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**FASHION NIGHTMARE! THE FUTURE OF CONSUMER
3-D PRINTING AND ONLINE COUNTERFEITING IN THE
FASHION INDUSTRY**

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A designer's greatest asset is his or her creativity. The satisfaction of purchasing and wearing a designer brand comes from the knowledge of the investment of human capital into the product, the creative mind that imagined it, and the steps to bring the product to the consumer. Taking that creativity from the designer compromises their business.¹

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¹ COUNCIL OF FASHION DESIGNER OF AMERICA, <http://cfda.com/programs/protecting-intellectual-property> (last visited Oct. 26, 2015).

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INTRODUCTION

Fashion designers do not necessarily use a pencil, paper, needle, and thread anymore. In fact, some do not use any of these materials at all. In March of 2013, designer Michael Schmidt partnered with architect Francis Bitonti and 3-D printing company, Shapeways, to design the “world’s first fully articulated 3-D printed dress.”² According to the designer, the dress was designed entirely on an iPad, refined via Skype,³ rendered digital, and printed in seventeen parts on an EOS P350 3-D printer.⁴ The dress, worn by American celebrity Dita Von Teese at a private event in New York, received much attention from the international high-end fashion community.⁵ At Paris Fashion Week, Dutch designer Iris Van Herpen became the first to incorporate 3-D printed pieces into her Haute Couture runway collection.⁶

Industrial grade 3-D printers have existed since the 1980s and were traditionally used to print plastic, metal, glass,

² MICHAEL SCHMIDT STUDIOS, <http://www.michaelschmidtstudios.com/dita-von-teese.html> (last visited Nov. 29, 2015).

³ Nathan Hurst, *Dita Von Teese Flaunts Fibonacci-Inspired, 3-D Printed Gown*, WIRED (Mar. 5, 2013, 4:52 PM), <http://www.wired.com/2013/03/dita-von-teese-3-d-printed-gown/>.

⁴ Damir Brodjanac, *3D Printers in the Fashion World*, DECRYPTED TECH (Mar. 10, 2013), <http://www.decryptedtech.com/news/3d-printers-in-the-fashion-world>.

⁵ Rachel Hennessey, *3D Printing Hits the Fashion World*, FORBES (Aug. 7, 2013), <http://www.forbes.com/sites/rachelhennessey/2013/08/07/3-d-printed-clothes-could-be-the-next-big-thing-to-hit-fashion/>.

⁶ *Id.*

and ceramic.⁷ However, 3-D printing, or additive manufacturing,⁸ has evolved to include a greater range of materials from titanium to human cartilage, and even nylons.⁹ Materialise, a 3-D printing company, recently created TPU-92A-1, the first 3-D printable material durable enough to be worn and withstand a washing machine.¹⁰ “It’s cushioning, elastic, and lightweight, designed specifically for use in the fashion industry.”¹¹ This creation has leading manufacturers taking note of the rapidly expanding capabilities that 3-D printing presents. A McKinsey Global Institute study suggests that 3-D printing could have a global impact of up to \$550 billion per year by 2025.¹² The study also predicts that by 2025, up to ten percent of all consumer products could be 3-D printable.¹³ McKinsey & Company attribute these numbers to the advancements in 3-D technology, stating “these advances have brought the technology to a tipping point – it appears ready to emerge from its niche status and become a viable alternative to conventional manufacturing processes in an increasing number of applications.”¹⁴

Advancements in 3-D printing technology has increased its applicability on the fashion industry. To date, most 3-D printable fashion is designed by Haute Couture fashion designers and can be seen on the runway. However, this is quickly

⁷ See Richard D’Aveni, *The 3-D Printing Revolution*, HARV. BUS. REV. (May, 2015), <https://hbr.org/2015/05/the-3-d-printing-revolution> (last visited Nov. 29, 2015).

⁸ Daniel Cohen, et al., *3-D Printing Takes Shape*, MCKINSEY QUARTERLY, (Jan. 2014), http://www.mckinsey.com/insights/manufacturing/3-d_printing_takes_shape (last visited Nov. 29, 2015).

⁹ *Id.*; Fira Rietveld, *3D Printing: The Face of Future Fashion?*, TEDXAMSTERDAM, <http://www.tedxamsterdam.com/3d-printing-the-face-of-future-fashion/> (last visited Nov. 29, 2015).

¹⁰ Rietveld, *supra* note 9.

¹¹ Hennessey, *supra* note 5.

¹² James Manyika et al., *Disruptive Technologies: Advances that will Transform Life, Business, and the Global Economy*, MCKINSEY QUARTERLY (May, 2013), http://www.mckinsey.com/insights/business_technology/disruptive_technologies (last visited Nov. 29, 2015).

¹³ *Id.*

¹⁴ Cohen, *supra* note 8.

changing as numerous fashion companies have begun experimenting with 3-D printing.

For example, New Balance is currently customizing running shoes for athletes using 3-D printing technology.¹⁵ New Balance's manager of studio innovations, Katherine Petrecca, states, "printing will allow us to be incredibly efficient by making products on-demand and eliminating large chunks of a traditional supply chain . . . [W]e will see significant opportunities to expand our usage and the scale of production."¹⁶ Nike has followed suit and is experimenting with 3-D printed sportswear, including football boots with integral 3-D printed elements and a Rebento Duffle Bag.¹⁷ Continuum, a San Francisco-based clothing company, is among the first to design 3-D printed wearable pieces in their new bikini line.¹⁸ Customers can now go on Continuum's website, design their own bikini, input their body shapes and measurements, and the company will print each unique design using nylon material.¹⁹ Outside of the U.S., consumer involvement in the 3-D printing process also exists in Russia, Ukraine, and Kazakhstan, where 3-D printing stores were launched to create an upscale shopping experience.²⁰

Soon, everyday household consumers may also experiment with 3-D printers and 3-D printable fashion. According to Google's Head of Engineering and world renowned futurist Ray Kurzweil, at this year's Google I/O Conference, soon consumers will be able to print 3-D printable

¹⁵ Chris Reidy, *New Balance Uses 3D Printing Technique to Customize Track Shoes*, BOSTON.COM (Mar. 8, 2013), <http://www.boston.com/businessupdates/2013/03/08/new-balance-uses-printing-technique-customize-track-shoes/v0GgY5NN9efZpCWrfq0pTN/story.html>.

¹⁶ *Id.*

¹⁷ Shane Taylor, *Ray Kurzweil's Predictions for 3D Printing at the 2014 Google I/O Conference*, 3DPRINTINGINDUSTRY.COM (June 27, 2014), <http://3dprintingindustry.com/2014/06/27/ray-kurzweils-predictions-3d-printing-2014-google-io-conference/>.

¹⁸ Hennessey, *supra* note 5.

¹⁹ *Id.*

²⁰ Brian Heater, *Solidoodle 3D Printing Stores Set to Bring 'Upscale Fashion Shopping' to Russia, Ukraine and Kazakhstan*, ENGADGET (Feb. 28, 2013), <http://www.engadget.com/2013/02/28/solidoodle/>.

clothing at home.²¹ Kurzweil believes that “additive manufacturing technologies are currently in their ‘hype phase,’ and that it will be around five years before the tech set is where it needs to be to enable a major paradigm shift.”²² According to Kurzweil, this paradigm shift will cause 3-D printable fashion designs to be commonplace by the 2020s.

