting problems with regard to software, clothing, computer icons, graphical computer interfaces, music, and useful commercial products.

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INTRODUCTION

At its most basic level, intellectual property refers to ideas or information that spring from a person's mind.[1] Such know-how is necessary for research, for artistic and creative endeavors, for basic activities most of us engage in, and for operating business enterprises. The importance of such intangible property creates a conundrum, however. Proponents of broad legal protection for intellectual property generally argue that such protection is necessary to incentivize investment in creative and innovative activities that ultimately benefit society.[2] In a capitalist economic

[1] More technically, intellectual property refers to mental creations that have been granted property law protection. ROGER E. SCHECHTER & JOHN R. THOMAS,INTELLECTUAL PROPERTY: THE LAW OF COPYRIGHTS, PATENTS AND TRADEMARKS § 1.1 (2003). *See also* J. Gordon Hylton, David L. Callies, Daniel R. Mandelker& Paula A. Franzese, PROPERTY LAW AND THE PUBLIC INTEREST: CASES AND MATERIALS 52 (3d ed. 2007) (stating that the main goal of intellectual property law is to distinguish between mental creations that are legally protected as property and those that are not protected as property).

[2] *See, e.g.,* Geoffrey Karny, *In Defense of Gene Patenting*, GENETIC ENGINEERING & BIOTECHNOLOGY NEWS, April 1, 2007, at 1, 1, *available at* http://www.genengnews.com/gen-articles/in-defense-of-gene-patenting/2052/ (arguing that gene patents are necessary to provide incentive to invest in

system, this argument has merit. Failure to provide property protection may negatively impact the ability to generate a return on investment and hence substantial capital outlays for such activities might be diminished. In contrast, proponents of more limited intellectual property rights argue that in a free society any state-granted property rights in intellectual creations should be minimized. This will enable the free flow of ideas and information for the benefit of society.[3] This argument has merit because allowing private parties to own ideas and information can interfere with marketplace competition[4] and with public access to intellectual property. Such access is important to enhance creative

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development of medicines and diagnostic tests based on newly sequenced genes).

[3] This argument was advanced by the California Supreme Court to support denial of property status for tissue removed from a human body during surgery because granting such property rights could impede innovation and research. Moore v. Regents of the Univ. of Cal., 51 Cal. 3d 120, 135-36 (1990), *cert. denied*, 499 U.S. 936 (1991). The above concerns have led to several movements in the United States that favor wide dissemination of know-how with few, if any, restrictions. For example, the Open Source Initiative advocates dissemination of software source code with few limitations.Open Source Initiative, http://www.opensource.org (last visited June 21, 2010). *See also*Nam Tai Electronics, Inc. v. Titzer, 113 Cal. Rptr. 2d 769, 777 (Ca. Ct. App. 2001) (describing how the open source movement advocates "making as much material as possible freely available over the Internet"); Bruce Abramson, *Promoting Innovation in the Software Industry: A First Principles Approach to Intellectual Property Reform*, 8 B.U. J. SCI. & TECH. L. 75, 138 n.251 (2001) (providing an overview of the open source movement). Recently, the Pirate Party won over seven percent of the vote in the Swedish parliamentary election, which entitles the party to two seats in the European Parliament. *Pirate Party Gains Second Seat In EU Parliament*, INTELLECTUAL PROPERTY WATCH, Nov. 5, 2009, *available at* http://www.ip-watch.org/weblog/2009/11/05/pirate-party-gains-second-seat-in-eu-parliament. The party advocates the elimination of patent law and a fundamental reform of copyright law. *Patently-O*, http://www.patentlyo.com/patent/2009/11/patently-o-bits-and-bytes.html (last visited Nov. 6, 2009). The Creative Commons organization advocates extension of Open Source Initiative ideas to creative works other than software. F. Gregory Lastowka& Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 41 n.211 (2004) ("Creative Commons is popularizing forms of 'open source' licenses for non-software products, which reserve a minimal number of rights to the author and allow broader public access..."). A project called Science Commons was launched by Creative Commons to facilitate innovation in the technology area by freer sharing of scientific intellectual property. Science Commons Home Page, http://sciencecommons.org (last visited June 21, 2010).

[4] Allowing private property rights in knowledge and information can lead to private control of the flow of information, which may interfere with the free flow of information in the marketplace, because granting property rights gives the owner the right to exclude others from using the information. *See* College Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd., 527 U.S. 666, 673 (1999) (noting that the "hallmark of a protected property interest is the right to exclude others.").

and innovative advances, which tend to build on what has gone before.[5] The free flow of information and ideas is also necessary for a robust free society to flourish.[6]

Over several centuries, intellectual property law has developed legal rules that carefully balance the above competing interests. The goal has long been to provide enough legal protection to maximize incentives to engage in creative and innovative activities while also providing rules and doctrines that minimize the effect on the commercial marketplace and minimize interference with the free flow of ideas generally. In short, the law has developed a careful balance between competing interests.

Over the last few decades legislative enactments and judicial decisions have adopted an expansive view of intellectual property. The subject matter eligible for protection has continued to expand significantly in recent years. This expansion has erased the clear delineation between patent, copyright, and trademark law. It has also led to overprotection of intellectual property in the form of overlaps that allow multiple bodies of intellectual property law to simultaneously protect the same subject matter. Such overlapping protection is problematic because it interferes with the carefully developed doctrines that have evolved over time to balance the private property rights in intellectual creations against public access to such creations.

These overlaps, arguably, are the unintended consequence of the fragmented nature of the field of intellectual property law. Few attorneys practice across the broad spectrum of intellectual

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[5]*See generally* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989) ("From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy.").

[6]Edwards v. Nat'l Audubon Soc'y, 556 F.2d 113, 115 (2dCir. 1977) ("It is elementary that a democracy cannot long survive unless the people are provided the information needed to form judgments on issues that affect their ability to intelligently govern themselves."). *See also*United States v. Carrier, 672 F.2d 300, 305 (2d Cir. 1983) (stating that the free dissemination of ideas is an essential element of democracy). The importance of preventing the government from interfering with the free flow of information is exemplified by the First Amendment to the Constitution, which prohibits the government from abridging freedom of speech and of the press. U.S. CONST. amend. I,*See generally*Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, 425 U.S. 748,760-62 (1976) (holding First Amendment free speech rights extend to commercial speech); New York Times Co. v. Sullivan, 376 U.S. 254, 270 (1964) (Justice Brennan, quoting Judge Learned Hand, who stated that the First Amendment "presupposes that right conclusions are more likely to be gathered out of a multitude of tongues, than through any kind of authoritative selection. To many this is, and always will be, folly; but we have staked upon it our all."); Whitney v. California, 274 U.S. 357, 375 (1927) (stating that freedom to think and to speak are fundamental concepts of American government).

property law. Most focus on specific areas of intellectual property law. For example, lawyers focusing on patent prosecution must be registered with the U.S. Patent and Trademark Office. Only lawyers who have hard science backgrounds and who have passed an exam administered by the Patent and Trademark Office can engage in such work.[7] This is further illustrated by the numerous organizations that focus on specific areas of intellectual property law rather than on the entire field.[8]

Finally, the development and implementation of different areas of intellectual property law are carried out by different entities rather than by a single governmental agency. The U.S. Patent and Trademark Office,[9] which is part of the U.S. Department of Commerce[10] and the executive branch of the federal government, is primarily responsible for utility patents, design patents, and trademarks. Asexually reproduced plants are the domain of plant patents, which are also the responsibility of the U.S. Patent and Trademark Office.[11] Sexually reproduced plants are protected by a different statutory scheme that is administered by the U.S. Department of Agriculture, which is a different executive branch agency.[12] Finally, primary responsibility for the

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[7] Requirements for the exam are available at http://lawprofessor.org/patentbar/examrequirements.html (last visited June 17, 2010).

[8] For example, the International Trademark Association focuses on the interests of trademark owners. International Trademark Association Home Page, http://www.inta.org (last visited June 17, 2010); The Copyright Society of the U.S.A. focuses on advancing the study of copyright law. Copyright Society of the U.S.A., http://www.csusa.org (last visited June 17, 2010); The National Association of Patent Practitioners supports those working in the field of patent law. National Association of Patent Practitioners Home Page, https://www.napp.org/ (last visited Sept. 19, 2010); The Institute of Trademark Attorneys is a United Kingdom organization advancing the interests of trademark owners in the United Kingdom and in other countries, http://www.itma.org.uk/ (last visited Sept. 19, 2010). The major professional organizations representing U.S. intellectual property lawyers are the American Intellectual Property Law Association and the Intellectual Property Law Section of the American Bar Association. American Intellectual Property Law Association Home Page, http://aipla.org (last visited Sept. 19, 2010).Intellectual Property Law Section of the American Bar Association Home Page, http:// http://www.abanet.org/intelprop (last visited Sept. 15, 2010). However, both organizations, via a committee structure, have separate groups that address patent, copyright and trademark issues.

[9] U.S. Patent and Trademark Office Home Page, http://www.uspto.gov/about/offices/index.jsp (last visited Aug. 27, 2010).

[10] The U.S. Patent and Trademark Office is one of twelve agencies or bureaus that exist under the auspices of the U.S. Department of Commerce.

[11] *See* http://www.uspto.gov/web/offices/pac/plant/ (last visited Aug. 27, 2010) (providing overview of plant patents).

[12] The Plant Variety Protection Act (7 U.S.C. §§ 2321-2582) is administered by the U.S. Department of Agriculture via the Plant Variety Protection Office.

copyright law is delegated to the U.S. Copyright Office,[13] which is part of the Library of Congress and the legislative branch of the federal government.[14] This division of responsibility facilitates the fragmented development of intellectual property law and policy rather than a coherent and integrated approach.

This article will examine the competing policies that underlie the various branches of intellectual property law. It will then discuss the expanding domain of subject matter protected by patent, copyright, and trademark law. Finally, it will examine the overlaps that exist under patent, copyright, and trademark law and the resulting problems with regard to software, clothing, computer icons, graphical computer interfaces, music, and useful commercial products.

I. BALANCING PRIVATE PROPERTY RIGHTS AND THE PUBLIC DOMAIN

A. Background

The existence and recognition of property is a fundamental aspect of a free market economy.[15] Allowing private ownership of

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[13]U.S. Copyright Office Home Page, http://www.copyright.gov/ (last visited Aug. 27, 2010).

[14]U.S. Copyright Office Home Page, http://www.copyright.gov,*See* http://www.loc.gov/about/ (last visited Aug. 27, 2010).

[15]*See generally* Arthur Seldon, INST. OF ECON. AFFAIRS, CAPITALISM: A CONDENSED VERSION 23, (2007), *available at* http://www.iea.org.uk/record.jsp?type=book&ID=407. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=979749&download=yes##. The development of new and creative innovations is an important component of a free market economic system. However, many companies will only commit resources to creative activities if an economic reward or benefit can be potentially obtained from the fruit of such activities. *See generally* Paul Goldstein, GOLDSTEIN ON COPYRIGHT § 1.14 (3d ed. 2008) (copyright law seeks to encourage creation and dissemination of literary and artistic works by giving authors inducements in the form of property rights). If property law did not protect intellectual property, third parties could duplicate and use such intellectual property without incurring the time, effort and expense incurred by the creator. Hence, such parties, often called free-riders, would diminish the potential economic benefit from creation of intellectual property. This would produce a disincentive to create intellectual property that is subject to free-riding. This problem does not arise with land or tangible personal property. The physical possession of such property by its owner eliminates free-riding because multiple parties are unable to simultaneously possess and use such property. In contrast, a unique aspect of intellectual property is that, unlike land and tangible personal property, it can be used by multiple persons simultaneously without the use by any party interfering with the use by other parties. Gary Myers, PRINCIPLES OF INTELLECTUAL PROPERTY LAW ¶ 1.03 (2008). Hence, intellectual property is granted property protection to insure the existence of an economic incentive to engage in creative and innovative activities. *See generally* William

H. Francis and Robert C. Collins, CASES AND MATERIALS ON PATENT LAW: INCLUDING TRADE SECRETS, COPYRIGHTS, AND TRADEMARKS 99494394 (4th ed. 1995) (In Thomas Jefferson's view, "[t]he patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge."). Of course, it could be argued that eliminating such an economic incentive might eliminate the substantial amount of time, energy and capital utilized in countries such as the U.S. to generate duplicative products and unnecessary consumer goods. However, despite creation of many perhaps useless products, it is advantageous to promote innovation. It provides benefits to the public generally by increasing the choices and options available to the public. It is ultimately the marketplace response to such choices that determines which products are useful and which are useless. Additionally, increasing the storehouse of public knowledge, as noted below, may be beneficial. This argument strongly supports the use of intellectual property law protection in a free-market economic system. The very essence of this argument coincides with the underlying premise of a free-market economy. Hence, intellectual property law protection is logical in a free-market economic system because it harnesses the desire to acquire economic wealth that exemplifies a free-market economy. In contrast, it could be argued that protection of intellectual property is less logical in a country that lacks a free-market economy. In such countries the potential for economic wealth does not play as large a role in the activities citizens engage in. Nevertheless, a robust capitalistic economy that will persevere and grow requires continued development of new products and services. Maximizing the amount of creative and innovative ideas that enter the public domain is an essential element of a healthy economy because innovators and creators do not work in a vacuum. Each builds upon the collective work of others. *See generally* Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 146 (1989) ("From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy."). Often, someone will look at existing technology in a new way such that she discovers a new use for previously developed technology; or, she combines existing elements of technology in a new and unique way that creates an unexpected technological advance or solution to a longstanding problem. *See* Ex Parte Hull, 191 U.S.P.Q. 157, 159 (Pat. & Trademark Office Bd. App. 1975). ("The consideration for the grant of a patent is the prompt disclosure to the public of the invention covered by that patent. The very purpose of this disclosure to the public is to catalyze other inventors into activity and thus make additional advances in the art. This is in furtherance of the constitutional intent of promoting the progress of science and the useful arts."). As noted above, legal protection for intellectual property provides an incentive for development of new creations and innovations. However, such legal protection pursuant to property law insulates the property owner, on one level, from competition in the marketplace if only the property owner can control the intellectual property. But once an intellectual property owner creates a market for her intellectual property others will seek to enter that market. Faced with property rights which bar free-riding, competitors will compete on a different level. They will seek to develop alternative and often better or cheaper products to serve the needs of the marketplace. Competition on this level injects new ideas and products into the marketplace, which provides more raw materials for future creators and innovators to work with. Ultimately, the benefit of increased competition inures to the benefit of the public by enlarging the domain of raw materials in the form of information and ideas that are available to the

property enables societal members to engage in capitalistic market behavior.[16] Generally, the question of whether land and tangible items things should be designated as property rarely arises. In most cases, it is self-evident from a utilitarian perspective that such things should be designated as property in a free market economy such as exists in the U.S. The accumulating, buying, selling, and transferring of land and tangible assets is endemic to a free market economic system. Such activities would be difficult to engage in absent the attachment of private property rights. Hence, it can be presumed that land and tangible items things will be designated as

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public. This in turn facilitates the quest for better and cheaper products to enable maintenance of market share by competing enterprises. *Id.*

[16] Under this rationale, all property—whether tangible or intangible—requires the same level and type of legal protection. Hence, different types of property should be viewed as fungible, at least with respect to legal protection. Increasingly, this argument seems more logical as the U.S. shifts to a technological economy that produces and sells increasingly more technological innovations in lieu of manufacturing tangible goods. *See Business Battle Over Patent Laws*, WALL ST. J., June 9, 2007, at A7 (technological innovation produced 80% of productivity gains in U.S. economy during the late 1990s; about 1/3 of the value of all U.S. stocks is currently comprised of intangible assets which includes intellectual property). The decline in U. S. manufacturing, however, should not be overstated. The U.S. is still a giant producer of manufactured goods. *See* U.S. Dep't of Commerce, MANUFACTURING IN AMERICA – A COMPREHENSIVE STRATEGY TO ADDRESS THE CHALLENGES TO U.S. MANUFACTURERS 7 (2004) (as of 2004, the U.S. is still largest producer of manufactured goods in the world). Traditionally, intellectual property was primarily used as a method of protecting the core business of an enterprise. It was an ancillary tool used to protect production and sale of tangible products. For example, if I manufactured shoes via a novel process I could rely on intellectual property law to protect my process to enhance my ability to sell shoes. Although this is still true in many industries, it is likewise true that in some industries intellectual property has become the product made and sold by companies in that industry. For example, the software industry is primarily engaged in selling its intellectual property, rather than relying on property law protection to facilitate sale of tangible products. Increasingly, intellectual property such as software and music are sold via the Internet. This allows downloading of the intellectual property directly into a purchaser's computer without the purchaser ever obtaining any physical or tangible medium containing the intellectual property. As a result, in such industries protection of intellectual property occupies the same importance as protection of tangible goods. For example, the sale of intellectual property in the form of patent licensing has become a free-standing profit center for some enterprises that is separate and distinct from the core products and services sold by the business. In such situations the patent rights are the basis of an ancillary business rather than being used to protect the core business of the enterprise. *See* Rodney Ho, *Patents Hit Record in '98 as Tech Firms Rushed to Protect Intellectual Property*, WALL ST. J., Jan. 15, 1999, at A2. For example, in 1998 IBM earned more than $1 billion in licensing fees from 1600 different companies. *See id.*

property absent a countervailing policy favoring a non-property designation.[17]

Intellectual property rights, like property in general, are based on a utilitarian theory[18] rather than a natural rights or labor theory.[19] Pursuant to a utilitarian theory, underlying policy concerns determine whether something is legally designated as property.[20] Once a property label is attached, the law gives the

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[17]*See* Moore v. Regents of the University of Cal., 51 Cal. 3d 120, 135-36 (1990), *cert. den.* 499 U.S. 936 (1991) (countervailing policy outweighed granting property status to tangible personal property.....)

