

## AI Creates Legal Challenges For The Fashion Industry

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Artificial intelligence is giving rise to a quiet revolution in the fashion industry as it plays a growing role in the product development, marketing and sales strategies of fashion designers and retailers. This revolution brings new business and legal challenges to the industry — not least in the areas of trade secret protection, traditional intellectual property rights, and privacy law.

### What Is Changing

Historically, fashion brands and retailers worked with a limited amount of data to predict what will sell, where it will sell, and what it will sell for. Advertising was targeted in only the broadest sense. Much of fashion decision-making was based on individual and corporate experience, as well as gut feeling. If retailers and designers got their estimates wrong, they could either end up with surplus of certain products and be forced to implement deep discounts, or could find themselves unable to meet customer demand.

Artificial intelligence, combined with big data, now allows the fashion industry to use internet bots to crawl e-commerce sites and social media and collect and analyze a previously unimaginable quantity of data. This data reveals, on a massive scale, what products are selling, the key features of those products worth imitating in a competing fashion line, where they are selling, at what price points, and following what trends. This allows the industry as a whole to be much more responsive to the market. But it also poses a threat to the intellectual property of innovators, whose efforts can be selectively replicated.

It may also raise consumer privacy concerns. The combination of artificial intelligence, big data, and three-dimensional sensing and augmented reality technologies now allows for more sophisticated targeting of individual consumers than ever before. But that targeting necessarily relies on the analysis of reams of data, including personal data, that such customers may feel they did not expect, or desire, to see collected by fashion brands and retailers.

### Some Secrets Are Less Secret



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Fashion brands and retailers have long treated pricing information, discount strategies, client lists and inventory records as confidential information — even trade secrets. But direct competitors, including counterfeiters, are now better able to deduce much of this previously hidden information through the mass processing of publicly available data, at a remarkably low cost. This may challenge the ability of major players in the fashion industry to protect previously secret information from their competitors.

Take laws on the misappropriation of trade secrets. Competitors have long been permitted to derive or reverse engineer secrets from public information. In a famous case striking down a state law that prohibited one type of reverse engineering, the U.S. Supreme Court emphasized that under traditional trade secrets law, “[t]he public at large remain[s] free to discover and exploit [a] trade secret through reverse engineering of products in the public domain.”[1]

Accordingly, the Uniform Trade Secrets Act and the Defend Trade Secrets Act provide no protection for information that is “readily ascertainable [by] proper means.”[2] The UTSA’s commentary explains that “proper means” include both “[o]bservation of the item in public use or on public display” and “[d]iscovery by ‘reverse engineering.’”[3]

Fashion brand and retailer information that was not previously “readily ascertainable by proper means” may be so today or in the near future, thanks to new technologies. For instance, historical pricing for millions of online products, including apparel, is already widely available on the web — indeed, even consumers regularly consult such information when they shop online. Artificial intelligence permits competitors to draw on this data and numerous other public information sources to provide detailed estimates of manufacturing costs and methods, product sales strategies, and sales performance. It may even become possible to learn about competitors’ concepts and designs while they are still on the drawing board, based on automated analysis of sources as varied as employee social media accounts and chatter at industry gatherings.

As new technologies improve their accuracy in estimating competitors’ secrets, courts and juries deciding trade-secrets cases may conclude that technology has effectively rendered many of the fashion industry’s secrets “readily ascertainable by proper means.” Such a result is not inevitable — much depends on the availability and success of the relevant technologies. But when artificial intelligence and big-data analysis technologies are mature enough to convince courts that they render many secrets “readily ascertainable,” courts may have no choice but to strip away trade-secret protection from those secrets.

### **Traditional IP Law Protections May Become Less Reliable for the Fashion Industry**

Fashion brands have enjoyed some limited, but crucial, protections against copying of their intellectual property under U.S. law. For instance, trademark law provides strong protection for brand logos, and it also protects some individual products with legally distinctive trade dress that does not serve a functional purpose.[4] Copyright law protects decorative elements from copying.[5] And major fashion labels are increasingly turning to design patents for deeper protection than offered by either trademark or copyright law.[6]

These protections are already under threat — even without adding artificial intelligence into the picture. For example, defendants can overcome such protections if they can show that the element in question is factually functional.[7] Additionally, parody has proven an increasingly effective defense to infringement claims, and will only become more common in light of My Other Bag Inc.’s recent Second

Circuit success against Louis Vuitton on that defense.[8]

Artificial intelligence may further increase the risk of legal and illegal copying of fashion products. Direct competitors and counterfeiters may turn to artificial intelligence and big data, including social media posts, to identify the characteristics of a product or product line that correlate with high sales value. Based on this analysis — potentially assisted by highly targeted focus groups or online testing and the work of human designers — they may become able to offer their own products incorporating those characteristics within days of the original products' launch.