Despite consumer 3-D printing’s positive impact on the fashion industry, it also presents worrisome intellectual property implications for the fashion industry, especially in online counterfeiting. There is immense potential for online counterfeiting when consumers are able to print fashion designs from the convenience of their own homes. Kenneth Mullen, an intellectual property law specialist at Withers Worldwide, states “[i]ncreased access to inexpensive 3-D printing potentially presents a significant challenge to designers, as well as brand owners, a great degree of whose power resides in their control of manufacturing and distribution channels.”²³ As the cost of 3-D printers decreases, household consumers’ experimentation with 3-D printers increases.²⁴ This repositioning of control over the distribution channel into the hands of the consumer generates greater potential for counterfeiting. “Hack the code for a Chanel bangle, get your hands on a MakerBot (3-D Printer) and you’ve engaged a brand new version of fashion piracy.”²⁵

The current state of intellectual property law for fashion leaves this industry particularly vulnerable. “As with fashion items that struggle to gain protection under existing intellectual property laws, 3-D printed fashion and fashion accessories will have to navigate copyright, design patent and other potential intellectual property requirements to gain full protection.”²⁶ It is

²¹ Taylor, *supra* note 17.

²² *Id.*

²³ Navaz Batliwalla, *3D Printing, Copyright Nightmare or DIY Heaven?*, BUSINESS OF FASHION (Oct. 23, 2012), <http://www.businessoffashion.com/2012/10/3d-printing-copyright-nightmare-or-diy-heaven.html>.

²⁴ Taylor, *supra* note 17.

²⁵ Rebecca Hiscott, *Will 3D Printing Upend Fashion Like Napster Crippled the Music Industry?*, MASHABLE (Mar. 3, 2014), <http://mashable.com/2014/03/03/3d-printing-fashion/>.

²⁶ Bryan J. Vogel, *IP: Five 3D Printing Headlines and the Law Issues They Raise*, INSIDE COUNSEL, (Nov. 12, 2013),

likely the fashion industry will follow its own precedent and lobby for more comprehensive copyright protections similar to the protections that the music and film industries enjoy.²⁷

This article will discuss: (1) the current state of U.S. intellectual property law for fashion design; (2) the background of 3-D printing; (3) how 3-D printable fashion will lead to widespread online file sharing and counterfeiting; and (4) proposes intellectual property reform by expanding copyright law to include fashion design, and by extending the Digital Millennium Copyright Act (“DMCA”) safe harbor provisions to trademark law.

I. THE CURRENT STATE OF U.S. INTELLECTUAL PROPERTY PROTECTION FOR FASHION DESIGN

Intellectual property is perhaps the most valuable asset a fashion designer can own.²⁸ However, intellectual property law in the United States is insufficient in meeting the needs of most fashion designers because, absent a few exceptions, fashion design is not protected under U.S. intellectual property law.²⁹ “[F]ashion design . . . [is] the way a specific garment is cut and assembled.”³⁰ Therefore, it is typically legal in the United States for one fashion designer to copy the identical construction of a garment from another designer.³¹ Fashion design lacks comprehensive protection; accordingly, fashion designers have attempted to rely on the different forms of intellectual property protection with varying degrees of success.³² These forms of intellectual property law include: copyright, trademark, trade dress, and design patents.

<http://www.insidecounsel.com/2013/11/12/ip-five-3d-printing-headlines-and-the-law-issues-t>.

²⁷ Hiscott, *supra* note 25.

²⁸ Charles E. Colman, *An Overview of Intellectual Property Issues Relevant to the Fashion Industry*, in NAVIGATING FASHION LAW: LEADING LAWYERS ON EXPLORING THE TRENDS, CASES, AND STRATEGIES OF FASHION LAW 114 (2012).

²⁹ Marc Misthal, *Trademarks and Trade Dress*, in FASHION LAW: A GUIDE FOR DESIGNERS, FASHION EXECUTIVES, & ATTORNEYS 26 (Guillermo C. Jimenez & Barbara Kolsun eds., 2d ed. 2014).

³⁰ *Id.*

³¹ *Id.* at 28.

³² Alexandra Manfredi, *Haute Copyright: Tailoring Copyright Protection to High-Profile Fashion Designs*, 21 CARDOZO J. INT’L & COMP. L. 111, 126 (2012).

A. COPYRIGHT

Copyright law is often described as a “bundle of rights granted to the creator of an original work of authorship that is fixed in a tangible form.”³³ In order to be “original,” it must be “independently created by the author as opposed to copied from other works . . . and possess at least some minimal degree of creativity.”³⁴ The work is not required to be entirely novel.³⁵ In fact, the Second Circuit has described the level of originality as “minimal, only an unmistakable dash of originality need be demonstrated, [and] high standards of uniqueness in creativity are dispensed with.”³⁶

In the United States, these “bundle of rights” are protected under the US Copyright Act, which grants the copyright owner the exclusive right to reproduce, distribute, perform, display, and create derivative works from the protected work.³⁷ Copyright infringement occurs when a protected work is reproduced, distributed, performed, publicly displayed, or made into a derivative work without the permission of the owner of the copyright.³⁸ In order to successfully claim copyright infringement, a plaintiff must first establish the validity of the copyright, and then show that “substantial similarity” exists between the protected work and the defendant’s work.³⁹ “Substantial similarity” exists when a non-trivial amount of the protected work is used⁴⁰ and when “the ordinary observer, unless he set out to detect the disparities, would be disposed to overlook them, and regard their aesthetic appeal as the same.”⁴¹

As a general rule, copyright law does not protect fashion

³³ Colman, *supra* note 28, at 115 (citing *Feist Pubs. v. Rural Telephone Service Co.*, 499 U.S. 340, 355 (1991)).

³⁴ *Feist Pubs.*, 499 U.S. at 345.

³⁵ Colman, *supra* note 28, at 115.

³⁶ *Folio Impressions Inc. v. Byer Cal.*, 937 F.2d 759, 764-65 (2d Cir. 1991).

³⁷ 17 U.S.C. § 106 (2002).

³⁸ U.S. Copyright Office, Definitions, COPYRIGHT.GOV, <http://www.copyright.gov/help/faq/faq-definitions.html> (last visited Nov. 11, 2014).

³⁹ Colman, *supra* note 28, at 116.

⁴⁰ *Ringgold v. Black Entm’t TV*, 126 F.3d 70 (2d Cir. 1997).

⁴¹ *Peter Pan Fabrics Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960).

design.⁴² U.S. federal courts hold that fashion design, or the construction of garments, fall within the Copyright Act's exclusion of "useful articles."⁴³ As defined by the Copyright Act, 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."⁴⁴ The utilitarian function derives from the view that fashion is meant to cover the body for purposes of warmth or social norms.⁴⁵ This "functional aspect of fashion design is the primary reason why there is no copyright protection for such designs in the United States."⁴⁶

However, some elements of fashion are protectable by copyright.⁴⁷ As an exception to the general rule, certain garments may be eligible for copyright protection if they "incorporate pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article."⁴⁸ This is known as the "separability" exception.⁴⁹ Essentially, copyright protection is granted when the design components can be separated from the functional components of the design.⁵⁰

U.S. federal courts have applied a two-pronged, disjunctive test to evaluate the separability exception: "[I]f a useful article incorporates a design element that is *physically* or

⁴² Charles Colman, *Copyright, in FASHION LAW: A GUIDE FOR DESIGNERS, FASHION EXECUTIVES, & ATTORNEYS* 45 (2014) (Guillermo C. Jimenez & Barbara Kolsun eds., 2d ed. 2014).