[18]*See* Adam D. Moore, *A Lockean Theory of Intellectual Property*, 21 HAMLINE L. REV. 65, 65 (1997) (noting intellectual property laws are typically based on the utilitarian policy that granting property rights to authors and inventors maximizes the incentive to engage in such creative endeavors). *See also*GOLDSTEIN ON COPYRIGHT, *supra* note 15 §1.13.2.3, at 1:37 (copyright law based on utilitarian foundation). Both the Supreme Court and Congress have likewise found that copyright law is based on a utilitarian theory and expressly rejected a natural rights theory as the basis of copyright law. *See id.*§§ *Id.* §1.13.2.2–1.13.2.3, at 1:36 –1:37. In *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974), the Supreme Court noted that patent law is based on the utilitarian goal of promoting science

> by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens.

Id. at 480. In *The New Kids on the Block v. News America Publishing, Inc.*, 971 F.2d 302, 305 (9th Cir. 1992), the court noted that trademarks serve the utilitarian purposes of identifying goods or services to consumers and preventing competitors from free-riding on a rival's trademark. *See also*PRINCIPLES OF INTELLECTUAL PROPERTY, *supra* note 15¶ 7.01, at 164 (legislative history of Lanham Act (federal trademark law) identifies utilitarian goals for the Act as including the prevention of consumer confusion and protection of, protecting the good will created by trademark owners from free-riding by competitors.).. *See generally* Jacqueline D. Lipton, *To © or Not to ©? Copyright and Innovation in the Digital Typeface Industry*, 43U.C. DAVIS L. REV. 143, 145 nn.2–3 (2009) (citing scholars who support the view that intellectual property law is based on a utilitarian theory).

[19]*See* Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 542 (2005) ("most scholars today base their understandings of property on a model where property is justified by utilitarianism and defined by positive law rather than upon natural rights theories."). *But cf.* Daniel A. Crane, INTELLECTUAL LIABILITY, 88TEX. L. REV. 253 (2009) (arguing intellectual property should not be treated as property under the law). *See generally* Stephanie Gore, "*Eureka! But I filed too late . . . ": The Harm/Benefit Dichotomy of a First-to-File Patent System*, 1993 U. CHI. L. SCH. ROUNDTABLE 293, 299 (1993) ("The root idea of Locke's labor theory stems from the argument that people are entitled to hold, as property, whatever they produce by their own initiative, intelligence, and industry.").

[20]*See* discussion *supra* note 18. *See generally*ROGER E. SCHECHTER & JOHN R. THOMAS,INTELLECTUAL PROPERTY – THE LAW OF COPYRIGHTS, PATENTS AND TRADEMARKS §1.1, at 1 (2003).

property owner control over the property.This control is enforceable via the state-run legal system,[21] but usually subject to restrictions necessary to further the public interest.[22]

The difficulty of extending property protection to intellectual property lies in striking a proper balance between granting enough protection to spur innovation while not impinging too greatly on the public benefits arising from the creation of intellectual property.[23] Development of creative and innovative products will occur even in the absence of any property protection for intellectual property.[24] However, absent such legal protection, less investment in creative and innovative development will occur[25] because a lack of economic benefits will create a disincentive to engage in certain types of creative and innovative activities. This can be a detriment to the public by reducing the public storehouse of knowledge. Conversely, if the creator of intellectual property controls its use and dissemination via the granting of property status, an anticompetitive effect may result.[26] The creator (owner) can restrict distribution of the property and

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[21]*Cf.* Felix S. Cohen, *Dialogue on Private* RUTGERS L. REV. 357, 374 (1954) ("[T]hat is property to which the following label can be attached: (To the world: Keep off X unless you have my permission, which I may grant or withhold. Signed: Private Citizen.Endorsed: The state.")).

[22]*See generally* Andrew Beckerman-Rodau, *Prior Restraints and Intellectual Property: The Clash between Intellectual Property and the First Amendment from an Economic Perspective*, 12 FORDHAM INTELL. PROP. MEDIA &ENT. L.J. 1, 11 nn.52–54 (2001) (discussing limitations on property rights).

[23]*See* Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 146 (1989) ("[("The Patent Clause [U.S. CONST. art I, § 8, cl. 8] ("[itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and the useful arts.'"). *See also*GOLDSTEIN ON COPYRIGHT, *supr*a note 15, § 15 §1.14, at 1:41–1:42 (3d ed. 2008) (discussing the balancing between providing enough rights to incentivize creators with maximizing public benefit from such creations in the context of copyright law). *See generally*PRINCIPLES OF INTELLECTUAL PROPERTY LAW, *supra* note 15, ¶ 15 ¶1.03, at 7–8 (understanding intellectual property law requires considering rights of authors and inventors as well seeking to promote marketplace competition, expand the public storehouse of knowledge, improve available technology and protect consumers).

[24]*See* Diamond v. Chakrabarty, 447 U.S. 303, 317 (1980) ("The grant or denial of patents on micro-organisms is not likely to put an end to genetic research. The large amount of research that has already occurred when no researcher had sure knowledge that patent protection would be available suggests that legislative or judicial fiat as to patentability will not deter the scientific mind from probing into the unknown any more than Canute could command the tides.").

[25]*See id.* ("Whether [inventions] are patentable may determine whether research efforts are accelerated by the hope of reward or slowed by the want of incentives, but that is all.").

[26]*See generally*PRINCIPLES OF INTELLECTUAL PROPERTY LAW,*supra* note 15, ¶ 1.03, at 7.

may be able to charge a higher price for its use by third parties as a consequence of being insulated from some degree of competition. This can work to the detriment of the public if the intellectual property, for example, involves a life-saving drug or treatment. The goal of any legal protection is therefore to find the optimum balance such that enough protection is provided by the law to maximize investment of time, energy, and capital in creative endeavors while minimizing any restriction on the public's freedom to use products resulting from such creativity.[27]

Ignoring this simple balancing concept can lead to either over-protection or under-protection of intellectual property.[28] The rhetoric favoring strong intellectual property protection reflects a unitary focus on maximizing the incentive for investment in innovation.[29] This focus is sometimes expressed under the rubric of rewarding creators for their efforts.[30] Conversely, the rhetoric favoring weak intellectual property protection tends to reflect a

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[27]*See*Labcorp v. Metabolite Laboratories, Inc., 548 U.S. 124, 127 (2006) (Breyer, J., dissenting) (patent law seeks to find a balance between the dangers of over-protection and the dangers of under-protection). *See also* Nash v. CBS, Inc., 899 F.2d 1537, 1540–41 (7th Cir. 1990) (discussing the importance of striking a balance between over-protection and under-protection in the context of copyright law).

[28]*See* White v. Samsung Elec. Am., Inc., 989 F.2d 1512, 1513–14 (9th Cir. 1993) (Kozinski, J., dissenting) (property protection must represent a balance because both overprotection and under protection of intellectual property is problematic).

[29]*See, e.g.*, Adam Liptak, *Justices to Weigh Issue of Patenting Business Methods*, N.Y. TIMES, June 2, 2009, at 2 (litigant in a patent case that reduced the scope of inventions eligible for patent protection argued that such action "threatens to stifle innovation in emerging technologies that drive today's information-based economy."); Warren E. Leary, *The Inquiring Minds Behind 200 Years of Inventions*, N.Y. TIMES, Oct. 22, 2002, at 4 ("Richard M. Russell of the White House Office of Science and Technology Policy [stated that] . . . '[u]nless we can protect intellectual property, we will not have invention.'"); Andrew Pollack, *Group Split Over Law On Drugs*, N.Y. TIMES, Mar. 28, 1990, at 3 ("Virtually everyone in the biotechnology industry agrees that protection for innovation is essential if companies are to invest the tens of millions of dollars it takes to develop a new drug.").

[30]*See, e.g.*, Mark Helprin, *A Great Idea Lives Forever. Shouldn't Its Copyright?* N.Y. TIMES, May 20, 2007, at 12 (arguing copyrights which are restricted to a limited time by the Constitution should be granted as long a term as possible in order to treat copyright, as much as possible, like other types of property). In response to criticism of his argument, Mr. Helprin authored a book supporting his position and rejecting such criticism. MARK HELPRIN, DIGITAL BARBARISM (2009). *See generally Sen. Schumer Introduces Fashion Design Protection Legislation, Similar to House Bill*, 80 PATENT, TRADEMARK & COPYRIGHT J. 498 (Aug. 13, 2010) (Senator Orin Hatch, speaking in support of Senate Bill S. 3728 introduced Aug. 5, 2010, which would provide a three year term of protection for fashion designs, stated "[w]e must ensure that all property rights, including fashion designs, are protected both here and abroad.").

unitary focus on the need for the public to have unrestricted access to all innovations.[31] These approaches are opposite extremes and both are inconsistent with the historical underpinnings[32] and the judicial interpretation of intellectual property law.

B. Historical Basis for the Balancing Approach

1. Patent and Copyright Law

The Constitution states:

> The Congress shall have power to . . . promote the progress of science and useful arts, by securing forlimited times to authors and inventors the exclusive right to their respective writings and discoveries . . . .[33]

This clause empowers Congress to enact both patent law and copyright law.[34] Furthermore, the clause has been interpreted to mean that the ultimate underlying purpose or goal of laws based on this clause is to "promote the progress of science and useful arts."[35] The granting of exclusive rights to "authors and

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[31]*See, e.g.,* Edward Rothstein, *CONNECTIONS; Swashbuckling Anarchists Try to Take the $; Out of Cyberspace*, N.Y. TIMES, June 10, 2000, at B1 ("'Information wants to be free' . . . has become a rallying cry for copyright challenges"). *See generally*AnupamChander&Madhavi Sunder, *The Romance of the Public Domain*, 92 CAL. L. REV. 1331, 1334 (2004) (noting that some intellectual property scholars argue that the public domain must be protected from intellectual property rights to preserve free speech and free access as well as innovation). *See also* the Swedish Pirate Party website, which states "Pharmaceutical patents kill people in third world countries every day. They hamper possibly life saving research by forcing scientists to lock up their findings pending patent application, instead of sharing them with the rest of the scientific community. . . . Patents in other areas range from the morally repulsive (like patents on living organisms) through the seriously harmful (patents on software and business methods) to the merely pointless (patents in the mature manufacturing industries)" (available at http://www2.piratpartiet.se/international/English (last visited June 21, 2010)).

[32]*See* Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 8–9 (1966) (noting that Thomas Jefferson rejected a natural rights theory for intellectual property in favor of a public policy based rationale which relied on rewarding a creator to induce innovation which ultimately benefits society). *See generally* Bilski v. Kappos, 130 S. Ct. 3218, 3239–52 (2010) (Stevens, J., concurring) (overview of history of U.S. patent law).

[33]U.S. CONST. art.I, § 8, cl. 8.

[34] Janice M. Mueller, PATENT LAW 31–32 (3d ed. 2009).

[35]*See* Rothstein, *supra* note 31. Promoting the progress of science and useful arts has generally been interpreted to mean that the goal of patent and copyright laws is to benefit the public not the author or inventor. Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932) ("The . . . primary object in conferring the [copyright]

inventors"[36] provides the incentive for such individuals to expend resources on creative endeavors in the hope that such rights can be monetized.[37] In light of this, the amount or degree of property protection provided to inventors and authors under the patent and copyright laws, respectively, should be the minimum amount necessary to incentivize such persons to engage in creative activities. The amount of property protection should not reflect the value of a particular creative product. Nor should it be viewed as a reward for engaging in such activities. Finally, whether the property rights granted are equitable is irrelevant. The utilitarian goal of patent and copyright law is to gain benefits for the public at large. This is accomplished by maximizing the amount of innovative and creative contributions that are freely available in the public domain while minimizing the scope of property rights protecting such contributions.

The above constitutional clause includes one limitation on the scope or degree of any property rights granted under patent and copyright law. Unlike typical property rights, which are not automatically time-limited, any rights given to patent and copyright owners must be time-limited.[38] This reflects the utilitarian basis of granting property protection for intellectual property law by specifically forbidding Congress from granting

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monopoly lie in the general benefits derived by the public from the labors of authors). *See also* Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 151 (1989) ("ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure".)

[36]*See* Rothstein, *supra* note 31.

[37] "The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.' Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered." Mazer v. Stein, 347 U.S. 201, 219 (1954).*See also*Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 164 (1995) ("It is the province of patent law . . . to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time"); Bonito Boats, 489 U.S. at 150-51 ("The federal patent system ... embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years"); U.S. v. Paramount Pictures, Inc., 334 U.S. 131, 158 (1948) ("The copyright law, like the patent statutes, makes reward to the owner a secondary consideration.")

[38]U.S. CONST. art. I, § 8, cl. 8 ("securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries"). Of course, some conventional property rights are limited. A possibility of reverter is a real property interest which via statute can only last for a fixed time period in some states. *See, e.g.*, Fla. Stat. § 689.18 (2010). Some contingent real property rights are void under the Rule Against Perpetuities if the possibility exists that such rights may not become possessory rights until too far into the future. *See generally* Joseph William Singer, PROPERTY § 7.7.4, at 328-29 (3d ed. 2010).

perpetual property rights under the patent and copyright laws. This is fully consistent with only granting enough protection to promote innovation and creative activities rather than rewarding a creator for his or her contributions to society.

Additionally, case law has long recognized the need to limit the scope of property rights under patent and copyright law to insure the necessary balance between seeking to maximize the benefit to society while minimizing the amount of property protection necessary to be an adequate incentive to creators.[39] In the patent context, courts frequently make a distinction between ideas and embodiments of ideas.[40] In the copyright context, courts make a distinction between ideas and the expression of ideas.[41] This distinction effectively limits property rights because ideas per se are not protectable property interests under patent and copyright law. Only the embodiment of the idea and the expression of the idea are protectable as property under the patent and copyright law, respectively. Sometimes the unprotected underlying idea, which becomes part of the public domain and which everyone is free to use,[42] is the most valuable aspect of any intellectual property

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[39] In *Brenner v. Manson*, 383 U.S. 519 (1966), the Supreme Court held that a working chemical process was ineligible for patent protection because the compound produced by the process had no known use. The court noted that the patent should be denied because "[s]ucha patent may confer power to block off whole areas of scientific development, without compensating benefit to the public." *Id.* at 534.*See also* In re Fisher, 421 F.3d 1365, 1371 (Fed. Cir. 2005).

[40]*See, e.g.,*Rubber-Tip Pencil Co. v. Howard, 87 U.S. 498, 507 (1874) ("An idea of itself is not patentable, but a new device by which it may be made practically useful is.");Jennings v. Brenner, 255 F. Supp. 410, 412 (D.D.C. 1966) ("[P]atent law does not permit patents on ideas but only on embodiments of ideas.") *See also*Diamond v. Diehr, 450 U.S. 175, 185 (1981) (concluding that an idea is not patentable); *See generally*Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) ("The laws of nature, physical phenomena, and abstract ideas have been held not patentable."); Janssen Pharmaceutica N.V. v. Teva Pharms. USA, Inc., 583 F.3d 1317, 1324 (Fed. Cir. 2009) (research proposals not eligible for patent protection); In re Fisher, 421 F.3d 1365, 1371 (Fed. Cir. 2005) (finding that basic scientific discovery useful only for engaging in further research is not eligible for patent protection).

[41]*See, e.g.,*Mazer v. Stein, 347 U.S. 201, 217 (1954) (finding that copyright protects expression of an idea rather than the idea itself); Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1234 (3d Cir. 1986) ("It is axiomatic that copyright does not protect ideas, but only expressions of ideas."); Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 741(9th Cir. 1971) (copyright protects form of expression of idea but it does not protect the idea).*See also* 17 U.S.C.A. § 102(b) (West 2010) (copyright does not protect ideas).