In the near term, therefore, artificial intelligence-guided efforts to grab market share from new products may well lead to intellectual property litigation. Over the longer term, however, successful artificial intelligence technologies that manage to toe the line between mimicry of successful characteristics and infringement may allow competitors to capture the market share of innovative fashion brands through largely uncreative copying, while denying the innovative brands the legal means to stop it.

### **Privacy Laws May Become a Greater Challenge for the Industry**

As international retailers and fashion designers increasingly rely on the processing of big data and artificial intelligence, they are likely to find themselves wading into the unfamiliar and ever-shifting terrain of privacy law. Fashion players are likely to encounter privacy law issues in their direct interactions with consumers, in market research, and in their efforts to track competitors' activities through social media.

Direct interactions with consumers, though a long-standing feature of many fashion businesses, are undergoing a major shift because of the nature of the consumer information being collected. An early example is the Amazon Echo Look device: Owners of the device allow it to photograph them and their surroundings so that the device can offer style suggestions based on machine learning. In practice, this means consumers are providing their photographs to Amazon, which uses artificial intelligence (trained by humans) to analyze its customers' photographs. This provides Amazon a far more detailed understanding of its customers' clothing needs than was previously possible from purchase and return histories.

More complex technologies, including those found in the Apple iPhone X, will soon even permit fashion retailers and designers to use three-dimensional sensors to map consumers' bodies. This will permit them to make targeted clothing recommendations. Even more impressively, it will provide consumers with highly accurate 3-D renderings of products on their own bodies, floating in augmented reality in their own homes.

As a result of these types of technologies, fashion businesses will begin to come in contact with far more sensitive consumer information than ever previously contemplated, including intimate photographs.

Additionally, fashion businesses will find it increasingly important to collect and analyze social media posts. For instance, artificial intelligence tools can use social media posts from customers to improve their targeting of products to those customers and to identify product quality problems before they become widely known. Such tools can also learn important competitive and market information from accounts of competitors' employees and the public at large. And they can anticipate trends by monitoring platforms like Twitter and Instagram.

The data collection inherent in these new technologies could easily implicate the European Union's

General Data Protection Regulation, which authorities will begin to enforce next month. Depending on how businesses gather and analyze data, they might find themselves in the role of a “controller” or “processor” of “personal data” under the GDPR. Moreover, some of the data might fall under the definition of “biometric data,” which is further restricted. Fashion-related businesses would be wise to address GDPR concerns quickly, including ensuring that appropriate “technical and organizational measures” are in place and that consumers give their fully informed consent to all information gathered.

## Conclusion

Coco Chanel famously said: “In order to be irreplaceable, one must always be different.” The question going forward may be whether being different is enough to be irreplaceable — and, if not, what more is needed. The most successful companies in the future may still be those that develop the most unexpected, creative, and different designs. But unless such companies can anticipate and plan for challenges by upstart competitors powered by artificial intelligence, they may find themselves to be more easily replaceable than expected.

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[1] *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 155 (1989).

[2] UTSA § 1(4)(i); DTSA, 18 U.S.C. § 1839(3)(B).

[3] UTSA § 1 cmt.

[4] See, e.g., *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*, 696 F.3d 206, 212 (2d Cir. 2012) (holding that a contrasting red sole was entitled to federal trademark protection because it had “acquired limited ‘secondary meaning’ as a distinctive symbol that identifies the Louboutin brand”).

[5] See, e.g., *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1007 (2017) (holding that graphic designs on cheerleading uniforms were entitled to copyright protection).

[6] See generally Design Patent Lookbook, <http://designpatentlookbook.tumblr.com/tagged/design-patents> (a curated collection of recent fashion-related design patents).

[7] See, e.g., *Henri Bendel, Inc. v. Sears, Roebuck & Co.*, 25 F. Supp. 2d 198, 202 (S.D.N.Y. 1998) (dismissing a complaint because the elements of Henri Bendel’s cosmetic bags that were allegedly infringed were functional).

[8] See *Louis Vuitton Malletier, S.A. v. My Other Bag, Inc.*, 674 F. App’x 16, 17 (2d Cir. 2016).