⁴³ "It is well settled that articles of clothing are 'useful articles' not protected by the Copyright Act." *Jovani Fashion, Ltd. v. Fiesta Fashions*, No. 12-598-CV, 2012 U.S. App. LEXIS 21245, at *2 (2d Cir. 2012).

⁴⁴ 17 U.S.C. § 101 (2010).

⁴⁵ Colman, *supra* note 28, at 118.

⁴⁶ Meaghan McGurrin Ehrhard, *Protecting the Seasonal Arts: Fashion Design, Copyright Law, and the Viability of the Innovative Design Protection & Piracy Prevention Act*, 45 CONN. L. REV. 285 (2012).

⁴⁷ Colman, *supra* note 42, at 45.

⁴⁸ 17 U.S.C. § 101 (2010).

⁴⁹ Colman, *supra* note 28, at 119.

⁵⁰ *See* 17 U.S.C. § 101 (2010); Sara R. Ellis, *Copyrighting Couture: An Examination of Fashion Design Protection and Why the Dppa and Idpppa Are a Step Towards the Solution to Counterfeit Chic*, 78 TENN. L. REV. 163, 171 (2010).

conceptually separable from the underlying product, the element is eligible for copyright protection.”⁵¹ A summary of fashion design categories that have passed this test and received copyright protection include: sufficiently original images affixed to garments, sufficiently original fabric patterns, sufficiently original jewelry, certain sculptural components of fashion, certain embroidery, beading and lace, as well as certain components of “fanciful costumes.”⁵²

Unfortunately, the vast majority of fashion design remains unprotected by the U.S. federal court’s present interpretation of the Copyright Act. Accordingly, there have been over eighty proposed amendments to the U.S Copyright Act since 1910 which purport to include fashion design.⁵³ Proponents of protection, including the Council of Fashion Designers of America (“CDFA”), the American Apparel and Footwear Association (“AAFA”), Harvard Law Professor Jeannie Suk, and fashion law scholar Professor Susan Scafidi, have argued that “fashion designs are creative works meriting copyright-style protection.”⁵⁴ The demand for more comprehensive copyright protection increased traction in Congress for recently introduced legislation, and may “[reignite] the debate over copyrighting fashion designs.”⁵⁵ Most notably, H.R. 2511, the Innovative Design Protection and Piracy Act (“IDPPPA”), and S. 3523, the Innovative Design Protection Act of 2012 (“IDPA”), were congressional bills aimed to amend the U.S. Copyright Act to include fashion design protection.⁵⁶ Both bills sought to revise the definition of “useful article” to include

⁵¹ *Chosun Int’l v. Chrisha Creations, Ltd.*, 413 F.3d 324, 328 (2d Cir. 2005) (emphasis added).

⁵² Colman, *supra* note 28, at 120.

⁵³ Manfredi, *supra* note 32, at 130 (citing Arina Shulga, *Intellectual Property for Fashion Designs*, BUS. LAW POST (Aug. 3, 2011), <http://www.businesslawpost.com/2011/08/intellectual-property-protection-for.html>; Ellis, *supra* note 50, at 171).

⁵⁴ Guillermo C. Jimenez et al., *Design Piracy Legislation: Should the United States Protect Fashion Design?*, in *FASHION LAW: A GUIDE FOR DESIGNERS, FASHION EXECUTIVES, AND ATTORNEYS* 66 (Guillermo C. Jimenez & Barbara Kolsun eds., 2d ed. 2014).

⁵⁵ Manfredi, *supra* note 32, at 130.

⁵⁶ Jimenez et al., *supra* note 54, at 67.

an article of apparel,⁵⁷ and effectively would provide a three-year window of protection from infringement for fashion designs.⁵⁸ However, neither proposed bill passed the committee nor received a floor vote.⁵⁹

B. TRADEMARK & TRADE DRESS

Trademark law is quite feasibly the most important form of intellectual property protection for fashion designers.⁶⁰ The fashion industry utilizes trademarks to fill the voids left unprotected by copyright law.⁶¹ A trademark is “any work, name, symbol, or device, or any combination thereof” intended to be utilized in commerce.⁶² Trademarks are protected under federal law under The Lanham Act.⁶³ Section 1125 reads:

Any person who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which is likely to cause confusion, or to cause mistake, or to

⁵⁷ ARTICLES OF APPAREL INCLUDE AN ARTICLE OF MEN’S, WOMEN’S, OR CHILDREN’S UNDERGARMENTS, OUTERWEAR, GLOVES, FOOTWEAR, HEADGEAR, HANDBAGS, PURSES, WALLETS, TOTE BAGS, BELTS, AND EYEGLASS FRAMES. S. 3523, 112TH CONG. § 2(A)(10) (2012).

⁵⁸ See S. 3523, 112th Cong. § 2(d)(2)(2012); H.R. 2511, 112th Cong. § 2(a)(2)(2011).

⁵⁹ Jimenez et al., *supra* note 54, at 69.

⁶⁰ Richard Reinis, a leading attorney in the area of fashion law, has described trademark protection as, “The most important form of protection for fashions and accessories . . . [and] the most commercially oriented one . . . a trademark identifies the source of goods. For many companies in the business, however, especially those in the luxury sector, their trademarks are the most effective communication devices for the most enduring property that the brand has, which is its story.” Richard Reinis, *An Exploration into the Practice of Fashion Law*, in *NAVIGATING FASHION LAW: LEADING LAWYERS ON EXPLORING THE TRENDS, CASES, AND STRATEGIES OF FASHION LAW* 95 (2012).

⁶¹ Colman, *supra* note 28, at 150.

⁶² 15 U.S.C. § 1127 (2006).

⁶³ 15 U.S.C. §§ 1051 et. seq.

deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person, or in commercial advertising or promotion, misrepresents the nature, characteristic, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities, shall be liable in a civil action by any person who believes that he or she is or is likely to be damaged by such act.⁶⁴

Two purposes are served by this statute, and by trademark law more generally: (1) to make certain that the owner of the trademark, or the brand owner, will enjoy the benefits of any investment he or she made in the brand, and (2) to prevent confusion among consumers.⁶⁵ Federal courts tend to focus most of their attention on trademark law's purpose of preventing consumer confusion.⁶⁶

To establish a violation of the Lanham Act, a plaintiff must show that (1) they have a legally protected mark under the statute, (2) they own the mark, and (3) the defendant's unauthorized use of the mark to identify a good or service causes a likelihood of confusion.⁶⁷ Each federal circuit has adopted a version of the "likelihood of confusion" test, which queries whether a considerable number of ordinarily prudent purchasers are "likely to be confused" about the source, sponsorship, or affiliation of the good or service they are observing.⁶⁸ The courts apply the "Polaroid" factors, or some equivalent, and determine *how close is too close?*⁶⁹

⁶⁴ 15 U.S.C. § 1125 (2012).

⁶⁵ Colman, *supra* note 28, at 150.

⁶⁶ *See id.* at 151.

⁶⁷ *A&H Sportswear, Inc. v. Victoria's Secret Stores, Inc.*, 237 F.3d 198, 210 (3d Cir. 2000).