[42]Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936) (concluding that the theme or idea in a copyrighted work can be freely copied even though the form of expression of that theme or idea is protected).

protected via patent and copyright laws.[43] Delineating the unprotectable idea and distinguishing it from the protectable intellectual property under patent and copyright law is a difficult task.[44] Nevertheless, focusing on minimizing the protection necessary to incentivize creative individuals rather than rewarding creators facilitates more accurate line drawing between protectable and unprotectable creativity in light of the utilitarian purpose of patent and copyright law. Finally, copyright law provides, under the judicially developed merger doctrine, that property rights under copyright law are denied when an unprotectable idea cannot be separated from protectable expression of the idea.[45]

Statutory patent and copyright law also contain limitations that are consistent with striking a balance between protectable and unprotectable aspects of creative endeavors. Under the patent law, new inventions that add to the public storehouse of knowledge must be useful to be considered eligible for patent protection.[46] Hence, valuable basic research discoveries that have no known use are not patent-eligible.[47] Additionally, new inventions are subject to a qualitative evaluation to determine if the inventive advance is

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[43]*See generally*LabCorp v. Metabolite Laboratories, Inc., 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting) (finding that some things, such as laws of nature, are excluded from patent protection because they are so valuable that patent protection may impede research activities). Likewise, factual information—regardless how valuable—is not protected by copyright law even if substantial time and money were utilized in discovering such facts.Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 347-51 (1991).

[44] Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971) ("The critical distinction between 'idea' and 'expression' [of an idea] is difficult to draw" [in copyright law]."). Judge Learned Hand, in *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.,* 274 F.2d 487 (2d Cir. 1960), noted the difficulty of drawing the line between the idea and the expression of the idea in copyright law, and observed that "no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression." Decisions must therefore inevitably be ad hoc." *Id.* at 489.*See also*Bilski v. Kappos, 2010 U.S. LEXIS 5521 (2010) (evincing judicial disagreement over whether business method is patent-eligible subject matter).

[45] N.Y. Mercantile Exch., Inc. v. Intercontinental Exch., Inc., 497 F.3d 109, 116-17 (2007) (denying copyright protection to expressions of ideas that can only be expressed in a very limited number of ways, under the merger doctrine, such that the expression and the idea are so intertwined that they "merge" and are both ineligible for protection).

[46] Patent law states that "[w]hoever invents or discovers any new and *useful* process, machine, manufacture, or composition of matter, or any new and *useful* improvement thereof, may obtain a patent." 35 U.S.C.A. § 101 (West 2010) (emphasis added).

[47]Brenner v. Manson, 383 U.S. 519 (1966) (denying a patent on a working process because the compound produced by the process had no known use); In re Fisher, 421 F.3d 1365, 1371 (Fed. Cir. 2005) (ruling that a basic scientific discovery only useful for engaging in further research is not eligible for patent protection).

large enough to entitle the inventor to a patent. This qualitative evaluation, which was originally judicially created, was codified in the patent law as the nonobvious requirement.[48] The requirement insures that novel inventions that would have been routinely discovered even in the absence of patent law are not patented. Likewise, the prohibition against extending copyright protection to the ideas embodied in a work subject to copyright protection is codified.[49]

2. *Trademark Law*

Traditionally, the underlying purpose of trademark law was to prevent confusion by consumers with regard to the source of products.[50] Contemporary trademark law additionally protects the trademark owner's economic interests[51] – represented by its brand and business reputation – against third party misappropriation; it also enables the trademark owner to move into new product markets.[52] Dilution law, which is limited to famous trademarks,

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[48] "A patent may not be obtained though the invention is [new] . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C.A. § 103(a) (West 2010).

[49] Copyright law states "[i]n no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C.A. § 102(b) (West 2010).

[50]Peaceable Planet, Inc. v. Ty, Inc., 362 F.3d 986, 993 (7th Cir. 2004).*See generally*PAUL GOLDSTEIN& R. ANTHONY REESE, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES: CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY 167 (6th ed. 2008) (explaining how marks have been used for hundreds of years by merchants to indicate ownership or the source of goods).

[51]Ameritech, Inc. v. American Information Technologies Corp., 811 F.2d 960, 964 (6th Cir. 1987) ("[T]rademark law now pursues two related goals—the prevention of deception and consumer confusion, and, more fundamentally, the protection of property interests in trademarks.").

[52]Sands, Taylor & Wood Co. v. Quaker Oats Co., 978 F.2d 947, 957 (7th Cir. 1992) ("[T]he ("value of [a] trademark [is] its product identity, corporate identity, control over its goodwill and reputation, and ability to move into new markets." (quoting Ameritech, Inc. v. American Information Technologies Corp., 811 F.2d 960, 964 (6th Cir. 1987))." *Id.* at 957). Modern trademark law protects the ability of a trademark owner to capitalize on its good will by entering into new product markets that it would reasonably be expected to enter into in the future. 978 F.2d at 958.*See also* Cumberland Packaging Corp. v. Monsanto Co., 32 F. Supp. 2d 561, 567 (E.D.N.Y. 1999) (Federal trademark law, "enacted to protect both consumers and trademark owners, is designed to ensure that consumers purchasing a product may be confident of getting the brand they think they are getting, and that when trademark owners expend resources promoting their products to consumers their reputation and goodwill

goes even further by primarily focusing on protecting the trademark owner's property rights in the trademark even in the absence of competition or consumer confusion.[53] Despite the expansion of trademark rights, the law has long recognized that limits must be placed on the property rights granted in a trademark in order to prevent unfair interference with competition and unacceptable impingement on First Amendment free speech rights.[54]

Use of a trademark by a competitor engaged in comparative advertising is typically permitted in order to promote competition.[55] This can allow an unknown competitor to free-ride on the mental association triggered by a well-known trademark, provided the free-rider avoids any consumer confusion.[56] A trademark can also be used in news reporting even if such use is

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will not be misappropriated by pirates."). *See generally*Lamparello v. Falwell, 420 F.3d 309, 313 (4th Cir. 2005) ("Trademark law serves the important functions of protecting product identification, providing consumer information, and encouraging the production of quality goods and services.").

[53]Times Mirror Magazines Inc. v. Las Vegas Sports News, 212 F.3d 157, 162-63 (3d Cir. 2000).*See also*15 U.S.C.A. § 1125(c) (West 2010) (federal dilution statute). *See also* Panavision Int'l L.P. v. Toeppen, 945 F. Supp. 1296, 1301 (Cal. 1996) ("Trademark dilution laws, however, changed the traditional trademark analysis. Trademark dilution laws protect 'distinctive' or 'famous' trademarks from certain unauthorized uses of the marks regardless of a showing of competition or likelihood of confusion. Indeed, the very purpose of dilution statutes is to protect trademarks from damage caused by the use of the marks in non-competing endeavors. Whereas traditional trademark law sought primarily to protect consumers, dilution laws place more emphasis on protecting the investment of the trademark owners.") (citations omitted).

[54] The First Amendment to the Constitution states, in part, that "Congress shall make no law . . . abridging the freedom of speech, or of the press." U.S. CONST. amend. I. In *Cliffs Notes, Inc. v. Bantam Doubleday Dell Publishing Group*, 886 F.2d 490 (2d Cir. 1989), the court stated that "in deciding the reach of [federal trademark law] in any case where an expressive work is alleged to infringe a trademark, it is appropriate to weigh the public interest in free expression against the public interest in avoiding consumer confusion." *Id.* at 494.*See also* Charles Atlas, Ltd. v. DC Comics, Inc., 112 F. Supp. 2d 330 (S.D.N.Y. 2000), where the court stated that federal trademark law "is construed narrowly when the unauthorized use of a trademark is made not for identification of product origin but rather for the expressive purposes of comedy, parody, allusion, criticism, news reporting and commentary." *Id.* at 335.

[55]Toni & Guy (USA) Ltd. v. Nature's Therapy, Inc., 2006 U.S. Dist. LEXIS 25291, at *19-20 (S.D.N.Y. 2006). *See also* Tommy Hilfiger Licensing, Inc. v. Nature Labs, LLC, 221 F. Supp. 2d 410, 423 (S.D.N.Y. 2002) (use of a trademark in comparative advertising is encouraged to promote dissemination of truthful information about the competing product to the public); 15 U.S.C.A. § 1125(c)(3)(A)(i) (West 2010) (comparative advertising is not actionable as dilution).

[56]SSP Agricultural Equipment, Inc. v. Orchard-Rite, Ltd., 592 F.2d 1096, 1103 (9th Cir. 1979) (use of competitors trademark in comparative advertising permissible absent any misrepresentations or consumer confusion).

critical of a product and results in lost sales and damages to the trademark owner's good will.[57] Likewise, use of a trademark in a parody is permissible despite economic repercussions from such use.[58] Identical trademarks may also be used by different enterprises on unrelated or dissimilar products because such concurrent use will typically not create consumer confusion or result in lost sales.[59] Use of a trademark in everyday speech is also permissible.[60] Finally, the judicially created functionality doctrine bars asserting property rights in a trademark if such rights would enable the trademark owner to protect a functional aspect of a product or obtain a substantial non-reputational economic advantage over competitors.[61]

II. THE EXPANDING DOMAIN OF INTELLECTUAL PROPERTY LAW

Historically, the law has categorized creations of the mind into different types of property. Typically, patent law,[62] copyright law,[63] and trademark law[64] have provided the main legal regimes

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[57]*See, e.g.,* 15 U.S.C.A. § 1125(c) (3) (B) (West 2010) (use of a trademark in "[a]ll forms of news reporting and news commentary" is not actionable as dilution).

[58]Charles Atlas, Ltd. v. DC Comics, Inc., 112 F. Supp. 2d 330, 337 (S.D.N.Y. 2000).*See also* 15 U.S.C.A. § 1125(c)(3)(A)(ii) (West 2010) (parody of a trademark is not actionable as dilution).

[59]*Id.* at § 1052(d) (permits federal registration for the same trademark for different goods or services provided no consumer confusion will result).*See generally* David B. Nash, *Orderly Expansion of the International Top-Level Domains: Concurrent Trademark Users Need a Way Out of the Internet Quagmire*, 15 J. MARSHALL J. COMPUTER & INFO. L. 521, 531 (1997) (noting concurrent registration of trademarks is common).

[60]Merck & Co. v. Mediplan Health Consulting, 425 F. Supp. 2d 402, 412 (S.D.N.Y. 2006).*See also* 15 U.S.C.A. § 1125(c)(3)(A)(ii) (West 2010) ("identifying and parodying, criticizing, or commenting upon the famous mark owner or the goods or services of the famous mark owner" is not actionable as dilution).

[61]Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 164 (1995) ("The functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm's reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time"."). In *Qualitex* the Court held that the color of a product could be a valid trademark. *Id.* at 162.

[62]35 U.S.C.A. §§ 1-376 (West 2010).

[63]17 U.S.C.A. §§ 101-1332 (West 2010) (federal copyright law). State common law copyright law also exists. *See, e.g.,*Richlin v. MGM Pictures, Inc., 531 F.3d 962, 971 (9th Cir. 2008) (California codified common law copyright in Ca. Civ. Code § 980 et seq.). However, common law copyright has only limited application today because once a copyrightable work is fixed in any tangible medium of expression federal copyright law preempts any equivalent rights

under which property status is granted to intellectual creations.[65] Each of these bodies of law, at its most fundamental level, is designed to protect different types of products of the mind.

A. Patent Law

The most common type of patent – a utility patent – protects things that are primarily functional as opposed to things that are primarily aesthetic in nature.[66] The patent law states that "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is patent-eligible subject matter.[67] Granting of a patent provides typical property rights. These rights include the right of

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under state common law copyright. 17 U.S.C.A. § 301 (West 2010). The federal copyright law makes clear that it does not preempt state copyright law that applies to works that are not fixed in a tangible medium of expression. *Id.* § 301(b)(1).

[64]*See infra* note 148.

[65] Trade secrets law and right of publicity law can also be viewed as part of the intellectual property law field. However, these areas are beyond the scope of this article. Trade secrets law protects information maintained in confidence which gives an enterprise, such as a business, an economic advantage over competitors who are not aware of the information. *See*UNIFORM TRADE SECRETS ACT §1(4) (1985), available at http://www.law.upenn.edu/bll/archives/ulc/fnact99/1980s/utsa85.htm (last visited June 21, 2010). Most states have adopted the Act. *See*A Few Facts About the Uniform Trade Secrets Act, http://www.nccusl.org/Update/uniformact_factsheets/uniformacts-fs-utsa.asp (last visited June 21, 2010). Additionally, the definition of a trade secret under the Economic Espionage Act, *see* 18 U.S.C.A. §§ 1831-39 (West 2010), which allows the government to bring civil and/or criminal actions for trade secret misappropriation, is analogous to the definition under the Uniform Trade Secrets Act. 18 U.S.C. § 1839(3).*See also*RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995) ("A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others."). Property rights in trade secrets can be protected against third parties who misappropriate a trade secret from a trade secret owner without authorization or via improper means.UNIFORM TRADE SECRETS ACT § 2 (1985) (injunctive relief available for misappropriation of trade secret); *id.* § 3 (damages available for misappropriation of trade secret); *see generallyid.* § 1(1) (definition of "improper means"); *id.*§ 1(2) (definition of "misappropriation"). The right of publicity protects a person against unauthorized commercial exploitation of his or her name, image or likeness. Brown v. ACMI Pop Div., 873 N.E.2d 954, 959(Ill. App. Ct. 2007).*See also*ROGER E. SCHECHTER AND JOHN R. THOMAS,INTELLECTUAL PROPERTY – THE LAW OF COPYRIGHTS, PATENTS AND TRADEMARKS § 11.3, at 264 (2003). The right of publicity is based on either state statutes or state common law. *Id.* at 265.*See, e.g.,*Cal. Civ. Code § 3344 (West 2010) (statutory right of publicity).

[66]*See generally* 35 U.S.C.A. § 101 (West 2010) (defines subject matter eligible for utility patent protection).

[67]*Id.*

the patent owner "to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States."[68]

Design patents[69] provide property rights analogous to the rights granted to utility patent owners.[70] In contrast to utility patents, however, design patents protect the non-functional exterior aesthetic or ornamental appearance of an object rather than its functional aspects.[71]

Section 101 of the patent law lists the categories of subject matter eligible for utility patent protection.[72] The section uses broad language that, if liberally interpreted, provides few if any limits on eligible subject matter. In the seminal Supreme Court decision in *Diamond v. Chakrabarty*,[73] the Court notes that Section 101 differs very little from the original section on patent-eligible subject matter drafted by Thomas Jefferson for the Patent Act of 1793.[74] The Court, quoting from the legislative history of the current patent law, also states that "Congress intended statutory subject matter [under Section 101] to 'include anything under the sun that is made by man.'"[75] Despite this compelling legislative history supporting a broad interpretation of Section 101,[76] both the *Chakrabarty* Court and other courts have recognized the need to

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[68]*Id.* § 154 (a)(1).

[69]*Id.* §§ 171-173. *See also*UNITED STATES PATENT AND TRADEMARK OFFICE, A GUIDE TO FILING A DESIGN PATENT, *available at*http://www.uspto.gov/web/offices/com/iip/pdf/brochure_05.pdf (last visited June 21, 2010) (providing information on filing a design patent).

[70]*Id.* § 171.

[71] Design patents can be obtained for "any new, original and ornamental design for an article of manufacture." *Id.* "The design for an article consists of the visual characteristics embodied in or applied to an article." U.S. PATENT & TRADEMARK OFFICE MANUAL OF PATENT EXAMINING PROCEDURE § 1502 (8th ed. 2001 rev. July 2008), *available at* http://www.uspto.gov/web/offices/pac/mpep/documents/1500_1502.htm#sect1502 (last visited Jan. 29, 2010). A design patent can "relate to the configuration or shape of an article, to the surface ornamentation applied to an article, or to the combination of configuration and surface ornamentation." *Id.* For an example of a design patent see U.S. Design Patent No. D383,280, *available at* http://www.freepatentsonline.com/D383280.pdf (last visited June 21, 2010),which covers the exterior appearance of a food vending cart. "It is well settled that non-functionality is an element of design patentability" even though this is not an express requirement in the patent law statute. GRAEME B. DINWOODIE& MARK D. JANIS, TRADE DRESS AND DESIGN LAW 319-20 (2010). A purpose of design patents is to promote the decorative arts. Avia Group Int'l, Inc. v. L.A. Gear California, Inc., 853 F.2d 1557, 1563 (Fed. Cir. 1988).

[72]*See* discussion *supra* note 65.

[73]447 U.S. 303 (1980).

[74]*Id.* at 308-09.

[75]*Id.* (quoting S. Rep. No. 82-1979, at 5 (1952)).

[76]*Id.* at 308 ("The relevant legislative history . . . supports a broad construction [of Section 101]").

limit the scope of patent-eligible subject matter in order to prevent undermining the policies upon which patent law is based.[77]

Historically, judicial decisions have stated that printed matter,[78] methods of doing business,[79] naturally occurring things,[80] mental processes,[81] scientific principles,[82] mathematical algorithms,[83] laws of nature,[84] physical phenomena,[85] and abstract

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[77] "[L]aws of nature, physical phenomena, and abstract ideas" are not patent-eligible subject matter. *Id.* at 309; neither a newly discovered mineral or a newly discovered wild plant is patent--eligible subject matter. *Id.*; a mathematical relationship such as $E=MC^2$ is not patent-eligible subject matter. *Id.See also*Bilski v. Kappos, 130 S. Ct. 3218, 3221 (2010) (citing and agreeing with *Chakrabarty* that "laws of nature, physical phenomena, and abstract ideas" are not patent-eligible subject matter).

[78]*See* U.S. PATENT & TRADEMARK OFFICE MANUAL OF PATENT EXAMINING PROCEDURE § 706.03(a) (8th ed. 2001 rev. July 2008), *available at* http://www.uspto.gov/web/offices/pac/mpep/documents/0700_706_03_a.htm#sect706.03a (last visited Dec. 14, 2009) (citing case law supporting the proposition that "a mere arrangement of printed matter, though seemingly a 'manufacture,' is rejected as not being within the statutory classes."). *See also*DONALD CHISUM,CHISUM ON PATENTS § 1.02 [4], at 97 (2009) (printed matter by itself not within statutory subject matter under section 101); Robert Greene Sterne & Lawrence B. Bugaisky, *Expansion of Statutory Subject Matter Under the 1952 Patent Act*, 37 AKRON L. REV. 217, 223 (2004) ("Printed matter has historically not been considered statutory subject matter" but later case law has held it may be patent-eligible subject matter when combined or associated with a physical structure.).

[79] In *State St Bank & Trust Co. v. Signature Fin Group*, the court noted the existence of the judicially created rule that business methods are not patent-eligible subject matter under section 101. 149 F.3d 1368, 1375 (Fed. Cir. 1998). The court then expressly rejected the rule as an incorrect limitation on patent-eligible subject matter. *Id.* Subsequently, the Supreme Court in *Bilski*held that a categorical rule that business methods are not patent-eligible subject matter under section 101 is incorrect. Bilski, 130 S. Ct. at 3222.

[80]*See* U.S. PATENT & TRADEMARK OFFICE MANUAL OF PATENT EXAMINING PROCEDURE § 706.03(a) (8th ed. 2001 rev. July 2008), *available at* http://www.uspto.gov/web/offices/pac/mpep/documents/0700_706_03_a.htm#sect706.03a (last visited Dec. 14, 2009)).

[81]Gottschalk v. Benson, 409 U.S. 63, 67 (1972); In re De Castelet, 562 F.2d 1236, 1241 (C.C.P.A. 1977) (mental steps or mental processes not patent-eligible); Shen Wei (USA) Inc. v. Kimberly-Clark Corp., No. 02-C450, 2002 U.S. Dist. LEXIS 16561, at *29-30 (N.D. Ill. Aug. 27, 2002) ("[P]urelymental steps . . . however meritorious, do not constitute patentable subject matter."); *See also*In re Yuan, 188 F.2d 377, 329 (C.C.P.A. 1951) (holding that purely mental acts are not patent-eligible subject matter).

[82]*Id.*

[83] State St. Bank & Trust Co. v. Signature Fin. Group, 149 F.3d 1368, 1373 (Fed. Cir. 1998) (mathematical algorithms that are merely abstract ideas are not patent-eligible subject matter). *See also* Robert Greene Sterne & Lawrence B. Bugaisky, *The Expansion of Statutory Subject Matter Under the 1952 Patent Act*, 37 AKRON L. REV. 217, 221 (2004) (algorithm standing alone not patent-eligible subject matter but subsequent case law supports conclusion that algorithm is patent-eligible if it has a practical application or it is associated with a tangible medium).

ideas[86] were not patent-eligible subject matter even if the invention or discovery literally fell within one of the statutory categories of eligible subject matter in section 101.[87]

Recent judicial decisions and legislative action have narrowed or eliminated many of these limitations on patent-eligible subject matter.[88] In a landmark 1998 decision, the Court of Appeals for the Federal Circuit expressly negated the ban on business methods being patent-eligible subject matter.[89] Subsequent legislative action affirmed this judicial decision.[90]

All of the limitations on patent-eligible subject matter can be viewed as indicia or short hand references aimed at drawing a line on the inventive continuum. At one end of the continuum are completed inventions that have specific commercial applications. Such inventions are clearly patent-eligible. However, the law has never required an invention to be actually constructed[91] or for it to have commercial viability[92] to qualify for patent protection. A written description in a patent of how to make and use the invention is sufficient, provided a person having ordinary skill in the relevant technology area could actually build and use the invention with minimal experimentation after reading the patent.[93] Nevertheless, if it is unknown how to actually build and/or use the invention, it is not patent-eligible. Moreover, some discoveries are

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[84]Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).
[85]*Id.*
[86]*Id.*
[87]*See*Bilski v. Kappos, 130 S. Ct. 3218, 3233-35 (2010) (noting that the patent-ineligibility of laws of nature, physical phenomena and abstract ideas is an exception to the broad scope patent-eligible subject matter defined by section 101).
[88]*See generally* Robert Greene Sterne & Lawrence B. Bugaisky, *The Expansion of Statutory Subject Matter Under the 1952 Patent Act*, 37 AKRON L. REV. 217, 217-21 (2004) (discussing the expansion of patent-eligible subject matter over the past fifty years).
[89] State St. Bank & Trust Co. v. Signature Fin. Group, 149 F.3d 1368 (Fed. Cir. 1998).
[90] In 1999, a year after the *State St. Bank & Trust Co.* decision, the patent law was amended to include a new prior user defense which could be asserted against an action for patent infringement. 35 U.S.C.A. § 273 (2010). The defense only applies to "a method of doing or conducting business." *Id.* at § §273 (a) (3).*See*Bilski v. *Kappos,* 130 S. Ct. 3218, 3244-46 (2010) (affirming that section 273 supports the court's conclusion that business methods are not automatically excluded from the domain of patent-eligible subject matter).
[91] Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 61 (1998).
[92]*Id.*; *see also* Johnson & Johnson Vision Care, Inc. v. CIBA Vision Corp., 648 F. Supp. 2d 1294, 1345 (M.D. Fla. 2009).
[93]Martek Biosciences Corp. v. Nutrinova, Inc., 579 F.3d 1363, 1378 (Fed. Cir. 2009).

simply too valuable to be granted patent protection.[94] For example, newly discovered mathematical relationships may revolutionize certain technology areas or at a minimum, such relationships may be contributions to basic science that can form the building blocks of future advances. Patent law jurisprudence has often struggled with where to draw the line on the inventive continuum between patent-eligible inventions and inventions that are not patent-eligible subject matter. This requires, as previously discussed, providing inventors the minimum amount of protection necessary to incentivize such activities.

Patents granted on methods or processes have been particularly problematic because many basic inventive discoveries can be described and claimed as a process. For example, one of the revolutionary discoveries by Albert Einstein was the relationship between energy and mass,[95] which is described mathematically as:

$$\text{Energy} = \text{Mass} \times (\text{Speed of light})^2$$

Likewise, the relationship between current, voltage, and resistance in a DC electric circuit, known as Ohm's law,[96] can be described mathematically as:

$$\text{Voltage} = \text{Resistance} \times \text{Current}$$

Both of these mathematical relationships or equations represent significant advances of great value. And, each could be described and claimed as a process. For example, a claim covering Ohm's law could be written as follows:

> A method of determining voltage in a DC electric circuit, comprising the steps of:
> (a) determining resistance in said circuit;

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[94] *See generally* JANICE MUELLER, PATENT LAW 285(3d ed. 2009) (Fundamental building blocks of science and technology, such as the discovery of scientific relationships and laws of nature, may be very valuable but they are not patent-eligible as a matter of public policy. *Id.*); Morton v. New York Eye Infirmary, 5 Blatchford 116, 17 Fed. Cases 879 (No. 9,865) (N.Y. Cir. Ct. 1862) (Court noted that the discovery that ether could be used as an anesthetic during surgical operations was not patentable even though it represented one of the greatest discoveries of the time whose value was too great to be quantified).

[95] For a basic description of this equation see NOVA, Einstein's Big Idea, The Legacy of $E=mc^2$, PBS, http://www.pbs.org/wgbh/nova/einstein/legacy.html (last visited June 21, 2010). In *Diamond v. Chakrabarty,* 447 U.S. 303, 309 (1980),the Supreme Court said this equation would not be patent-eligible subject matter.

[96] For a basic description of Ohm's Law see Ohm's Law, National Aeronautics and Space Administration, http://www.grc.nasa.gov/WWW/K-12/airplane/ohms.html (last visited June 21, 2010).

> (b) determining current in said circuit;
> (c) multiplying said resistance by said current, whereby the resulting value is said voltage in said circuit.

Although the above claim language purports to cover a patent-eligible method under section 101, the above claim should be construed as not covering patent-eligible subject matter. This claim, if allowed, would grant the patentee ownership of a basic scientific relationship that is too important to be owned by anyone.[97] Such ownership would have the potential to impede future scientific advances that require using Ohm's law.

Nevertheless, patents have been issued on similar methods. For example, U.S. Patent number 4,940,658,[98] issued in 1990, covers a method of detecting certain vitamin deficiencies in human blood. The invention is based on the discovery that an elevated level of a specific amino acid in a person's blood correlates with a vitamin deficiency. The invention, which allowed creation of a diagnostic test, is an important advance because proper diagnosis of the deficiency allows for treatment of medical conditions related to certain vitamin deficiencies. Although the patent contains thirty-four claims, claim 13 in particular stands out as problematic:

> 13. A method for detecting a deficiency of cobalamin [vitamin B-12] or folate [naturally occurring vitamin] in warm-blooded animals comprising the steps of: assaying [analyzing] a body fluid for an elevated level of total homocysteine [amino acid]; and correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate.

Claim 13 protects much more than a diagnostic medical test. It covers the naturally occurring correlation between certain vitamins and an amino acid. This is an example of an important basic scientific finding that no one should own.[99] Denial of this

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[97] *See also* Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124, 126-27 (2006) (Breyer, J., Stevens, J., & Souter, J., dissenting); *See generally* Gottschalk v. Benson, 409 U.S. 63, 67 (1972) ("Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.").

[98] U.S. Patent No. 4,940,658 (filed Nov. 20, 1986).

[99] This claim was the basis of a patent infringement action. The trial found the claim valid and infringed. Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings, 370 F.3d 1354, 1358-59 (Fed. Cir. 2004). This was affirmed on appeal. *Id.* at 1358. The Supreme Court agreed to hear this case on appeal. Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 546 U.S. 975 (2005). However, this

claim would not leave the inventor without protection, however. The remaining thirty-three claims in the patent provide protection for a diagnostic test based on the natural correlation in contrast to claim 13, above, which protects just the underlying naturally occurring correlation itself.[100] And, this diagnostic test – unlike the naturally occurring correlation – is the type of subject matter that patent law is designed to protect.

Essentially, if a patent claim effectively preempts or monopolizes all use of a basic scientific principle or law, it should be deemed not patent-eligible subject matter. This is the approach taken by the Court of Appeals for the Federal Circuit[101] and the Supreme Court with regard to method claims.[102] Likewise, if an invention or discovery is only a building block of basic science and

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decision was subsequently reversed. Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124 (2006) ("Writ of certiorari dismissed as improvidently granted." *Id.* at 125). Nevertheless, three Supreme Court justices in a dissent accompanying the dismissal argued that claim 13 covered natural phenomena and therefore it was not directed to patent-eligible subject matter under section 101. *Id.* at 135–38 (Breyer, J., Stevens, J., & Souter, J., dissenting).

[100]*See generally id.* at 128–29 (patent claims not at issue cover diagnostic tests relying on the natural phenomena).

[101] In re Bilski, 545 F.3d 943, 957 (Fed. Cir. 2008) (en banc), *aff'd*, Bilski v. Kappos, 130 S. Ct. 3218 (U.S. 2010). Although the federal circuit decision in *Bilski* only applied to method claims it should equally apply to machine or other product claims because the above method claim for Ohm's Law could easily be rewritten as a machine claim which would effectively preempt all use of the mathematical relationship. *See generally* State St. Bank & Trust Co. v. Signature Fin. Group, 149 F.3d 1368 (Fed. Cir. 1998), where the following claim which essentially covers a series of mathematical operations was held to cover patent-eligible subject matter under section 101:

> 1. A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:
> (a) computer processor means for processing data;
> (b) storage means for storing data on a storage medium;
> (c) first means for initializing the storage medium;
> (d) second means for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, assets and for allocating the percentage share that each fund holds in the portfolio;
> (e) third means for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;
> (f) fourth means for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and
> (g) fifth means for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.
>
> *Id.* at 1371-72

[102]Bilski v. Kappos, 130 S. Ct. 3218, 3231 (U.S. 2010).

requires more creative activity for it to become a useful product, it should be ineligible for patent protection.[103]

Other categories of patent-eligible subject matter should be deemed ineligible for patent protection in light of the underlying policies of patent law. For example, protecting surgical methods[104] and financial services products[105] is generally inconsistent with the goals of patent law. Significant innovations in these areas are likely to occur without regard to whether patent protection is available.[106] However, in light of the broad judicial interpretation

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[103]*See*Parker v. Flook, 437 U.S. 584, 591 (1978); Gottschalk v. Benson, 409 U.S. 63, 67 (1972). Granting patent protection for basic scientific discoveries has improperly occurred in the biotechnology area. Patent law requires that patented inventions must be useful. 35 U.S.C.A § 101 (West 2010). The useful requirement (commonly called the utility requirement) is a low standard but it clearly is not satisfied by basic science discoveries whose only value is as a building block or basis for more research. Nevertheless, some basic discoveries in the biotechnology field have been held to satisfy the utility requirement based on the argument that the scientific discovery is actually a "research tool" when in reality it is really just a basic scientific discovery that has no value other than its use in furthering research. *See also* Peter Yun-hyoung Lee, *Inverting the Logic of Scientific Discovery: Applying Common Law Patentable Subject Matter Doctrine to Constrain Patents on Biotechnology Research Tools*, 19 HARV. J.L. & TECH. 79 (2005); CRAIG A. NARD,THE LAW OF PATENTS 181 – 82 (2008) (discussing different viewpoints on whether biotechnology research tools should satisfy the utility requirement). *See generally*Marlan D. Walker, *The Patent Research Tool Problem After Merck v. Integra*, 14 TEX. INTELL. PROP. L.J. 1, 4-6 (2005) (discussing patents on research tools in the pharmaceutical and biotechnology industries). At least one recent judicial decision has rejected the research tool argument when it found patent claims in a pending application that covered a genetic sequence called an expressed sequence tag did not satisfy the utility requirement in section 101. In re Fisher, 421 F.3d 1365 (Fed.Cir. 2005).

[104] Congress has indicated ambivalence with regard to protecting surgical methods. Current law allows such methods to be patented but the remedies for infringement of a patent covering such methods are expressly limited. 35 U.S.C.A. § 287(c) (West 2010). This is also a controversial issue internationally. The TRIPS agreement which regulates intellectual property law protection by members of the World Trade Organization specifically allows member nations to decide individually whether to allow patent protection for surgical methods. Agreement on Trade Related Aspects of Intellectual Property Rights art. 27, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter TRIPS].

[105]*See generally* U.S. Patent No. 7,376,607 (filed Jul. 1, 2005) (issued May 20, 2008) (patent for systems and methods of maintaining a bond); U.S. Patent No. 7,246,094 (filed Jul. 31, 2001) (issued Jul. 17, 2007) (patent for method of structuring municipal bond)); U.S. Patent No. 5,193,056 (filed Mar. 11, 1991) (issued Mar. 9, 1993) (patent for software for valuing mutual funds).