⁶⁸ Colman, *supra* note 28, at 151-52 (citing *Western Pub. Co. v. Rose Art Indus.*, 910 F.2d 57, 59 (2d Cir. 1990)).

⁶⁹ Colman, *supra* note 28, at 151-52. The "Polaroid" factors are as follows: (1) the strength of his mark; (2) the degree of similarity between the two marks; (3) the proximity of the products/services; (4) the likelihood that the prior owner will bridge the gap; (5) actual

The fashion industry utilizes various kinds of trademarks. Personal name marks are of particular importance to trademark protection in the fashion industry.⁷⁰ A person, typically the designer, can choose to use his or her own personal name as a company's trademark.⁷¹ Countless fashion designers have used personal name marks, including Ralph Lauren, Marc Jacobs, Chanel, Gucci, Versace, and others. However, the right to use one's own surname as a trademark is a qualified right.⁷² In order to receive trademark protection, the rights holder must demonstrate that the use of the surname is both descriptive and has acquired secondary meaning.⁷³ Secondary meaning requires a determination of whether the average American perceives the word as a surname only, or with other significance.⁷⁴ If it is viewed as a surname only, it will fail to gain protection under the secondary meaning test.⁷⁵

Design marks, such as the Nike swoosh and the Lacoste alligator, are also important in the fashion industry.⁷⁶ Design marks do not require a secondary meaning, so long as (1) the image is not merely ornamental, and (2) the image creates a commercial impression, which is not related to the claimed mark's aesthetic impact.⁷⁷ Thus, a design mark may not receive protection if it serves an aesthetic function.⁷⁸ The purpose of this functionality bar is to prohibit producers from controlling a "useful product feature," so that trademark law does not create

confusion; (6) the defendant's good faith in adopting its own mark; (7) the quality of the defendant's product; (8) the sophistication of the buyers. *See* Polaroid Corp. v. Polarad Elec. Corp., 287 F.2d 492, 495 (2d Cir. 1961).

⁷⁰ Colman, *supra* note 28, at 163.

⁷¹ Francesca M. Montalvo, *Refashioning the Right of Publicity: Protecting the Right to Use Your Name After Selling a Personal Name Trademark*, 31 CARDOZO ARTS & ENT. L.J. 893, 898 (2013).

⁷² *Id.*

⁷³ J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 13:2 (4th ed. 2013).

⁷⁴ Colman, *supra* note 28, at 163.

⁷⁵ *See In re Cazes*, 21 U.S.P.Q.2d 1796 (T.T.A.B. 1991).

⁷⁶ Colman, *supra* note 28, at 169.

⁷⁷ *See In re Paramount Pictures Corp.*, 213 U.S.P.Q. 1111, 1113 (T.T.A.B. 1982); *In re E.J. Brach & Sons*, 256 F.2d 325, 327 (C.C.P.A. 1958).

⁷⁸ Colman, *supra* note 28, at 169-70.

limitless monopolies over utilitarian product features.⁷⁹

Lastly, color trademarks, a contentious area, are important in the fashion industry.⁸⁰ According to the U.S. Supreme Court in *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159 (1995), a company can feasibly own a color for trademark purposes so long as the color is non-functional and has accrued secondary meaning.⁸¹ Since *Qualitex*, courts have struggled to determine whether or not a particular color is functional. The landmark case, *Christian Louboutin S.A. v. Yves Saint Laurent America Inc.*, is illustrative of this problem.⁸²

Fashion designer Christian Louboutin sells more than five hundred thousand pairs of shoes every year and “virtually all Louboutin shoes” sold since 1992 have exhibited his signature lacquered red sole.⁸³ In *Louboutin v. Yves Saint Laurent*, Louboutin sought a preliminary injunction to enjoin the luxury fashion house Yves Saint Laurent (“YSL”) from selling shoes with bright-red soles.⁸⁴ YSL counterclaimed for cancellation of Louboutin’s registration, arguing that the single color was aesthetically functional and therefore not eligible for protection.⁸⁵ The Southern District Court held that single colors in the fashion industry are “per se aesthetically functional,” and it would therefore cancel the mark’s registration.⁸⁶ However, on appeal to the Second Circuit, Judge Cabranes reversed insofar as

⁷⁹ *Id.* at 173 (quoting *Qualitex Co. v. Jacobson Prods. Co. Inc.*, 514 U.S. 159, 164 (1995)).

⁸⁰ Colman, *supra* note 28, at 175.

⁸¹ The Court found that “over time, customers may come to treat a particular color on a product . . . as signifying a brand.” *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163 (1995).

⁸² *Christian Louboutin S.A. v. Yves Saint Laurent Am., Inc.*, 778 F. Supp. 2d 445 (S.D.N.Y. 2011) *aff’d in part, rev’d in part and remanded sub nom.* *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*, 696 F.3d 206 (2d Cir. 2012).

⁸³ Danielle E. Gorman, *Protecting Single Color Trademarks in Fashion After Louboutin*, 30 CARDOZO ARTS & ENT. L.J. 369, 370 (2012) (citing Brief of Appellant at 9, *Louboutin S.A. v. Yves Saint Laurent Am., Inc.*, No. 11-cv-3303 (2d Cir. Oct. 17, 2011), No. 45).

⁸⁴ *Christian Louboutin*, 778 F. Supp. at 445.

⁸⁵ *See Christian Louboutin*, 778 F. Supp. at 445.

⁸⁶ CHARLES E. COLMAN, *A Red-Leather Year for Aesthetic Functionality*, 4 No. 2 LANDSLIDE: A PUBLICATION OF THE ABA SECTION OF INTELLECTUAL PROPERTY LAW 26, 28 (Nov./ Dec. 2011).

the district court held that a color can never receive trademark protection in the fashion industry.⁸⁷ Thus, it seems that in some circumstances a single color in the realm of fashion can qualify for trademark protection.

As a result of the Lanham Act's expansive language,⁸⁸ fashion companies often seek to protect the overall image of a product through trade dress protection. Trade dress is "the total image of a product and may include features such as size, shape, color, color combinations, texture, graphics, or even particular sales techniques."⁸⁹ Trade dress has been extended to protect certain noteworthy fashion items, such as the blue Tiffany box and the Hermès' Birkin bag.⁹⁰

Fashion designers argue that trade dress should be extended to protect fashion design.⁹¹ Unfortunately, the U.S. Supreme Court addressed this issue and denied general protection to fashion design under trade dress.⁹² Instead, the Court held that fashion design only indicates source, and is thus eligible for protection when a "secondary meaning" exists in the minds of consumers.⁹³ This is a relatively high standard and thus, it is difficult for most designers to secure protection unless they are well-known by consumers. Accordingly, while designers repeatedly attempt to secure protection under trademark and trade dress to fill the gap left unprotected by copyright, this too has proven fairly insufficient to protect fashion design.

C. DESIGN PATENTS

Design patents occasionally fill the void copyright and

⁸⁷ *Christian Louboutin*, 696 F.3d at 229.

⁸⁸ The aforementioned language being referred to here is as such: "[A]ny word, term, name, symbol, or device, or any combination thereof . . . which . . . is likely to cause confusion[.]" 15 U.S.C. § 1125(a)(1)(A) (2012).

⁸⁹ *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 764 (1992).

⁹⁰ *See Coach Leatherware Co. v. Ann Taylor, Inc.*, 933 F.2d 162, 168 (2d Cir. 1991).