[106] It has been argued that the development of new business methods will likewise occur without regard to whether such methods are protectable via patent law. Bilski v. Kappos, 130 S. Ct. 3218, 3254-56 (U.S. 2010) (J. Stevens, J., concurring).

of what is patent-eligible subject matter, such express exclusions would require legislative action.[107]

Design patents have also undergone an expansion of protectable subject matter. Design patents, unlike utility patents, are limited to the "ornamental design for an article of manufacture."[108] Nevertheless, design patent protection has been extended to computer generated icons that appear on a computer screen[109] as well as to the appearance of computer screen interfaces.[110] This is a significant subject matter expansion that essentially ignores the "article of manufacture" limitation in the statute.[111]

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[107] Nevertheless, some recent judicial action by the Supreme Court may indirectly limit patent-eligible subject matter by making it harder to obtain a patent and/or by reducing the economic value of a patent. *See, e.g.,* Quanta Computer, Inc. v. LG Elecs., Inc., 553 U.S. 617 (2008) (patent exhaustion doctrine strengthened which may reduce economic value of some patents by making it harder to place resale and use restrictions on patented products that are sold); KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398 (2007) (generally made the nonobviousness requirement for patenting an invention, pursuant to 35 U.S.C. § 103, a higher hurdle); eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006) (may reduce the economic value of some patents because a patent owner is no longer entitled to a permanent injunction against future infringement which means a defacto compulsory license will enable ongoing infringement of some patents in return for monetary payment). Additionally, recent decisions by the Court of Appeals for the Federal Circuit may signal that the court is taking a more restrictive view of what qualifies as patent-eligible subject matter. *See, e.g.,* In re Comiskey, 499 F.3d 1365 (Fed. Cir. 2007) (court found patent claims on a method of arbitration were not patent-eligible subject matter); In re Nuijten, 500 F.3d 1346, 1352 (Fed. Cir. 2007) ("transitory electrical and electromagnetic signals" are not patent-eligible subject matter). *See generally* Andrew Beckerman-Rodau, *The Aftermath of eBay v. MercExchange, 126 S. Ct. 1837 (2006): A Review of Subsequent Judicial Decisions*, 89 J. PAT. & TRADEMARK OFF. SOC'Y631 (2007) (examining the effect of *eBay* on subsequent lower court decisions); Andrew Beckerman-Rodau, *The Supreme Court Engages in Judicial Activism in Interpreting the Patent Law in eBay, Inc. v. MercExchange*, L.L.C., 10 TUL. J. TECH. &INTELL. PROP. 165 (2007) (examining negative implications of *eBay* decision).

[108] 35 U.S.C.A. § 171 (West 2010).

[109] *See infra* notes 215 & 216.

[110] *See infra* note 214.

[111] An "'ornamental design for an article of manufacture' . . . [encompasses] at least three kinds of designs: 1) a design for an ornament, impression, print or picture to be applied to an article of manufacture (surface ornamentation); 2) a design for the shape or configuration of an article of manufacture; and 3) a combination of the first two categories." Ex parte Tayama, No. 92-0624, 1992 WL 336792 (B.P.A.I. Apr. 2, 1992). Initially, the U.S. Patent and Trademark Office held that computer icons were not subject matter eligible for design patent protection in light of the "article of manufacture" limitation. *See, e.g., id.* (held icon merely a picture which is not within subject matter of design patent law). However, the Office eventually reversed its view and considered the computer screen to be an article of manufacture upon which the icon appeared or was applied to. *SeeGuidelines for Examination of Design Patent Applications*

B. Copyright Law

The core focus of copyright is the extension of property rights to artistic and literary works[112] including books, music, and works of art.[113] Once a work of authorship is protected by copyright, the owner of the work is granted typical property rights in the work that entitle her to control use and distribution of the work.[114] However, the copyright law specifically states that it does not protect "any idea, procedure, process, system, method of operation, concept, principle, or discovery."[115] Therefore, ideas and information, as well as functional aspects of a copyrighted work, are not protected via copyright law.

1. Subject Matter Expansion

Copyright law originally protected printed material.[116] As the subject matter of copyright expanded, it was historically oriented–in contrast to patent law–toward protecting primarily aesthetic works rather than primarily functional works.[117] Additionally, copyright in accordance with its Constitutional authorization can extend protection to the "writings" of authors.[118] The initial copyright law protected only a limited number or type

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For Computer-Generated Icons, MANUAL OF PATENT EXAMINING PROCEDURE § 1504.01(a) (available at http://www.uspto.gov/web/offices/pac/mpep/documents/1500_1504_01_a.htm) (last visited July 22, 2010).

[112]*See generally infra* note 117.

[113]17 U.S.C.A. §102(a) (West 2010).

[114]*See id.* §106 (1) (right to control making copies); *id.* §106 (2) (right to control modifications); *id.* §106 (3) (right to control distribution); *id.* §106 (4) & (6) (right to control public performance of certain works); *id.* §106 (5) (right to control public display of certain works); *id.* §106(6) (right to control public performance of sound recordings via digital audio transmission).

[115]*Id.* §102 (b).

[116]*See*PAUL GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK, AND RELATED STATE DOCTRINES: CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY 556 (rev. 4th ed. 1999) ("Copyright law began in England with the printing press").

[117] Dennis S. Karjala, *A Coherent Theory for the Copyright Protection of Computer Software and Recent Judicial Interpretations*, 66 U. CIN. L. REV. 53, 56 (1997) ("The fundamental difference between traditional patent and copyright subject matter is simple: patent protects creative but functional invention; copyright protects creative but nonfunctional authorship"). *See generally* Orit FischmanAfori, *Reconceptualizing Property in Designs*, 25CARDOZO ARTS &ENT. L.J. 1105 (discussing the tension between artistic or aesthetic designs and industrial designs); Contico Int'l, Inc. v. Rubbermaid Commercial Products, Inc., 665 F.2d 820, 825 (8th Cir. 1981) ("design patents are concerned with the industrial arts, not the fine arts").

[118]Eldred v. Ashcroft, 537 U.S. 186, 192-93 (2003).

of writings.[119] Today, however, the scope or definition of writing has evolved such that it incorporates a large category of subject matter that is not limited to primarily aesthetic works.[120] The result is that today computer software,[121] building designs,[122] three dimensional commercial products such as jewelry,[123] directories,[124] compilations of facts,[125] financial reports,[126] photographs,[127] sound recordings,[128] and the bar examination,[129] among other things,[130] are subject matter within the domain of copyright law.

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[119] The Copyright Act of 1790 only provided protection for maps, charts, and books. Mazer v. Stein, 347 U.S. 201, 208 (1954).

[120] "The history of copyright law has been one of gradual expansion in the types of works accorded protection . . . ." H.R. Rep. No. 94-1476, at 5 (1976). Subsequent statutory enactments following the first copyright act expanded the subject matter covered by copyright to include engravings, etchings, musical compositions, dramatic compositions, photographs, negatives, and three-dimensional statues. Mazer, 347 U.S. at 208-11. The current copyright act states that "works of authorship [protected by copyright] include the following categories: (1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works." 17 U.S.C.A. § 102 (a) (West 2010). These categories are expressly defined as being only illustrative. *Id.* § 101 ("The terms 'including' and 'such as' are illustrative and not limitative.)

[121]Central Point Software v. Nugent, 903 F. Supp. 1057, 1060 (E.D. Tex. 1995) ("That software programs are copyrightable material is beyond dispute").

[122] The copyright law specifically covers architectural works (17 U.S.C.A. § 102(a)(8) (West 2010)) which are defined as including a building design which is embodied in a building. *Id.* § 101) (see definition of "architectural work").

[123]Paul Morelli Design, Inc. v. Tiffany & Co., 200 F. Supp. 2d 482, 484 (E.D. Pa. 2002) ("Jewelry is included in the category of works which may be copyrighted").

[124]BellSouth Adver. &Publ'g Corp. v. Donnelley Info.Publ'g, Inc., 999 F.2d 1436 (11th Cir. 1993) (case involves issue of whether copyright in a yellow pages phone directory infringed).

[125]17 U.S.C.A. § 103 (a) (West 2010).FeistPubl'ns, Inc. v. Rural Telephone Service Co., Inc., 499 U.S. 340, 347-48 (1991) (original arrangement of facts protectable via copyright law).

[126]*See* H. C. Wainwright & Co. v. Wall Street Transcript Corp., 418 F. Supp. 620 (S.D.N.Y. 1976), *aff'd*, 558 F.2d 91 (2d Cir. 1977), *cert. denied*, 434 US 1014 (1978).

[127]Ets-Hokin v. Skyy Spirits, Inc., 225 F.3d 1068, 1075 (9thCir. 2000) ("photograph of an object is copyrightable").

[128] 17 U.S.C.A. § 102(a)(7) (West 2010). *See generally id.* § 101 (definition of sound recordings includes works which incorporate "a series of musical, spoken, or other sounds").

[129] National Conference of Bar Examiners v. Multistate Legal Studies, Inc., 495 F. Supp. 34, 36 (N.D. Ill. 1980), *aff'd*, 692 F.2d 478 (7th Cir. 1982), *cert. den.*, 464 U.S. 814 (1983) (bar examinations are "writings" covered by copyright law).

[130] The Copyright Office recognizes textbooks, reference works, directories, catalogs, advertising copy and compilations of information as nondramatic

Mass-produced commercial products[131] such as computer software, which are primarily functional or useful, exemplify subject matter embraced by copyright law that should be more appropriately limited to the domain of patent-eligible subject matter.[132] Software may be described or written in a programming language or via other symbolic representations but it is not a literary work analogous to a novel, biography, or a poem despite the contrary view taken by Congress and judicial decisions.[133] Computer programs or software are merely instructions that enable a computer to operate.[134] Software is an integral part of a computer that has limited value other than to enable computer hardware to operate.

Nevertheless, the beginning of a disturbing trend towards extending specialized copyright protection to specific useful products or articles may be in its infancy. The Copyright law

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literary works that are subject matter covered by copyright law. Additionally, the Copyright Office recognizes maps, globes, charts, technical drawings, diagrams, models, pictorial or graphic labels and advertisements as visual works of art that are subject matter covered by copyright law. 1-2 MELVILLE B. NIMMER& DAVID NIMMER,NIMMER ON COPYRIGHT § 2.03 [F] (2009).

[131]*See generally* Robert C. Denicola, *Applied Art and Industrial Design: A Suggested Approach to Copyright in Useful Articles*, 67 MINN. L. REV. 707 (1983) (noting the difficulty and uncertainty raised by protecting certain aspects of useful articles under copyright law).

[132]*See generally* Dennis S. Karjala, *A Coherent Theory for the Copyright Protection of Computer Software and Recent Judicial Interpretations*, 66 U. CIN. L. REV. 53 (1997) (suggesting more appropriate to protect software under patent law rather than copyright law). I argued in a prior article that software should be protected by copyright law. Andrew Beckerman-Rodau, *Protecting Computer Software: After Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983), Does Copyright Provide the Best Protection?*, 57 TEMP. L. Q. 527 (1984). However, after years of reflection I believe my position in that article is incorrect. *See also* Hart v. Dan Chase Taxidermy Supply Co., Inc., 86 F.3d 320, 321 (2d Cir. 1996) (useful things not protected by copyright law).

[133] Early judicial decisions reached contrary views on whether copyright law protected software. Apple Computer, Inc. v. Formula International, Inc., 562 F. Supp. 775, 779 (C.D. CA. 1983). However, 1980 amendments to the Copyright Act made it clear that software was subject to copyright protection. *Id.* at 779-80. The current definition of "literary work" in the copyright law would appear to clearly cover software. It currently states: "'Literary works' are works . . . expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied." 17 U.S.C. § 101 (2006).

[134]Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1229 (3d Cir. 1986); *see also* http://www.yourdictionary.com/computer/software (last visited Jan. 14, 2010) (software controls how a computer processes data). The Copyright law states that "[a] 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result. 17 U.S.C. § 101 (2006).

currently contains specialized protection for boat hulls or decks.[135] Pending legislation would amend this section of the Copyright law to provide a three year term of protection for certain fashion designs.[136] Specifically, the legislation would protect the original and creative appearance of an article of men's, women's, or children's clothing, including undergarments, outerwear, gloves, footwear, and headgear; handbags, purses, wallets, duffel bags, suitcases, tote bags, and belts; and eyeglass frames.[137] Such a product or industry-specific approach, if expanded, could result in an endless legislative process that would continually enact new laws to protect new products or industries. The resulting morass of law would create ever expanding complexity and inefficiency.[138] It might also cause overprotection of some intellectual property in slack economic times under the guise of protecting the economic interests of the U.S.[139]

2. *Increasing Duration of the Term of Protection*

The term of copyright protection was originally fourteen years, which could be renewed for a second fourteen year term provided the author was still alive at the end of the first term.[140] However, the term of protection has continually expanded.[141] Today, protection typically lasts for the author's life plus seventy

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[135] *Id.* § 1301. Boat hulls and decks are protected against copying (*see id.* § 1309) for a ten year period. *Id.* § 1305(a).

[136] Senate Bill S. 3728, 111th Cong. §2 (2010) introduced Aug. 5, 2010 would provide a three year term of protection for fashion designs. *See* Nathan Pollard, *Sen. Schumer Introduces Fashion Design Protection Legislation, Similar to House Bill*, 80 PAT., TRADEMARK & COPYRIGHT J. 498 (Aug. 13, 2010) (overview of bill).

[137] Text of Senate Bill S. 3728, 111th Cong. (2010) (introduced Aug. 5, 2010), http://thomas.loc.gov/cgi-bin/query/z?c111:S.3728: (last visited Aug. 18, 2010).

[138] For example, prior to the enactment of U.C.C. Article 9 different bodies of law regulated security interests in different things. One goal of enactment of Article 9 was to create a uniform body of law regulating security interests in all property other than real estate. *See generally* James White and Robert Summers, UNIFORM COMMERCIAL CODE § 21-1 714-16 (4th ed. 1995).

[139] *See supra* note 136 (Senator Orin Hatch stated his support for legislation protecting fashion design, in part, on protecting U.S. jobs).

[140] Eldred v. Ashcroft, 537 U.S. 186, 194 (2003).

[141] Original renewable 14-year term increased to 42 years in 1831 which comprised of an initial 28-year term which could be renewed for an additional 14 years. In 1909, the term was increased to 56 years which comprised an initial 28 year term which could be renewed for an additional 28 years. The 1976 Copyright Act altered the term starting time. Instead of starting at the date of publication, the term began upon the date of creation of the relevant work. Additionally, the 1976 Act extended the term from the date of creation until 50 years after the author's death. *Id.* at 194-95.

years after his or her death.[142] Additionally, the term of copyright protection has been extended on more than one occasion subsequent to the initial creation of creative works protected by copyright.[143] Such an extension amounts to an unsolicited gift of property rights that rewards an author without obtaining any additional contribution by the author for the benefit of the public.[144]

Finally, the long term afforded under current copyright law far exceeds the economic incentive necessary to spur significant creative activities. Such long terms largely reflect a focus on protecting the property rights of the copyright owner without regard to the ultimate underlying goal of copyright, which is to enable the public to gain free and unhindered access to creative endeavors.[145]

C. Trademark Law

Trademark law[146] focuses on the relationship between symbols, words, and short phrases that are associated with or identify products or services sold in the marketplace.[147] Over time,

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[142]17 U.S.C. § 302(a) (2006). For anonymous works, pseudonymous works, and works made for hire, the term is the shorter of 95 years from the date of publication or 120 years from the date of creation. *Id.* § 302(c) (2006).

[143]*Eldred* at 194.

[144]*See generally* Arlen W. Langvardt& Kyle T. Langvardt, *Unwise or Unconstitutional?: The Copyright Term Extension Act, the Eldred Decision, and the Freezing of the Public Domain for Private Benefit*, 5 MINN. INTELL. PROP. REV. 193 (2004) (criticizing the decision in the *Eldred* case where the Supreme Court upheld the constitutionality of a 20-year term extension for preexisting copyrights under the 1998 Copyright Term Extension Act. *Eldred* at 193-94); *Id.* at 222 (Justice Stevens, dissenting) (arguing that retroactively extending the term of copyright is unconstitutional).

[145]*See generally Id.* at 242 (Breyer, J., dissenting) (arguing a long copyright term may actually undermine the underlying policies of copyright law).

[146] Trademark law comprises three distinct but coexisting bodies of law: Federal statutory law, state common law and state statutory law. *See generally* Paul Goldstein & R. Anthony Reese, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES 167-70 (6th ed. 2008). Federal trademark law, the Lanham Act (15 U.S.C. §§ 1051-1141n), is based on the Commerce Clause of the Constitution. Buti v. ImpressaPerosa S.R.L., 139 F.3d 98, 102 (2d Cir. 1998).*See, e.g.*, Ohio Rev. Code §§ 1329.54 – 1329.67 (2009) (state trademark statute).

[147]*See generally*DEBORAH E. BOUCHOUX,PROTECTING YOUR COMPANY'S INTELLECTUAL PROPERTY – A PRACTICAL GUIDE TO TRADEMARKS, COPYRIGHTS, PATENTS & TRADE SECRETS 15 (2001); Mishawaka Rubber & Woolen Mfg. Co. v. S.S. Kresge Co., 316 U.S. 203, 205 (1942); RESTATEMENT (THIRD) OF UNFAIR COMPETITION §9 (1995). Trademarks used to sell services are typically called "service marks" and are generally protected to the same extent as trademarks used to sell goods. 15 U.S.C. § 1053 (2006); Bihari v. Gross, 119 F. Supp. 2d 309, 317 n.11 (S.D.N.Y. 2000).

consumers in the relevant marketplace associate a particular symbol, word, or phrase with a product or service. This mental association, which is protected by trademark law,[148] is a protectable property interest.[149] It facilitates commercial transactions by reducing the potential for consumer confusion and by protecting the good will[150] an enterprise creates.[151] The mental association becomes a proxy for a specific level of quality or good will that a consumer can rely on to differentiate competing goods and services.[152] Moreover, this enables a trademark owner to monetize this quality indicator or good will by launching new products under an existing trademark and by licensing third parties to place the trademark on goods made by others.[153]

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[148] The term "trademark" refers to the word, symbol, phrase or other device which triggers the mental association. *See* 15 U.S.C. § 1127 (2006) (definition of trademark). Trademarks which create a mental association with a service are called "service marks." *See id.* (definition of service mark). *See generally* Mister Donut of America, Inc. v. Mr. Donut, Inc., 418 F.2d 838 (9th Cir. 1969) ("law is well settled that there are no rights in a trademark alone and that no rights can be transferred apart from the business with which the mark has been associated" *Id.* at 842).

[149]College Sav. Bank v. Fla. Prepaid Postsecondary Ed. Expense Bd., 527 U.S. 666, 673 (1999) (trademarks are property); Hamilton-Brown Shoe Co. v. Wolf Bros. & Co., 240 U.S. 251, 259 (1915) (trademarks recognized as property).*See also*New Kids on the Block v. News America Pub., Inc., 971 F.2d 302 (9th Cir. 1992) ("trademark is a limited property right in a particular word, phrase or symbol" *Id.* at 306).

[150]PRINCIPLES OF INTELLECTUAL PROPERTY LAW, *supra* note 15 at ¶ 7.01, at 162 . "Good will" is a business term. Avery v. Lyons, 183 Kan. 611 (Kan. Sup. Ct. 1958) ("Good will means an established business at a given place with the patronage that attaches to the name and the location. It is the probability that old customers will resort to the old place." *Id.* at 621).

[151]Lorillard Tobacco Co. v. Amouri's Grand Foods, Inc., 453 F.3d 377 (6th Cir. 2006) ("two fundamental purposes of trademark law: preventing consumer confusion and deception in the marketplace and protecting the trademark holder's property interest in the mark" *Id.* at 383).

[152]*See generally* Blue Bell, Inc. v. Farah Mfg. Co., 508 F.2d 1260 (5th Cir. 1975) ("the primary, perhaps singular purpose of a trademark is to provide a means for a consumer to separate or distinguish one manufacturer's goods from those of another." *Id.* at 1265).

[153]*See, e.g.,* Ryan Buxton, *University Trademark Licensing Brings Big Bucks*, THE DAILY REVEILLE (Oct. 14, 2009), http://www.lsureveille.com/news/university-trademark-licensing-brings-big-bucks-1.1996649) (last visited June 21, 2010) (trademark licensing generates millions of dollars of revenue for Louisiana State University); Kira L. Schlechter, *NFL logos coming to state lottery games*, THE PATRIOT-NEWS (May 27, 2009), http://www.pennlive.com/midstate/index.ssf/2009/05/nfl_logos_coming_to_lottery_ga.html. (last visited June 21, 2010) (NFL has given individual football teams permission to earn revenue by licensing team trademarks to state lotteries for use on lottery tickets); *Longhorns hook record merchandising revenue*, ASSOCIATED PRESS (Aug. 26, 2006), http://sports.espn.go.com/ncaa/news/story?id=2562097.) (last visited June 21,

A trademark owner is entitled to control use of a trademark in the commercial context against unauthorized third party use that "is likely to cause confusion, or to cause mistake, or to deceive."[154] Violation of the trademark owner's rights can result in monetary damages or injunctive relief.[155] Additionally, if the trademark becomes widely recognized by the public such that it is deemed famous,[156] it will be entitled to additional protection. This protection, under a dilution theory, provides for automatic injunctive relief against unauthorized use of the trademark when such use has the potential to negatively affect the good will associated with the mark.[157]

The scope of what can be a trademark today has expanded beyond the typical word, phrase, or unique design that comprises most trademarks.[158] In *Qualitex Co. v. Jacobson Products Co.,*[159] the Supreme Court, relying on federal trademark law,[160] adopted a descriptive approach to determining what can potentially be a trademark in lieu of limiting marks to specific categories.[161] Almost anything, including a specific characteristic of a product, can potentially be a trademark if it signals to consumers that the product comes from a specific producer or seller.[162] This has

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2010) (University of Texas earned over $ 8 million in licensing revenue during 2005-06 academic year); *see also* Angelina Martinez-Rubio, *City Launches Licensing Program for City Marks and Logos*, 11 CITY LAW 49 (2005) (New York City engaged in program to earn revenue from its logos and trademarks). Companies also earn licensing revenue by licensing use of trademarks to third parties who make totally unrelated goods. Irene Calboli, *The Sunset of "Quality Control" in Modern Trademark Licensing*, 57 AM. U. L. REV. 341, 342-43 (2007).

[154] 15 U.S.C. § 1114(1)(a) (2006).

[155] *Id.* § 1117 (2006).

[156] *Id.* § 1125(c)(2)(a) (2006). (Factors a court can use to determine if a trademark is famous).

[157] *Id.* § 1125(c)(1) (2006). An action under section 1125(c) is commonly referred to as a "dilution" or "anti-dilution" action. A dilution action was added to federal trademark law in 1995. Moseley v. V Secret Catalogue, Inc., 537 U.S. 418, 420 (2003). A dilution action may also be available under state law. *See, e.g.,*Fla. Stat. § 495.151 (2009).

[158] *See generally* Gary Myers, *Statutory Interpretation, Property Rights, and Boundaries: The Nature and Limits of Protection in Trademark Dilution, Trade Dress, and Product Configuration Cases*, 23 COLUM.-VLA J.L. & ARTS 241 (1999-2000) (discussing expansions of trademark rights today).

[159] 514 U.S. 159 (1995).

[160] *Id.* at 172 (court cited Lanham Act, 15 U.S.C. § 1127 which states, in part, that a "'trademark' includes any word, name, symbol, or device, or any combination thereof . . . [used] to identify and distinguish his or her goods . . . from those manufactured or sold by others . . .").

[161] *See Id.*

[162] Qualitex Co. v. Jacobson Products Co., 514 U.S. 159, 171-73 (1995).*See, e.g.*, Service Mark Reg. No. 2, 007, 624 (Registered Oct., 15, 1996) *available at*

enabled trademark protection to be obtained for colors,[163] sounds,[164] shapes,[165] smells,[166] feel,[167] and trade dress.[168]

This expansion of what can be a trademark by itself is not problematic. The functionality doctrine[169] and the fair use doctrine[170] provide limitations on the property rights in a

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http://tarr.uspto.gov/servlet/tarr?regser=serial&entry=74646306 (last visited Sept. 19, 2010) (mark for goats on a roof of grass for restaurant services).

[163]*Id*, at 174 (color of press pad used by dry cleaners can be a trademark). *See also*In re Owens-Corning Fiberglas Corp., 774 F.2d 1116 (Fed. Cir. 1985) (pink color for fiberglass insulation can be a trademark).

[164]Ride the Ducks, LLC v. Duck Boat Tours, Inc., 2005 U.S. Dist. LEXIS 4422 at 20 (E.D. PA. 2005). *See also* U.S. Patent and Trademark Office website listing of numerous sounds, including music, that are registered trademarks. Available at http://www.uspto.gov/web/offices/ac/ahrpa/opa/kids/kidsound.html (last visited Sept. 1, 2010).

[165]*See* Paul Goldstein and R. Anthony Reese, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES – CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY 256-57 (6th ed. 2008) (three-dimensional product packages, such as the distinctive Coca-Cola bottle, can be protected as trademarks).

[166]*See* Douglas D. Churovich, *Scents, Sense or Cents?; Something Stinks in the Lanham Act: Scientific Obstacles to Scent Marks*, 20 ST. LOUIS U. PUB. L. REV. 293, 294-95 (2001) (discussing U.S. Patent and Trademark Office's allowance of a trademark registration for a scent smelling like Plumeria blossoms that was applied to sewing thread and embroidery yarn).

[167] U.S. Trademark Registration no. 3,155,702 (registered on Oct.17, 2006) is for a sensory or touch trademark registered for the feel of a velvet-textured covering on a bottle of wine. See registration information at http://tarr.uspto.gov/servlet/tarr?regser=serial&entry=76634174 (last visited June 21, 2010).

[168] "The trade dress of a product is the total image of a product, the overall impression created, not the individual features." Woodsmith Pub. Co. v. Meredith Corp., 904 F.2d 1244, 1247 (8th Cir. 1990). Trade dress is protected by federal trademark law. Yankee Candle Co. v. Bridgewater Candle Co., 259 F.3d 25, 38 (1st Cir. 2001).

[169] In *Qualitex*at 164-65, the Supreme Court stated that "[t]he functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm's reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time . . . after which competitors are free to use the innovation. If a product's functional features could be used as trademarks, however, a monopoly over such features could be obtained without regard to whether they qualify as patents and could be extended forever . . .." The Court further explained that a product feature is functional and not subject to trademark protection "if exclusive use of the feature would put competitors at a significant non-reputation-related disadvantage." *Id.* at 165.

[170] Two types of trademark fair use are recognized. Classic trademark fair use allows an unauthorized third party to use a trademark when such use is to describe the third party's product. Nominative fair use occurs when a third party uses a trademark to describe the trademark owner's product. KP Permanent Make-Up, Inc. v. Lasting Impression I, Inc., 328 F.3d 1061, 1071-72 (9th Cir.

trademark. However, this expansive view of trademarks, especially when coupled with the development of trademark dilution law,[171] has created a shift in how trademarks are viewed today. The black letter rule that a trademark can only be assigned with the goodwill it encompasses reflects the traditional view that the property interest in a trademark is the mental association that arises in consumer's minds when a trademark is associated with a particular product.[172] Although this rule continues to be cited by courts,[173] it is often ignored as trademarks are increasingly viewed as property without regard to a particular mental association existing between the trademark and the product on which it is used.[174] This can be seen in the marketplace, where well-known trademarks are often the subject of naked licensing for use by other non-competing and

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2003). An example of nominative fair use is when an independent automobile repair shop uses the Volkswagen trademark to inform consumers that the shop repairs Volkswagen cars. Century 21 Real Estate Corp. v. Lendingtree, Inc., 425 F.3d 211, 219 (3d Cir. 2005). Unauthorized use of a trademark in comparative advertising is also nominative fair use. Benjamin F. Sidbury, *Comparative Advertising on the Internet: Defining the Boundaries of Trademark Fair Use for Internet Metatags and Trigger Ads*, 3 N.C. J.L. & TECH. 35, 55 (2001). An example of classic or descriptive fair use is the use of a trademark to identify a particular product in a news report. *Id.* at 54. The Lanham Act statutorily recognizes trademark fair use. 15 U.S.C.A. § 1115(b)(4) (2002). *See generally* Playboy Enters. v. Terri Welles, Inc., 78 F. Supp. 2d 1066, 1073 (S.D. C..A. 1999) (fair use doctrine promotes both free competition and freedom to use descriptive words as part of everyday speech). The Lanham Act also provides that both nominative and descriptive fair use of a trademark cannot be the basis of a dilution action. 15 U.S.C. §1125(c)(3)(A) (2006).

[171] Trademark dilution provides the owner of a famous trademark with the right to bring a dilution action against a third party for use of his or her trademark when such use tarnishes or blurs the distinctiveness of the trademark, without any requirement that the third party's use create consumer confusion or that the parties are selling competing goods. *See id.* §1125(c)(1).

[172] Mr. Donut of America, Inc. v. Mr. Donut, Inc., 418 F.2d 838, 842 (9th Cir. 1969) (under both common law and the Lanham Act, the law is settled that rights in a trademark do not exist separate from the business with which the mark is associated, and therefore, the mark cannot be transferred separately from the business it is associated with); *see also*COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES – CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY LAW, *supra* note 165, at276 and 15 U.S.C. §1060(a)(1) (a mark registered under the Lanham Act is assignable with associated good will).

[173]*See, e.g.*, Topps Co., Inc. v. Cadbury Stani S.A.I.C., 526 F.3d 63, 70 (2d Cir. 2008) ("An assignment 'in gross' is a purported transfer of a trademark divorced from its goodwill, and it is generally deemed invalid under U.S. law.").

[174] Irene Calboli, *Trademark Assignment "With Goodwill": A Concept Whose Time has Gone*, 57 FLA. L. REV. 771, 774-75 (2005). *See generally*COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES – CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY LAW, *supra* note 165 at 276-77 (noting some courts have substantially weakened the rule prohibiting in gross trademark assignments).

unrelated industries.[175] This is reinforced by dilution law, which focuses on recognizing the trademark per se as a protectable property interest that can be protected from third party use even in the absence of any likelihood of consumer confusion or competition.[176] This shift reflects concern for protecting the economic interests of trademark owners while ignoring the other goals of trademark law–preventing consumer confusion and facilitating competition.[177] It may also result in diminution of the concurrent use of trademarks by non-competing entities when consumer confusion is absent, which can adversely affect competition.[178]

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[175]*See generally* Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687 (1999) (discussing judicial decoupling of trademark rights from associated good will).

[176]Ameritech, Inc. v. American Information Technologies Corp., 811 F.2d 960, 965 (6th Cir. 1987).*See also* Mead Data Central, Inc. v. Toyota Motor Sales, U.S.A., Inc., 875 F.2d 1026, 1028-29 (1961).

[177]*See generally*Moseley v. V Secret Catalogue, 537 U.S. 418, 429-30 (2003) (purpose of dilution law is to protect trademark owners' economic interest in his or her trademark rather than protecting consumers). Dilution law can also lead to some overreaching by owners of intellectual property. According to news reports the estate of author Philip K. Dick is objecting to a new cell phone introduced by Google called NEXUS ONE that uses a new operating system called ANDROID. The objection is based on the novel Mr. Dick wrote in 1968 entitled "Do Androids Dream of Electric Sheep?" which involves a bounty hunter chasing androids known as Nexus-6 models. Apparently, the estate must believe it has ownership rights to the words "android" and "nexus." Nathan Koppel, *Nexus Name Irks Author's Estate*, WALL ST. J., Jan. 6, 2010, at B4.

[178] Under trademark infringement law it has long been permissible and common practice for different entities to use the same trademark on dissimilar goods provided no consumer confusion results from such concurrent use. For an actual example of concurrent use see DOVE PRODUCTS, http://dovechocolate.com/products_icecream_p1.html (last visited June 21, 2010) (Dove mark used for premium ice cream) and see DOVE WHITE BEAUTY BAR, http://www.dove.us/?dl=/Products/BarSoapBodyWash/BB_White.aspx/#/Products/BarSoapBodyWash/BB_White.aspx/ (last visited June 21, 2010) (Dove used for soap). A shift to recognizing trademarks as property distinct from any associated good will is inconsistent with such concurrent use. *See also* 15 U.S.C. § 1052(d) (Lanham Act expressly authorizes concurrent registration of the same or similar marks for different parties provided it is not likely to cause confusion, mistake or deception). For example, several different entities have a federal trademark registration for the mark "AAA." *See, e.g.,* U.S. Trademark Reg. No. 0703556 (registered Aug. 30, 1960) (American Automobile Association for maps and other printed travel information); U.S. Trademark Reg. No. 2971005 (registered July 19, 2005) (American Arbitration Association for printed materials for alternate dispute resolution); U.S. Trademark Reg. No. 1760282 (registered March 23, 1993) (AAA Flag & Banner Mfg. Co. for rental and installation of flags, banners, pennants and signs). Likewise, many entities have a federal trademark registration for the mark "WATERFORD." *See, e.g,.* U.S. Trademark Reg. No. 2355690 (registered June 6, 2000) (Waterford Wedgwood PLc. Co. for glassware, tableware and dinnerware); U.S. Trademark Reg. No.