⁹¹ ANNE GILSON LALONDE, *GILSON ON TRADEMARKS*, § 2A.12 (LexisNexis 2012).

⁹² *Wal-Mart Stores, Inc. v. Samara Bros., Inc.*, 529 U.S. 205, 216 (2000).

⁹³ *Id.*

trademark leave unprotected in the fashion industry.⁹⁴ Generally, a fashion design is eligible for design patent protection if it is a “new, original and ornamental design for an article of manufacture.”⁹⁵ However, design patent protection is only available where the article is “ornamental, a product of aesthetic skill, and artistic conception”;⁹⁶ therefore, protection does not extend when “functional features dominate the design.”⁹⁷ Furthermore, because of the time-consuming nature of patent registration with the U.S. Patent and Trademark Office, many designs become outdated by the time the patent is issued due to the rapid evolution of the fashion industry.⁹⁸

II. BACKGROUND ON 3-D PRINTING

To understand the intellectual property issues surrounding consumer 3-D printing, one must first understand the basics of 3-D printing functions. The 3-D printers build 3-D objects by printing tiny layers upon layers of plastic, metal, ceramic, or other materials.⁹⁹ This “additive” process of building layer upon layer allows the production of intricate structures, and its application has been extended to, among other things, machine parts, architectural models, human tissue,¹⁰⁰ and of course, fashion.

Additionally, 3-D printers can turn a computer model into a 3-D physical object.¹⁰¹ The virtual 3-D models that 3-D printers use to operate are called computer-aided design

⁹⁴ See Colman, *supra* note 28, at 144.

⁹⁵ 35 U.S.C. § 171 (2006).

⁹⁶ Warbern Packaging Indus. Inc. v. Cut Rate Plastics Hangers Inc., 652 F.2d 987, 988 n.1 (2d Cir. 1981).

⁹⁷ Tough Traveler v. Outbound Prods., 60 F.3d 964, 971 (2d Cir. 1995).

⁹⁸ See Colman, *supra* note 28, at 145 (2012).

⁹⁹ See HOD LIPSON & MELBA KURMAN, *FABRICATED: THE NEW WORLD OF 3D PRINTING* 39 (2013).

¹⁰⁰ Kyle Dolinsky, *Cad's Cradle: Untangling Copyrightability, Derivative Works, and Fair Use in 3d Printing*, 71 WASH. & LEE L. REV. 591, 599 (2014).

¹⁰¹ Brian Rideout, *Printing the Impossible Triangle: The Copyright Implications of Three-Dimensional Printing*, 5 J. BUS. ENTREPRENEURSHIP & L. 161, 163 (2011).

(“CAD”) files.¹⁰² CAD files, mostly saved in .amf format,¹⁰³ have been described as “the object equivalent of a .pdf file — they are more or less universally printable by 3-D printers and allow objects to be transferred digitally around the world.”¹⁰⁴ Designers utilize these CAD files to create digital “blueprints” for 3-D products.¹⁰⁵ When the objects are printed, the CAD files “deconstruct the image into a series of 2-D cross-sectioned slices” and these slices are then deposited layer-by-layer with the material used by the particular printer.¹⁰⁶ With each pass of the printing heads, the object gradually begins to take shape.¹⁰⁷

The present 3-D printing online community emphasizes an “open source” system,¹⁰⁸ meaning users are typically free to “upload, improve upon, and distribute virtually any design.”¹⁰⁹ Under this system, control and ownership over designs can virtually spread to all the individuals who take part in the

¹⁰² See E. Sachs et al., *Three-Dimensional Printing: Rapid Tooling and Prototypes Directly from a CAD Model*, 39 CIRP ANNALS - MFG. TECH. 1, 201-04 (1990).

¹⁰³ See Lipson & Kurman, *supra* note 100.

¹⁰⁴ See Michael Weinberg, *What's the Deal with Copyright and 3D Printing?*, PUB. KNOWLEDGE 8 (Jan. 2013), https://www.publicknowledge.org/files/What's%20the%20Deal%20with%20Copyright_%20Final%20version2.pdf (last visited Nov. 29, 2015).

¹⁰⁵ Charles W. Finocchiaro, *Personal Factory or Catalyst for Piracy? The Hype, Hysteria, and Hard Realities of Consumer 3-D Printing*, 31 CARDOZO ARTS & ENT. L.J. 473, 477 (2013); see also Michael Weinberg, *It Will Be Awesome if They Don't Screw it Up: 3D Printing, Intellectual Property, and the Fight over the Next Great Disruptive Technology*, PUB. KNOWLEDGE (Nov. 2010), <http://publicknowledge.org/it-will-be-awesome-if-they-dont-screw-it-up> (last visited Nov. 29, 2015) (“Much as a word processor is superior to a typewriter because it allows a writer to add, delete, and edit text freely, a CAD program allows a designer to manipulate a design as she sees fit.”).

¹⁰⁶ Dolinsky, *supra* note 101, at 601.

¹⁰⁷ Rideout, *supra* note 102, at 163.

¹⁰⁸ *Id.*

¹⁰⁹ See Peter Hanna, *The Next Napster? Copyright Questions as 3D Printing Comes of Age*, ARS TECHNICA (Apr. 6, 2011), <http://arstechnica.com/tech-policy/2011/04/the-next-napster-copyright-questions-as-3d-printing-comes-of-age/>.

creation and editing of the designs.¹¹⁰ A number of websites have emerged supporting this open source system.

Currently, the most popular 3-D design file website, Thingiverse, encourages users to share designs and emphasizes community collaboration.¹¹¹ Thingiverse serves as an online platform where users are free to upload designs, improve upon them, and virtually distribute these design files, which can then be printed by anyone with access to a 3-D printer.¹¹² Another leading website, Shapeways, has begun to commercialize 3-D printing by allowing consumers to order custom designs and have them shipped to their homes, allowing those without a 3-D printer to print their own custom designs.¹¹³

III. INTELLECTUAL PROPERTY SHORTCOMINGS: CONSUMER 3-D PRINTING IN THE FASHION INDUSTRY

Innovative designers are now using 3-D printers for the expanded capabilities that allow complex and creative designs.¹¹⁴ Guillermo C. Jimenez, fashion law professor at the Fashion Institute of Technology, has predicted that “[c]ontinuing advances in the materials available for 3-D printing are expected by many to lead to 3-D printers taking their place alongside the sewing machine in apparel manufacturing so that 3-D printed clothing becomes commonplace.”¹¹⁵ Yet, 3-D printing has still

¹¹⁰ Rideout, *supra* note 102, at 163.

¹¹¹ See *What is Thingiverse?*, THINGIVERSE, <http://www.thingiverse.com/> (last visited Nov. 29, 2015) (“MakerBot’s Thingiverse is a thriving design community for discovering, making, and sharing 3D printable things. As the world’s largest 3D printing community, we believe that everyone should be encouraged to create and remix 3D things, no matter their technical expertise or previous experience. In the spirit of maintaining an open platform, all designs are encouraged to be licensed under a Creative Commons license, meaning that anyone can use or alter any design.”).

¹¹² Rideout, *supra* note 102, at 164-65.

¹¹³ See *About Us*, SHAPEWAYS.COM, <http://www.shapeways.com/about/> (last visited Nov. 29, 2015).