III. OVERLAPPING PROTECTION

It has long been acceptable for different aspects of a product to be protected by different bodies of intellectual property law. For example, if a sculpture is made into a lamp the sculpture is still protectable via copyright law.[179] The functional aspects of the lamp's illumination circuitry could receive utility patent protection. A name or logo placed on the lamp could be protected by trademark law if it indicates the source or producer of the lamp. Likewise, the nonfunctional ornamental exterior appearance of a functional product such as a camera is within the domain of design patent protection[180] while the optics and electronics that enable the camera to take pictures are within the domain of utility patent law.

Simultaneously protecting the same aspect of a product – as opposed to different aspects of the product –under different bodies of intellectual property law, however, had historically been disallowed by some courts.[181] Most recent case law has allowed such simultaneous protection.[182] To some extent, the historical rejection of simultaneous protection was consistent with and a consequence of the clear historical demarcations between the subject matter protected by patent, copyright, and trademark law. The broad modern expansion of subject matter protectable by each of these bodies of law has made significant overlaps unavoidable. Therefore, the same creative innovation may be simultaneously

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2731000 (registered July 1, 2003) (Capital Senior Living Corp. for managing and operating an independent living facility for adults); U.S. Trademark Reg. No. 2007379 (registered Oct. 15, 1996) (Revere Sink Corp. for sinks); U.S. Trademark Reg. No. 1844162 (registered July 12, 1994) (Waterford Institute Inc. for computer software); U.S. Trademark Reg. No. 1636824 (registered March 5, 1991) (Waterford Foundry Ltd. For solid fuel burning stoves).

[179]*See*Mazer v. Stein, 347 U.S. 201 (1954) (statuette protected as work of art by copyright law does not forfeit its protection because it is incorporated into a lamp which is a useful product).

[180]*See, e.g.,* U.S. Design Patent No.D468, 334 (issued Jan. 7, 2003) which covers the exterior appearance of a camera (available at http://www.google.com/patents?id=ZNICAAAAEBAJ&printsec=abstract&zoom=4&source=gbs_overview_r&cad=0#v=onepage&q=&f=false) (last visited June 21, 2010).

[181]*See, e.g.,*Louis De Jonge& Co. v. Breuker& Kessler Co., 182 F. 150, 151-152 (S.E.D. Pa. 1910) (author must elect to rely on copyright or design patent protection rather than obtaining protection under both bodies of law). *See also* Jones Bros. Co. v. Underkoffler, 16 F. Supp. 729, 731 (M.D. PA. 1936) (approvingly cites *Louis DeJonge& Co.*).

[182]*See, e.g,* In re Yardley, 493 F.2d 1389, 1393 (C.C.P.A. 1974) (work can be simultaneously protected by design patent law and copyright law). *See also* J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, 534 U.S. 124 (2001) (artificially bred hybrid plants and seeds may be protectable under both utility patent law (*see* 35 U.S.C. § 101) (2006) and plant patent law (*see* 35 U.S.C. § 161) (2006).

protected by different bodies of intellectual property law.[183] In some circumstances, these overlaps can create overprotection of intellectual property by undermining rationales on which a particular body of law is based and by avoiding some of the carefully developed doctrines designed to limit protection under a specific body of intellectual property law.[184]

The following sections provide examples of products simultaneously protected by multiple bodies of intellectual property law and, discuss the consequences of this.

A. Software

As already discussed, the expansive scope of subject matter under copyright law has enabled the form of expression of software to be copyrightable[185] in addition to the functional aspects of the same software being patent-eligible subject matter under utility patent law.[186] However, software is primarily functional or utilitarian in nature and therefore, it should only be protectable under utility patent law. Relying solely on patent law insures a lengthy process in which a utility patent will only issue if the software is found to be both novel and sufficiently innovative under the nonobviousness requirement. In contrast, although copyright protection is limited to the form of expression of the software, it does not require novelty or any qualitative evaluation

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[183]*See* In re Yardley at 1394 (noting existence of overlap between copyright law and design patent law). *See alsoJ.E.M. Ag Supply* at 143-45 (noting overlap between utility patent law and plant patent law with regard to certain types of plants); In re Mogen David Wine Corp., 328 F.2d 925 (C.C.P.A.1964) (shape of wine bottle could be protected both by design patent law and by trademark law). *See generally* Viva R. Moffat, *Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection*, 19 BERKELEY TECH. L.J. 1473, 1474-75 (2004) (discussing the problem of overlapping protection of the same subject matter under various intellectual property laws).

[184] For example, protection of the ornamental appearance of a consumer product under design patent law lasts for 14 years. 35 U.S.C.A. § 173 (West 2010). However, under certain circumstances, protection of the ornamental appearance can be extended by simultaneously obtaining copyright protection that typically lasts for the life of the design creator plus 70 years after his or her death. 17 U.S.C.A. § 302. (2010).

[185]*See generally* U.S. COPYRIGHT OFFICE, COPYRIGHT BASICS – CIRCULAR 1 at 3 (http://www.copyright.gov/circs/circ01.pdf (last visited July 8, 2010) (software eligible for copyright protection). *See also* Eldred v. Ashcroft, 537 U.S. 186, 219 (2003) (holding that copyright protects the form of expression but not underlying ideas); Craig Nard, THE LAW OF PATENTS 157 (2008) (copyright protects expression in software but not functional aspects of software).

[186]*See* Craig Nard, THE LAW OF PATENTS 157 (2008); *see also* COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES, *supra* note 172 at 1025-26 (noting despite historical resistance to patenting software it is generally accepted today that software is patent-eligible subject matter).

akin to the nonobviousness requirement. Although a creativity requirement must be satisfied under copyright law, this is a very low or minimal threshold requirement, which unlike the patent law nonobviousness requirement, is easily met.[187]

Patent law is premised on the rationale that once a patent term expires, the patented product enters the public domain and it can be freely used by anyone.[188] Utility patent expiration occurs twenty years after filing a patent application[189] but copyright protection typically lasts for the author's lifetime plus seventy years.[190] As a result, some aspects of the software – its form of expression – do not enter the public domain at the end of the patent term because the copyright term will continue to run for decades after the end of the patent term.[191] This interferes with the policy balance underlying patent law, which grants a patentee insulation from competition during the patent term in return for allowing the patented subject matter to enter the public domain when the patent term ends.[192] Therefore, although under patent law a competitor is permitted to freely copy patented software upon patent expiration, such action may violate copyright law.

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[187]*See* FeistPubl'ns, Inc. v. Rural Tel Serv. Co., 499 U.S. 340, 345 (1991).

[188] Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 152 (1989) ("We have long held that after the expiration of a federal patent, the subject matter of the patent passes to the free use of the public as a matter of federal law."). *See also*Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 230 (1964) ("When the patent expires the monopoly created by it expires, too, and the right to make the article - including the right to make it in precisely the shape it carried when patented - passes to the public"); Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169, 185 (1896) ("It is self evident that on the expiration of a patent the monopoly created by it ceases to exist, and the right to make the thing formerly covered by the patent becomes public property.").

[189] 35 U.S.C.A. § 154(a)(2) (2010).

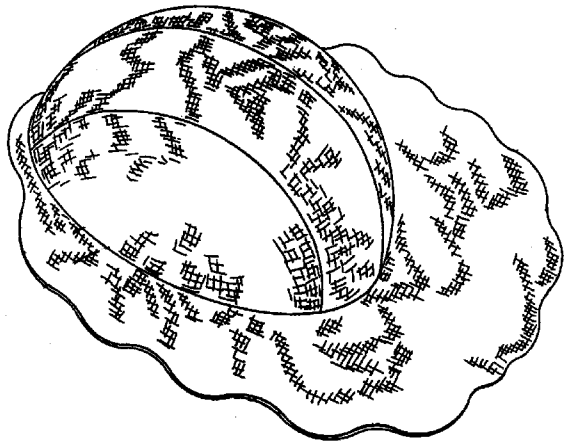
[190]17 U.S.C.A. § 302(a) (2010). Some works can have longer terms of up to 95 or 120 years. *Id.* § 302(c).

[191] Of course, the protection provided by copyright law is weaker and less extensive than the protection provided by patent law. Patents provide exclusive rights so a patent infringement action can be brought against an innocent infringer who independently invents the patented invention. 35 U.S.C. § 271(a) *seealso* SRI Int'l v. Advanced TechnologyTechnologyTechnologyTechnologyTechnologyTechnologyTech. Lab., 1994 U.S. App. LEXIS 36220 at *5 (Fed. Cir. 1994). In contrast, copyright infringement can only be asserted against a party who copies the protected work. *See*T-Peg, Inc. v. Vt. Timber Works, Inc., 459 F.3d 97,108 (1st Cir. 2006). Independent creation is not actionable under copyright law. *See*Nicholls v. Tufenkian Import/Export Ventures, Inc., 367 F. Supp. 2d 514, 524 (S.D.N.Y. 2005).

[192]*See generally* Scott Paper Co. v. MarcalusMfg Co., Inc., 326 U.S. 249, 256-57 (1945) (noting that once patentable subject matter enters public domain at expiration of a patent, another body of law cannot be used to limit the public's access to the invention).

B. Clothing

An expansion of patent-eligible subject matter has also allowed products that are primarily nonfunctional to be granted utility patent protection. For example, a novelty hat was the subject of a utility patent.[193] The hat, shown below, is analogous to a baseball cap where the dome is yellow and the brim is irregular and white, which makes the wearer look like he or she is wearing a fried egg.[194]



The stated functionality or use for the above hat is "as an attention-getting item in-connection with promotional activities at trade shows, conventions, and the like."[195] Such a use could easily apply to many items currently protected by design patent law, by copyright law, or by trademark law. Hence, such a minimal view of functionality could conceivably allow an artist to argue his or her painting or sculpture could be an attention getting device that could be used for promotional purposes. Likewise, a catchy song used in an automobile commercial could, arguably, serve the utility of being an attention getting device for marketing automobiles. However, artistic creations including music and novelty hats are

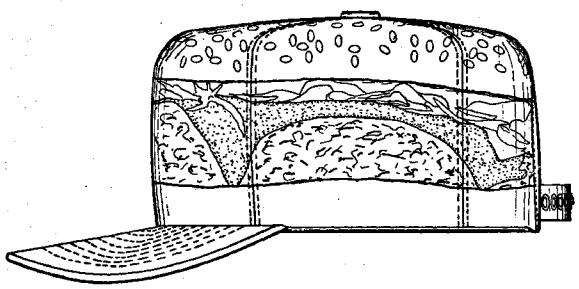
[193] U.S. Patent No. 5,457,821 (filed Feb. 22, 1994) (issued Oct. 17, 1995). The U.S. Patent and Trademark Office patent classification system includes a patent classification entitled "Apparel" that covers utility patents on hats and other clothing. *See* United States Patent and Trademark Office, http://www.uspto.gov/web/patents/classification/uspc002/defs002.htm#C002S195000 (last visited July 19, 2010).

[194] *Id.* fig. 1 (patent reference numbers removed from drawing).

[195] *Id.* col. 1, l. 6-8.

primarily ornamental or aesthetic items that should not be within the domain of utility patent law.[196]

Interestingly, a similar hat design shown below was granted design patent protection for the surface ornamentation that makes the hat look like a cheeseburger.[197] Granting a design patent means that the hat below was determined to be ornamental[198] and non-functional[199] in contrast to the hat shown above that was deemed functional and protectable via a utility patent.



Additionally, the novelty hat shown below, which is presumably designed to entertain and/or attract attention, was the subject of a design patent.[200]

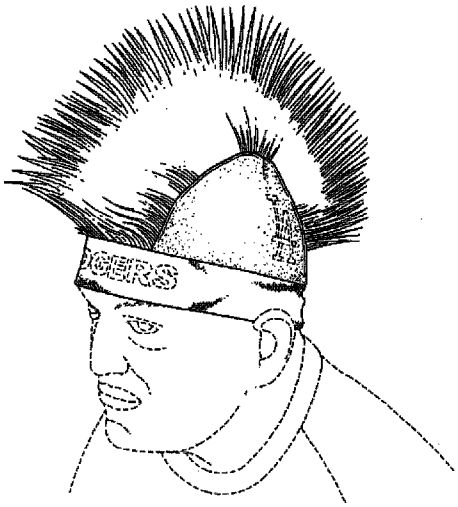
[196] In contrast to utility Patent No. 5,457,821, *supra* note 193, a hat made to look like a cheeseburger was granted. U.S. Design Patent No. D267,285 (filed Jan. 17, 1980) (issued Dec. 21, 1982).Unlike utility patents, design patents apply to the non-functional ornamental design applied to the exterior of a product such as a hat.

[197]U.S. Patent No. D273,435 (filed Oct. 8, 1981) (issued April 17, 1984).

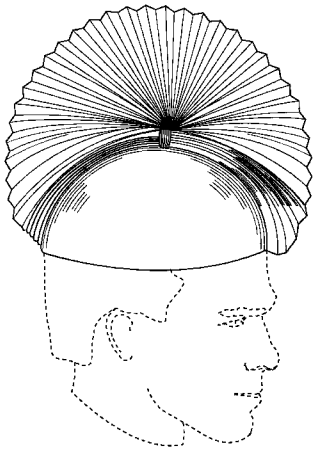
[198] The patent statute only permits design patents to be issued for an "ornamental design for an article of manufacture." 35 U.S.C.A. § 171.(West 2010).*See also* In Re Webb, 916 F.2d 1553, 1557 (Fed. Cir. 1990).

[199] Although the patent law does not state that design patents can only be issued for non-functional things, it is generally understood that the reference to "ornamental" in the design patent law means non-functional. *See, e.g.,* 35 U.S.C.A. § 171 (2010); PHG Techs., LLC v. St. John Cos., Inc., 469 F.3d 1361, 1366 (Fed. Cir. 2006) (A design that is primarily functional as opposed to being primarily ornamental cannot be protected by a design patent).

[200]U.S. Patent No. D500,580 (filed Jul. 17, 2003) (issued Jan. 11, 2005).



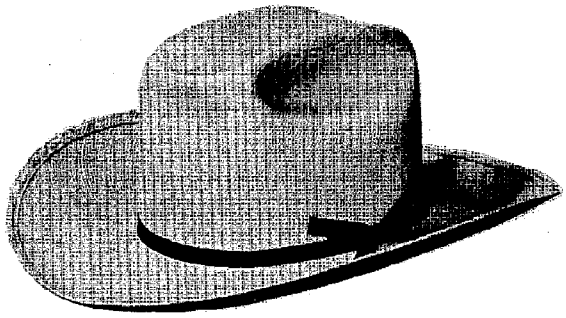
Nevertheless, a similar novelty hat shown below was granted utility patent protection.[201]



Hats designed for regular use, as opposed to the above novelty hats, have also been granted design patents. The hat shown below is a conventional men's hat that claims a novel configuration of the crown portion of the hat.[202]

[201] U.S. Patent 5,903,926 (filed Aug. 24, 1998) (issued May 18, 1999). The figure shown is Fig. 7 from the patent with the patent reference numbers removed.

[202] U.S. Patent No. D153,538 (filed Sept. 2, 1947) (issue April 26, 1949).



Other clothing items, such as sweatshirts, have been granted design patent protection[203] even though clothing is generally denied copyright protection because it is considered functional or useful.[204]

The inconsistent treatment of clothing – for example, is it primarily functional or primarily non-functional – creates significant unpredictability. It also suggests a degree of arbitrariness with regard to the intellectual property protection that can be obtained for clothing. Nevertheless, the type of protection has significant ramifications. Design patent protection provides

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[203] The U.S. Patent and Trademark Office patent classification system includes a patent classification entitled "Apparel and Haberdasery" which covers design patents on hats and other clothing. Information on this classification is available at http://www.uspto.gov/web/patents/classification/uspcd02/defsd02.htm#CD02S866000 (last visited July 19, 2010). *See, e.g.,* U.S. Patent No. D590,134 (Jun. 17, 2008) (issued April 14, 2009); U.S. Patent No. D295,575 (issued May 10, 1988).; U.S. Patent No. D479,385 (filed Dec. 18, 2002) (issued Sept. 3, 2003) .

[204] Whimsicality, Inc. v. Rubie's Costume Co., 891 F.2d 452, 455 (2d Cir. 1989) ("We have long held that clothes, as useful articles, are not copyrightable."). The copyright law generally does not protect useful or functional items. It states: 'Pictorial, graphic, and sculptural works' include two-dimensional and three-dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions, maps, globes, charts, diagrams, models, and technical drawings, including architectural plans. Such works shall include works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned; the design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article." 17 U.S.C.A. § 101 (West 2010). It also states: "A 'useful article' is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information. An article that is normally a part of a useful article is considered a 'useful article.'"*Id.* Sometimes clothing is considered functional by the Patent and Trademark Office. *See, e.g.,* U.S. Patent 5,144,696 (filed Jul. 3, 1991) (issued Sept. 8, 1992); U.S. Patent 4,280,229 (filed Mar. 3, 1980) (issued July 28, 1981).

rights for fourteen years from the date the design patent is granted.[205] Utility patent protection provides rights for a longer time period.[206] Furthermore, design and utility patents provide exclusive protection in contrast to the non-exclusive rights provided by copyright law. Therefore, independent creation is not a defense to third party infringement of patented clothing designs.

C. Computer Icons and Graphical User Interfaces

Design patents and copyrights both cover nonfunctional intellectual property. Design patents cover the ornamental appearance of products.[207] Copyrights today cover the nonfunctional appearance of utilitarian or functional products.[208] Hence, the U.S. Patent and Trademark Office takes the following position:

There is an area of overlap between copyright and design patent statutes where the author/inventor can secure both a copyright and a design patent. Thus an ornamental design may be copyrighted as a work of art and may also be subject matter of a design patent. The author/inventor may not be required to elect between securing a copyright or a design patent.[209]

The result of this overlap is that the same intellectual property may simultaneously be protected by both patent and copyright law. This can allow a manufacturer to obtain a design patent covering the unique appearance of a product. However, when the fourteen year design patent term[210] ends, the ornamental appearance will not pass into the public domain because copyright protection has a substantially longer term than design patent

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[205] 35 U.S.C.A § 173 (West 2010).

[206] The term of a utility patent lasts for twenty years measured from the date a utility patent application is filed even though the rights under the patent typically cannot be asserted until the patent is actually granted. *Id.* § 154(a)(2).

[207] *Id.* § 171.

[208] *See generally* Paul Goldstein and R. Anthony Reese, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES, *supra* note 186, at 1071-73 (courts often require that the non-functional or aesthetic appearance of a useful article can only be protected via copyright law if it separable from the utilitarian or functional article to which it is attached or incorporated into); *see also* Baby Buddies Inc. v. Toys "R" Us Inc., 95 U.S.P.Q.2d 1885, 1891 (11th Cir. 2010) (finding a baby pacifier holder to be a useful article but that certain aspects of the holder are sufficiently separable to be entitled to copyright protection).

[209] U.S. PATENT & TRADEMARK OFFICE MANUAL OF PATENT EXAMINING PROCEDURE § 1512 (8th ed. 2001 rev. July 2008) (available at http://www.uspto.gov/web/offices/pac/mpep/documents/1500_1512.htm#sect1512 (1) (last visited Jan. 29, 2010). The U.S. Copyright Office similarly allows copyright registration of something without regard to whether it was previously protected via a design patent. *See supra* note 208, at 1073.

[210] 35 U.S.C.A. § 173 (West 2010).

protection.[211] As a result, the appearance of the product can be protected against any third party copying or independently creating the same product appearance during the first fourteen years since patent infringement does not require copying.[212] After the patent expires, the design creator can no longer object to a third party independently creating the same product appearance but he or she can continue to object to a third party copying the product appearance for many additional years under copyright law.[213]

Additionally, the expansion of the subject matter within both patent law and copyright law has lessened the traditional divide between industrial product design traditionally covered by design patent law and the protection of artistic works under copyright law. As a result, Google claims copyright protection for the following layout of their search engine page interface as it appears on a computer screen. Additionally, they sought and obtained a design patent that protects the same subject matter (with the exclusion of the words and numbers that are shown in broken line format).[214]

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[211] 17 U.S.C.A § 302 (West 2010) (A general term is author's life plus 70 years).

[212] *See generally* 35 U.S.C.A. § 154(a)(1) (West 2010) (Patent owner has "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States" *Id.*).

[213] Infringement under copyright law, unlike patent law, requires that the infringer copied the work protected by copyright law. *See*Coles v. Wonder, 283 F.3d 798, 801 (6th Cir. 2002) ("Plaintiff must prove two things in order to establish a copyright infringement claim: first, that he had ownership of a valid copyright; second, that another person copied a protected interest in the work.").

[214] *See, e.g.*, U.S. Design Patent No. D599,372 (filed Mar. 7, 2006) (issued Sept. 1, 2009); U.S. Design Patent No. D454,354 (filed Aug. 25, 1999) (issued March 12, 2002); U.S. Design Patent No. D401,231 (filed Aug. 12, 1996) (issued Nov. 17, 1998).

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Icons used on a computer screen, as shown below in figures 1 to 5, have also been protected by design patents.[215]

Fig. 1

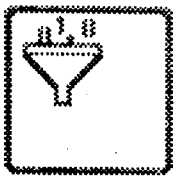


Fig. 2

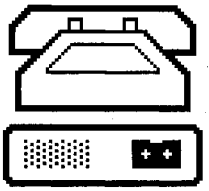
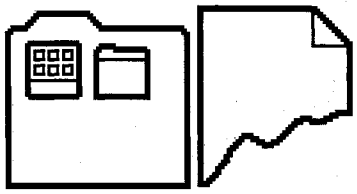


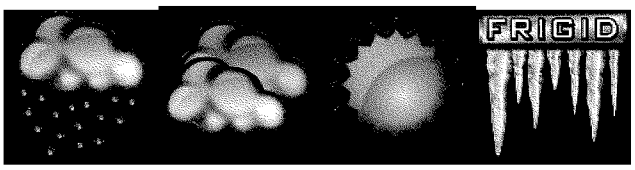
Fig. 3

[215] Fig. 1 shows U.S. Design Patent No. D295,636 (filed Dec. 9, 1985) (issued May 10, 1988); Fig. 2 shows U.S. Design Patent No. D295,764 (filed Dec. 9, 1985) (issued May 17, 1988); Fig. 3 shows U.S. Design Patent No. D386,485 (filed Aug. 27, 1992) (issued Nov. 18, 1997; Fig. 4 shows U.S. Design Patent No. D296,705 (filed Oct. 28, 1985) (issued July 12, 1988); Fig. 5 shows U.S. Design Patent No. D295,637 (filed Dec. 9, 1985) (issued May 10, 1988).

Fig. 4 Fig. 5



Copyright protection is also asserted for computer icons such as the following weather icons:[216]



Any creativity contained in the above graphical interface and in the icons is more appropriately protected by copyright law rather than design patent law. Icons are really pictures that are appropriately protected as pictorial or graphic works of art[217] under copyright law provided they meet the required creativity standard.[218] The medium in which the icon is created – drawing, painting, printing or display on a computer screen – should not affect whether copyright protection is available. Likewise, computer interfaces, such as the Google interface shown above, are more appropriately protected as literary works,[219] compilations,[220] pictorial, or graphical works.[221]

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[216] These icons are copyright 2003 by Stardock Corporation. They are available at http://www.stardock.com/weather.asp (last visited July 22, 2010). *See also* http://holidays.kaboose.com/xmas-icons.html (last visited July 22, 2010) (holiday icons copyrighted by the Iconfactory); U.S. Copyright Office Registration no. VA0001638936 (Oct. 22, 2007) (available at http://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?v1=1&ti=1,1&Search_Arg=beer%20keg%20icon&Search_Code=FT*&CNT=25&PID=NSi5P00LnCmSTyQBLFZiPwLWx&SEQ=20100722141017&SID=2) (last visited July 22, 2010) (copyright registration for a beer keg icon).

[217] *See* 17 U.S.C.A. § 101 (West 2010) (definition of pictorial, graphic, and sculptural works under copyright law).

[218] *See*Feist Publications, Inc. at 369 (Copyright law requires that a work is both independently created by the author and that it possesses at least a minimal amount of creativity).

[219] *See* 17 U.S.C.A. § 101 (West 2010) (definition of literary works)

[220] *See id.* § 103. *See also id.* § 101 (definition of compilation).

[221] *Seeid.* § 101 (definition of pictorial, graphical, and sculptural works).

D. Music

Music, along with other artistic and creative creations, logically falls within the domain of Copyright. The current Copyright Act specifically lists "musical works" as subject matter covered by the Act.[222] This enables the author of a musical composition to prohibit third parties from copying his or her composition for the prescribed statutory period provided by the Copyright law. Once that period ends, however, Copyright law provides that the music enters the public domain and is free for anyone to copy and use.

Nevertheless, it is now accepted that a sound can be a trademark. Consequently,music, as a sound, can act as a trademark.[223] Therefore, music whose copyright protection has ended can still be subject to control by an individual or entity as a trademark. And, in contrast to copyright law, a trademark can provide rights potentially forever. Although trademark rights only protect certain commercial or so-called trademark use of a mark, such rights can significantly limit commercial use of music that would otherwise be considered to be in the public domain. Such use could be further limited if a music mark became famous and hence protectable under both a trademark infringement and a trademark dilution theory.

E. iPods and Other Commercial Products

The two-dimensional and three-dimensional shape and appearance of a product may be subject to protection under multiple bodies of intellectual property law. The three-dimensional shape of the highly successful iPod, shown below, is protected by trademark law.[224]

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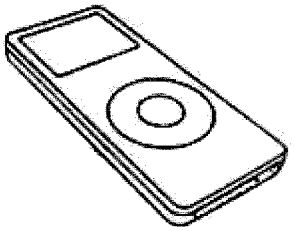
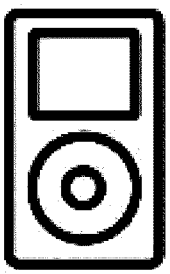
[222] *See id.* § 102(2).

[223] See, for example, U.S. Patent and Trademark Office website listing of some sounds, including music, that are registered trademarks. The following songs are listed as registered trademarks: Sweet Georgia Brown for the Harlem Globetrotters basketball team; The LoonieToons theme sound for entertainment provided by Time Warner. Available at http://www.uspto.gov/web/offices/ac/ahrpa/opa/kids/kidsound.html (last visited Sept. 1, 2010).

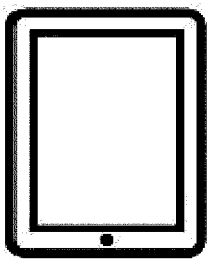
[224] David Orozco and James Conley, *Shape of Things to Come*, WALL ST. J., May 12, 2008 (available at http://online.wsj.com/article/SB121018802603674487.html) (last visited July 23, 2010). *See* U.S. Trademark Reg. No. 3,365,816 (registered Jan. 8, 2008).



Likewise, the two-dimensional shape of the iPod,[225] shown below, is protected by trademark law.



A trademark registration for the two-dimensional shape of the new iPad, shown below, is currently pending in the U.S. Patent and Trademark Office.[226]



Three-dimensional product containers, such as the Coke bottle shown below,[227] have been simultaneously protected via trademark law[228] and design patent law.[229]

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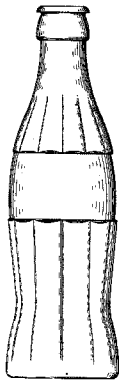
[225] *See* U.S. Trademark Reg. No. 3,341,214 (registered Nov. 20, 2007).
[226] *See* U.S. Trademark Reg. Serial No. 85,025,647 (filed April 28, 2010).
[227] This Coke bottle drawing appears in both a U.S. Trademark Registration for the bottle (*see infra* note 228) and a design patent covering the bottle (*see infra* note 229).
[228] *See* U.S. Trademark Reg. No. 1,057,884 (registered Feb. 1, 1977).
[229] *See* U.S. Design Patent No. D63,657 (filed Feb. 4, 1922) (issued Dec. 25, 1923) . *See generally* U.S. Design Patent No. D 380,158 (filed Jan. 24, 1995) (issued June 24, 1997).



It is likely the above product shapes for the iPod, iPhone, and the iPad could also be protected simultaneously via design patent law[230] and trademark law. The grant of trademark protection, as noted above, for the exterior appearance of the iPod, iPhone, and iPad means the appearance is viewed as non-functional since functional aspects of a product are not subject to trademark protection. This non-functional appearance is also amenable to design patent protection which protects the ornamental non-functional exterior appearance of a product or its container.

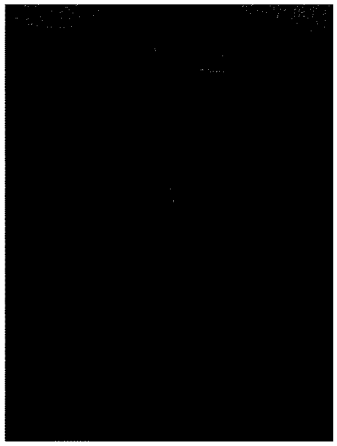
Copyright law may also be available to protect the appearance of the above products. The baby pacifier holder, shown below,[231] was granted copyright protection as a sculptural work.[232]

[230]*See, e.g.,* U.S. Design Patent No. D567,221 (filed Feb. 12, 2007) (issued April 22, 2008); U.S. Design Patent No. D357,929 (filed Mar. 7, 1994) (issued May 2, 1995).

[231]*See* Baby Buddies Inc. v. Toy "R" Us Inc., 95 U.S.P.Q.2d 1885 (11th Cir. 2010). The picture of the work is in Appendix A of the opinion, which is available at http://www.ca11.uscourts.gov/opinions/ops/200817021.pdf (last visited Sept. 19, 2010).

[232]95 U.S.P.Q2d at 1886-87.

In a dispute involving alleged copyright infringement of the above pacifier holder, the copyright registration was held valid after the court separated the copyrightable parts – the teddy bear and the bow – from the functional or useful parts – the tether and the clip that attaches the holder to a pacifier.[233] Although the copyright was held valid, a copy of the design by a competitor, shown below,[234] was held to be sufficiently different to avoid copyright infringement.[235]



However, the non-functional aspects of the pacifier holder could support trademark protection if consumers, via marketing and advertising, come to identify the bear as a particular brand of pacifier holder. As a result, sales of the competitor's pacifier holder, shown above, might amount to trademark infringement even if it avoids a copyright infringement claim. It is also likely that the non-functional aspects of the pacifier holder protectable via copyright law could also receive design patent protection.

Simultaneous or overlapping protection for the above products and product containers under design patent, trademark, and copyright law may be problematic. As noted above, design patent rights end after a fourteen year term, copyright protection typically lasts for the creator's lifetime plus seventy years, and trademark rights could potentially last forever. Therefore, the iconic shape and appearance of a useful commercial product or its container/packaging – or at least some aspects of it – can be protected far beyond the fourteen year period after which the design should enter the public domain in light of the underlying rationales of patent law. Additionally, it is possible that rights

[233] *See id.* at 1891.
[234] *See supra* note 231, Appendix B.
[235] 95 U.S.P.Q.2d at 1992-93.

pursuant to trademark law – which can potentially last forever – could exist after expiration of any copyright rights.

CONCLUSION

Intellectual property law is premised on incentivizing innovative and creative activities by providing limited property rights for the fruits of such activities in order to increase the storehouse of creative and innovative knowledge for the betterment of society.

A careful balance has been developed under each major body of intellectual property law – patent, copyright, and trademark – in an effort to provide property rights that promote creative and innovative conduct without such property rights interfering too greatly with public access to the fruits of such conduct.

The subject matter protectable under patent, copyright, and trademark law has greatly expanded in recent years. To some extent, this expansion reflects an excessive or unitary focus on protecting the property rights of innovators in an effort to incentivize investment in creative and innovative activities. This approach leads to overprotection when it fails to properly balance the resulting property protection against the right of the public to use the results of such creative and innovative activities.

Additionally, this expansion of covered subject matter under each specific area of intellectual property law has occurred with little regard to its effect on the other areas of intellectual property law. The unintended result has been the ability to protect certain subject matter simultaneously under patent, copyright, and/or trademark law. Such overlapping protection undermines the careful balance individually developed under each body of intellectual property law. For example, patent law is based on the premise that upon expiration of a patent the covered subject matter passes into the public domain. However, simultaneous protection under copyright law means limitations on public access will continue after patent expiration since the term of copyright protection significantly exceeds the length of protection under patent law. Likewise, simultaneous trademark protection can further exacerbate the problem because trademark rights are not time-limited like patent and copyright rights.

Solving the problems due to overlapping protection – or at least not compounding the problem by further subject matter expansion – requires both legislators and courts to have a better understanding of the balancing policy that undergirds intellectual property law. Legislative enactments and judicial decisions that expand the reach of intellectual property law should not be made in

a vacuum. Therefore, expansion of the subject matter protected under either patent, copyright, or trademark law should only occur if it does not undermine the careful balances struck under each of the other bodies of intellectual property law. This can prevent unintended over-protection of intellectual property which protects the rights of creators and innovators at the expense of the public. Finally, investing a single federal entity or agency with power to oversee all intellectual property, in lieu of the current fragmented approach, might facilitate a more coordinated development of the various bodies of intellectual property law.