¹¹⁴ Rose Auslander, *Time for Fashion Designers to Buckle up for 3-D Printing*, LAW360.COM (Oct. 17, 2013), <http://www.law360.com/articles/478826/time-for-fashion-designers-to-buckle-up-for-3-d-printing>.

¹¹⁵ GUILLERMO C. JIMENEZ, *A Survey of Fashion Law: Key Issues and Trends*, in FASHION LAW: A GUIDE FOR DESIGNERS, FASHION

not reached the mainstream public.¹¹⁶ However, prices of at-home 3-D printers are rapidly falling; Staples recently began selling a 3-D printer for \$1,299.99 and other companies, such as Assembled Printrbot Simple, have sold 3-D printers for as low as \$399.¹¹⁷ With commentators forecasting that “[e]ventually every household could have its own 3D printer, placing the production of garments firmly in the hands of the consumer,”¹¹⁸ it is evident that fashion designers must prepare for the implications that will come along with this new technology.

A. COUNTERFEITING & ONLINE DESIGN PIRACY

As 3-D printing technology spreads in the fashion industry, so does the potential for counterfeiting. Counterfeiting fashion is “the act of manufacturing or distributing a product or service bearing a mark that is identical to or substantially indistinguishable from a registered trademark.”¹¹⁹ Not only is counterfeiting an act of theft, but engaging in such behavior has a substantial negative impact on the value of a brand’s authentic product.¹²⁰ This leads to a loss in sales for the trademark owner, as well as harm to consumers who might reasonably believe the product that they are purchasing is authentic.¹²¹ A number of federal criminal statutes have been enacted to combat counterfeiting.¹²² Despite this, counterfeiting continues to grow

EXECUTIVES, AND ATTORNEYS 20 (Guillermo C. Jimenez & Barbara Kolsun 2d eds., 2014).

¹¹⁶ Auslander, *supra* note 115.

¹¹⁷ *Id.*

¹¹⁸ Eleanor Dunne, *Friend of Foe? 3D Printing and the Fashion Industry*, NOTJUSTALABEL.COM (May 27, 2014), <https://www.notjustalabel.com/editorial/friend-or-foe-3d-printing-and-fashion-industry>.

¹¹⁹ Barbara Kolsun & Heather J. McDonald, *Counterfeiting*, in *FASHION LAW: A GUIDE FOR DESIGNERS, FASHION EXECUTIVES, AND ATTORNEYS* 139 (Guillermo C. Jimenez & Barbara Kolsun eds., 2d. ed. 2014).

¹²⁰ *Id.*

¹²¹ Many sophisticated websites exist today that sell seemingly legitimate products, yet are actually unauthentic counterfeits. See Kolsun & McDonald, *supra* note 120, at 144.

¹²² The *Trafficking in Counterfeit Goods or Services Anticounterfeiting Consumer Protection Act of 1996*, 18 U.S.C. § 2320 states that whoever intentionally traffics or attempts to traffic in goods

in the U.S. with some referring to it as “the crime of the twenty-first century.”¹²³

The 3-D printing technology, including 3-D scanners and printers, facilitates counterfeiting; with this technology, consumers are enabled to produce identical replicas of fashion goods.¹²⁴ The 3-D scanners “capture physical dimensions of things . . . as a surface coating of digital confetti [in which] [e]ach piece of digital confetti represents a data point . . . documented as a set of x, y, and z coordinates.”¹²⁵ As 3-D printers become household items, consumers will have the capability to scan and print designer fashion items, a practice that has been coined “cottage counterfeiting.”¹²⁶

Moreover, this process of scanning designer fashion goods allows users to upload and share designs with other users. This practice resembles the online piracy crisis the music and film industries have experienced.¹²⁷ The music industry lost billions of dollars due to illegal peer-to-peer file sharing before taking action to curtail online piracy.¹²⁸ Following the music industry’s lead, branded manufacturers of luxury fashion items will begin to police counterfeiting and argue for new legislation that addresses design piracy.¹²⁹

B. COPYRIGHT ENFORCEABILITY AGAINST DESIGN PIRACY

Fashion brand owners will first use copyright law to enforce any infringements. Copyrights enable brand owners to send Digital Millennium Copyright Act (“DMCA”) takedown notices to Internet service providers who post uploaded fashion designs that infringe on the owner’s copyrights.¹³⁰ Because courts recognize certain types of “secondary liability” for

or services and knowingly uses a counterfeit mark on or in connection with such goods or services shall, if an individual, be fined not more than \$2,000,000 or imprisoned not more than 10 years, or both, and if a person other than an individual, be fine not more than \$5,000,000.

¹²³ Kolsun & McDonald, *supra* note 120, at 141.

¹²⁴ Jimenez, *supra* note 116, at 20.

¹²⁵ Lipson & Kurman, *supra* note 100, at 96.

¹²⁶ Jimenez, *supra* note 116, at 20.

¹²⁷ Auslander, *supra* note 115.

¹²⁸ *See id.*

¹²⁹ *See* Jimenez, *supra* note 116, at 20.

¹³⁰ *See* Auslander, *supra* note 115.

websites who knowingly benefit from infringement,¹³¹ these takedown notices can be effective tools to dis-incentivize websites from continuing to distribute copyrighted designs.

Although not in the realm of fashion, at least one DMCA takedown notice of a 3-D printable design has already occurred.¹³² Intellectual property attorney Rose Auslander¹³³ described the situation as follows:

This past February (2013), HBO sent the 3-D printing service nuPROTO a letter warning it to “cease and desist from continuing to produce and offer for sale the ‘Iron Throne Dock,’” a 3-D manufactured iPod dock inspired by HBO’s “Game of Thrones” fantasy TV series. Referencing copyrights, but also making a trade dress reference to likely consumer confusion, the letter claim that the Iron Throne Dock “will infringe on HBO’s copyright in the Iron Throne, and given the distinctive nature of the Iron Throne, mislead consumers into believing that it is connected with the Series and that it originates with or is sponsored by HBO. The nuproto.com site indicates that the offending Iron Throne Dock is no longer for sale, although pictures of it still appear on the site, along with an explanation of the dispute with HBO.”¹³⁴

This takedown notice demonstrates that fashion designers will soon rely on the Digital Millennium Copyright Act to protect their copyrighted products. However, as previously discussed, copyright law leaves the majority of fashion design unprotected.¹³⁵ Therefore, brand owners will be forced to resort to other means for protection from design piracy.

C. TRADEMARK ENFORCEABILITY AGAINST DESIGN PIRACY

¹³¹ Colman, *supra* note 28, at 195.

¹³² See Auslander, *supra* note 115.

¹³³ Rose Auslander is a partner at Carter Ledyard & Milburn LLP in their Intellectual Property and Fashion Law practice groups.

¹³⁴ Auslander, *supra* note 115 (citing *Throne Dock*, nuPROTO.com, <http://nuproto.com/iThrone.html> (last visited Nov. 29, 2015)).

¹³⁵ Colman, *supra* note 42, at 45.

While courts are inclined to find websites that knowingly facilitate copyright infringement secondarily liable, this is not the case with trademark infringement.¹³⁶ In fact, case law on this topic “leaves the law of contributory trademark infringement ill-defined.”¹³⁷ This can be explained in part by the lack of a trademark law counterpart to the Digital Millennium Copyright Act (“DMCA”).¹³⁸ Currently, no legislation provides a guideline for fashion brand owners to send takedown notices for trademark infringement; as a result, brands avoid making frivolous claims against websites they seek to hold secondarily liable.¹³⁹

Fashion brand owners who seek to protect their brands against trademark-infringing- design piracy may be left with the sole option of policing the individuals who post the designs. However, the policing of online piracy is both difficult and unpopular.¹⁴⁰ When the Recording Institute of America sent DMCA takedown notices to third-party websites and sued individuals for “sharing music” via the Internet, they received backlash and online protests ensued.¹⁴¹ Fashion brands will likely want to avoid this type of negative publicity.

IV. INTELLECTUAL PROPERTY REFORM

With its lack of comprehensive intellectual property protection, some view the fashion industry as particularly vulnerable to the negative implications of 3-D printing.¹⁴² To overcome its exceptional vulnerability, the fashion industry must lobby for intellectual property reform, as it has done in the past.¹⁴³

A. COPYRIGHT REFORM

The most comprehensive way to protect the fashion industry from online design piracy is to expand the U.S. Copyright Act to include fashion design. A number of arguments have been made against design piracy legislation.

¹³⁶ Colman, *supra* note 28, at 195.

¹³⁷ *Id.*

¹³⁸ *See id.*

¹³⁹ *See id.*

¹⁴⁰ Auslander, *supra* note 115.

¹⁴¹ *Id.*

¹⁴² *See Jimenez, supra* note 116, at 20.

¹⁴³ Jimenez et al., *supra* note 54, at 66.

Opponents to expanding such protection argue that design piracy and weak intellectual property laws are beneficial for the fashion industry.¹⁴⁴ According to Professor Kal Raustiala¹⁴⁵ and Professor Christopher Sprigman,¹⁴⁶ knockoffs and copied designs force designers to consistently create new designs, which is advantageous for an industry that prides itself for its innovation.¹⁴⁷ However, this argument rests on shaky economic grounds.¹⁴⁸ Europe has strong intellectual property protection and the European fashion industry does not lack innovation or revenue.¹⁴⁹

Opponents also argue that design piracy “democratizes” fashion, giving less affluent consumers the opportunity to afford the same styles worn by models on the runway.¹⁵⁰ However, this argument overlooks “fast-fashion” companies like Zara and H&M that sell couture-like fashion at low and affordable prices. Because these companies are based in Europe, they already face rigorous intellectual property protection schemes, but nevertheless have been able to sell couture imitations at a cheap price.¹⁵¹ Additionally, there is strong evidence to support the notion that design piracy protection would not have an impact on prices.¹⁵²

In addition, opponents argue that design piracy legislation will lead to an increase in frivolous litigation, negatively impacting small and large designers, as well as the U.S. court system.¹⁵³ However, Harvard Law Professor Jeannie Suk counters that in a five-year period, the American brand

¹⁴⁴ *Id.* at 69.

¹⁴⁵ Kal Raustiala is a law professor at UCLA.

¹⁴⁶ Christopher Sprigman is a law professor at the University of Virginia.

¹⁴⁷ See Jimenez et al., *supra* note 54, at 67.

¹⁴⁸ *Id.* at 69.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 70.

¹⁵¹ *Id.* at 71.

¹⁵² See Jimenez et al., *supra* note 54, at 71 (“The cost-based argument ignores the ‘Zara Solution’: a company can simply hire a designer to interpret or imitate a trend and thus can continue to produce trendy fashion items at low cost and sell them at low prices. Under the legislative proposals, one simply cannot sell identical replicas of particular branded goods.”).

¹⁵³ *Id.*

Forever 21 found itself in significantly more litigation disputes than its European counterparts Zara or H&M.¹⁵⁴ Furthermore, most of the proposed legislation, such as the previously mentioned IDPA of 2012, contains elements aimed at preventing the spread of frivolous claims.¹⁵⁵

Finally, the primary argument put forth for why fashion design is not copyrightable is of little persuasive value. As previously stated, the “functional aspect of fashion design is the primary reason why there is no copyright protection for such designs in the United States.”¹⁵⁶ However, this argument hardly makes any sense “in an age when much of fashion is more ornamental than functional.”¹⁵⁷

Additionally, stronger arguments can be made for the adoption of design piracy legislation. At the fundamental level, fashion is creative and thus, its artistic value deserves protection under the laws that protect other forms of creativity.¹⁵⁸ Fashion designers are commonly shocked and dismayed upon learning their designs are not protected under U.S. intellectual property law.¹⁵⁹

The United States should mirror the European Union where fashion brand owners have both an independent right against design copying and a thriving fashion industry.¹⁶⁰ The European Community Design Protection Regulation (the “Regulation”), adopted in all 27 European Union Member States, “provides designers with exclusive rights to use their designs in commerce, to enforce those rights against infringers, and to claim damages.”¹⁶¹ Given the relative recentness of the

¹⁵⁴ See C. Scott Hemphill & Jeannie Suk, *The Law, Culture, and Economics of Fashion*, 61 STAN. L. REV. 1147, 1172-73 (2009).

¹⁵⁵ Jimenez et al., *supra* note 54, at 72.

¹⁵⁶ Meaghan McGurrin Ehrhard, *Protecting the Seasonal Arts: Fashion Design, Copyright Law, and the Viability of the Innovative Design Protection & Piracy Prevention Act*, 45 CONN. L. REV. 285, 301-02 (2012).

¹⁵⁷ Colman, *supra* note 28.

¹⁵⁸ Jimenez et al., *supra* note 54, at 74.

¹⁵⁹ Colman, *supra* note 28, at 118.

¹⁶⁰ *Id.* at 118 n. 7.

¹⁶¹ Jimenez et al., *supra* note 54, at 75. (citing Council Regulation (EC) No. 6/2002 of 12 December 2001 O.J. (L 3, 1.2002, at .1), *amend* by Council Regulation (EC) No. 1891/2006 of 18 December 2006 O.J.

Regulation, the extent of its impact is still uncertain. However, fashion brand owners have successfully utilized the intellectual property protection offered by the Regulation.

Further, adopting design piracy legislation would bring the U.S. laws into compliance with international treaty obligations.¹⁶² Current U.S. intellectual property law violates the Berne Union and the Uruguay Round Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”) because it fails to “provide for the protection of independently created industrial designs that are new or original.”¹⁶³ Amending the U.S. Copyright Act to include protection for fashion design would bring the U.S into compliance with these treaties.¹⁶⁴

Finally, if fashion design were to receive copyright protection, then fashion brand owners could proceed similarly to the music and film industries in preventing online file sharing. If fashion design is eligible for copyright protection, fashion brand owners could send DMCA takedown notices, serving as an effective means to limit widespread fashion design piracy.¹⁶⁵

B. TRADEMARK REFORM

As previously mentioned, lobbying Congress to expand copyright law to include fashion design has been consistently unsuccessful.¹⁶⁶ While 3-D printing presents a new and grave threat to intellectual property protection in the fashion industry, there is no reason to believe that Congress, given its track record, will confront this threat by expanding copyright law to include fashion design.

Accordingly, the industry may be better off by lobbying for trademark law reform. Currently, third-party distributors can be held liable for knowingly supplying goods that are trademark protected through what is known as contributory trademark

(L 386, 29.12.2006, at 14) *available at* <http://oami.europa.eu/en/design/pdf/6-02-CV-en.pdf>).

¹⁶² Jimenez et al., *supra* note 54, at 75.

¹⁶³ Agreement on Trade-Related Aspects of Intellectual Property Rights art. 25, Annex 1C, Apr. 15, 1994, 33 I.L.M. 81 (1994).

¹⁶⁴ Jimenez et al., *supra* note 54, at 75.

¹⁶⁵ *See* Auslander, *supra* note 115.

¹⁶⁶ Jimenez et al., *supra* note 54, at 69.

infringement.¹⁶⁷ However, applying contributory trademark infringement to Internet Service Providers (“ISPs”) has been a struggle.¹⁶⁸

Unlike copyright, contributory liability for trademark is not codified in a statute. Instead, courts rely upon the Supreme Court’s decision in *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 844 (1982).¹⁶⁹ In *Inwood*, the Supreme Court considered whether a manufacturer or a distributor of generic drugs could be held contributorily liable for the direct infringement of pharmacists.¹⁷⁰ The majority held in the affirmative and provided the following test:

[I]f a manufacturer or distributor intentionally induces another to infringe a trademark, or if it continues to supply its product to one whom it knows or has reason to know is engaging in trademark infringement, the manufacturer or distributor is contributorily responsible for any harm done as a result of the deceit.¹⁷¹

Many courts have found it difficult to apply the test set forth in *Inwood* to the Internet context.¹⁷² Because of the vast nature of ISPs, there is often an absence of actual knowledge of infringement on servers, one of the elements required by the

¹⁶⁷ See *Infringement*, BLACK’S LAW DICTIONARY (10th ed. 2014) (defining contributory trademark infringement as “[a] manufacturer’s or distributor’s conduct in knowingly supplying, for resale, goods bearing an infringing mark”).

¹⁶⁸ Jason Kessler, *Correcting the Standard for Contributory Trademark Liability over the Internet*, 39 COLUM. J.L. & SOC. PROBS. 375, 385 (2006) (“Any attempt to apply the existing tests for contributory trademark liability to cases arising over the Internet will immediately encounter difficulties”).

¹⁶⁹ Fara S. Sunderji, *Protecting Online Auction Sites from the Contributory Trademark Liability Storm: A Legislative Solution to the Tiffany Inc. v. Ebay Inc. Problem*, 74 FORDHAM L. REV. 909, 919 (2005) (citing *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844 (1982)).

¹⁷⁰ *Inwood Laboratories, Inc.*, 456 U.S. at 855.

¹⁷¹ *Id.* at 854.

¹⁷² Emily Favre, *Online Auction Houses: How Trademark Owners Protect Brand Integrity Against Counterfeiting*, 15 J.L. & POL’Y 165, 180 (2007).

Inwood test.¹⁷³

The first case addressing contributory trademark infringement over the Internet was *Tiffany v. eBay, Inc.*, 576 F. Supp. 2d 463, 463 (S.D.N.Y. 2008).¹⁷⁴ There, Tiffany brought an action in the Southern District of New York against eBay for contributory trademark infringement, alleging that eBay engaged in “facilitation and participation in the counterfeiting, infringement and false advertising of the federally registered trademarks owned, licensed and/or used by Tiffany.”¹⁷⁵ The district court held that eBay was not liable for contributory trademark infringement.¹⁷⁶

Applying the test from *Inwood*, the district court determined whether eBay continued to sell and distribute the products after eBay knew or had reason to know of possible infringement.¹⁷⁷ The district court held that eBay did not continue to sell and distribute products after they had knowledge of their infringement, and therefore, eBay was not liable.¹⁷⁸ In reaching its determination, the district court effectively held that the burden rests not on the website, but rather on the trademark owner to enforce its trademark.¹⁷⁹ The Second Circuit agreed on appeal.¹⁸⁰

¹⁷³ Elizabeth K. Levin, *A Safe Harbor for Trademark: Reevaluating Secondary Trademark Liability After Tiffany v. Ebay*, 24 BERKELEY TECH. L.J. 491, 511 (2009).

¹⁷⁴ *Id.* at 494 (citing *Tiffany Inc. v. eBay, Inc.*, 576 F. Supp. 2d 463, 527 (S.D.N.Y. 2008)).

¹⁷⁵ First Amended Complaint ¶ 4, *Tiffany, Inc. v. eBay, Inc.*, 576 F. Supp. 2d 463, 527 (S.D.N.Y. 2008) (No. 04 Civ. 4607) 2004 WL 1413904, ¶ 4.

¹⁷⁶ *Tiffany Inc.*, 576 F. Supp. 2d at 469.

¹⁷⁷ *Id.* Judge Sullivan wrote:

“In determining whether eBay is liable, the standard is not whether eBay could reasonably anticipate possible infringement, but rather whether eBay continued to supply its services to sellers when it knew or had reason to know of infringement by those sellers.”

¹⁷⁸ *Id.*

¹⁷⁹ Katja Weckström, *Secondary Liability for Trademark Infringement in the United States*, 49 U. LOUISVILLE L. REV. 555, 573 (2011).

¹⁸⁰ *Tiffany (NJ) Inc. v. eBay Inc.*, 600 F.3d 93 (2d Cir. 2010); *see also* Levin, *supra* note 175, at 494. (“The court held that trademark law cannot force online auctioneers to filter for trademarked material.

The rule is now clear: trademark owners must police against infringement of their marks. To do so, trademark owners require an effective Internet solution. Although the DMCA provides a means for copyright owners to police against copyright infringement on the Internet,¹⁸¹ trademark law does not currently have an equivalent to the DMCA.¹⁸² Therefore, Congress should enact legislation, whether by amending the DMCA or the Lanham Act, to adopt a DMCA-like safe harbor provision, which would protect both 3-D printing websites and trademark owners from contributory trademark infringement.¹⁸³ Similar to the DMCA, legislation extending safe harbor to 3-D printing websites from contributory trademark infringement should include the following minimum requirements:

- (1) the [website] must not have actual knowledge of the infringing activity and must not be aware of facts or circumstances from which infringing activity is apparent;
- (2) if the site has the right and ability to control the infringing activity, it must not receive a financial benefit directly attributable to the infringing activity;
- and (3) upon receiving proper notification of claimed infringement, the site must expeditiously take down or block access to the material.¹⁸⁴

Adopting this legislation would provide ISPs, including those that print and distribute 3-D printable products, with clear steps to protect themselves from contributory trademark infringement. It would also provide trademark owners with clear steps on how to protect their trademarks over the Internet.

CONCLUSION

3-D printing technology is projected to substantially impact the global economy. The fashion industry should prepare

Rather, provided that the website removes the material when an intellectual property owner files a complaint, trademark owners must monitor for infringement.”).

¹⁸¹ Kessler, *supra* note 170, at 396-97.

¹⁸² Levin, *supra* note 175, at 521.

¹⁸³ Sunderji, *supra* note 171, at 940; *see also* Levin, *supra* note 175, at 493.

¹⁸⁴ Levin, *supra* note 175, at 522.

for both the positive and negative consequences of 3-D printing. The fashion industry is particularly susceptible to 3-D printing technology due to the industry's lack of comprehensive intellectual property protection. Fashion designers and brand owners must advocate for intellectual property reform. Failure to reform intellectual property law may result in the spread of online fashion design piracy. If intellectual property law and the fashion industry mutually adapt, 3-D printing may present an exciting opportunity for designers to be increasingly more creative.