

AI is coming and it will change trade mark law

The rise of artificial intelligence may mean some of the historic concepts and principles of trade mark law will simply no longer apply or will have to be interpreted differently, write [Lee Curtis](#) and [Rachel Platts](#) of [HGF](#)

Sitting at home or at work today, one might presume that the way product suggestions are made and how the product purchasing process is conducted has remained static over the years. That is not the case, however. The way products are bought has gone through three revolutions already in the past hundred years, and a fourth is on the horizon, if not already here.

Three revolutions, another coming

When the basis of trade mark law was laid down in the nineteenth century, one would enter a shop, a product suggestion would be made by a shop assistant from products kept behind a counter and a product purchase made based on that suggestion.

In 1916, when the Piggly Wiggly chain of stores in Memphis, Tennessee introduced what is now widely accepted as the modern self-service grocery store, the way products were purchased changed. Self-service removed the shop assistant from the product suggestion process and increased the likelihood of consumers being confused between trade marks.

Then there was the second revolution, online retailing. Online retailing with the development of the world-wide web was launched and developed in the 1990s and took off in the early part of this century. With online retailing came new challenges to trade mark law, Google and other search platforms based a whole business on keyword advertising and trade mark law had to deal with issues such as domain names, keywords, meta data and initial interest confusion.

1 MINUTE READ

Artificial intelligence, which reduces the role of the human being in the product suggestion and product purchasing process, means some of the historic concepts and principles of trade mark law will simply no longer apply, or at least will have to be interpreted differently to reflect the new retail reality. This raises several questions related to trade mark law, involving confusion, imperfect recollection, the average consumer, and secondary infringement. Only one case so far could be described as dealing with the interaction between AI and trade mark law. But it is likely that the number of trade mark decisions concerning AI will rise. The authors expect that the courts will interpret the involvement of AI in trade marks and purchasing decisions in a similar way to the Google France cases at the CJEU in which Google was not held liable for trade mark infringement in the automated Adword suggestion system unless it had been put on notice of the infringing activity.

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Then came the third revolution, the social media revolution, which is still a relatively new phenomenon and is having a big impact on how product suggestions are made and how products are purchased. Many products are now purchased or at least influenced by social media platforms. Facebook, Twitter, Instagram and the like have all raised new issues for trade mark law, without even touching on the rise of the “influencer”.

However, we now have the fourth revolution on the horizon – Artificial Intelligence (AI). And indeed the revolution may already be here. AI is everywhere, whether you are aware of it or not. It is found in a range of existing forms that people encounter daily, many of which operate in the retail environment.

Why is AI relevant to trade mark law?

The impact of AI systems in everyday life and the process of buying products and services, which in essence is the focus of trade mark law, is increasing. It is predicted by a study from Gartner that by 2020, 85% of customer service interactions in retail will be powered or influenced by some form of AI technology. AI global revenue is predicted by market intelligence firm Tractica to skyrocket from \$643.7 million in 2016 to \$36.8 billion in 2025. A report from advertising agency J Walter Thompson suggests that 70% of so-called millennials appreciate brands using AI technology to showcase their products, with a report from Statista suggesting that 38% percent of consumers receive better purchasing guidance with AI than without.

To date, AI and IP discussions have centred around patent law and patent protection for AI software applications. The impact of AI on trade mark law and whether the present law is “fit for purpose” seems to have been completely overlooked. Trade mark law coped with the self-service revolution, the internet revolution and just about with the social media revolution, but can it deal with the AI revolution?

It’s all about people or lack thereof

Why is AI relevant to trade mark law? Well, at its very foundation trade mark law is all about humans and human interaction with brands and the purchasing process. Think about some of trade mark law’s buzz words; imperfect recollection, phonetic, conceptual and visual similarity, confusion and the average consumer – they all centre around human beings and their interaction with brands.

AI effectively reduces or, at its most extreme, completely removes the human being from the product suggestion and product purchasing process. This raises several questions. Can AI be confused? Does AI have imperfect recollection? Does AI take the place of the average consumer? When your Amazon Echo suggests and buys a product for you, does it become a secondary infringer? Readers will recall that both Google and eBay have been the subject of trade mark infringement proceedings based on allegations that they can provide the means to enable infringing activity. Further, will a court review AI algorithms in court cases?

An October 2017 article in Harvard Business Review by Ajay Agrawal, Joshua Gans and Avi Goldfarb suggests that some aspects of the retailing process could be completely turned on their head by AI, changing from a “shopping-then-shipping” to “shipping-then-shopping” model. Conventional retailing is reactive. First the customer reacts to branding cues such as words, logos and colours, then makes a purchasing decision. AI in its purest form is predictive retail, it predicts what products a consumer wants, makes suggestions for product purchases and buys products automatically on the consumers’ behalf, without their input.

Examples of AI in retail now

There are several examples of AI operating in retail environments. The simplest form of AI, which most consumers have probably encountered, can be found on the Amazon website and its “recommendations based on your order” or general product suggestion feature. The shopping giant has AI systems in place which provide product suggestions and recommendations based on a variety of parameters including your browsing history, what others have bought and your purchase history. These targeted product suggestions are made through AI. This suggestion framework at the very least has substituted the human shop assistant of old with AI.

Another example of AI in retail is the Amazon Echo and Google Home devices. Amazon’s Echo product is run by a voice recognition software program called Alexa and is essentially AI. Although at present a default setting prevents Alexa automatically ordering products, even with the default it makes product suggestions to consumers based on various parameters such as past purchasing decisions. Now this may seem benign but it removes a crucial part of the product selection process frequently considered in trade mark law. Alexa is the one analysing the market, it has all the market and branding information, not the consumer. If a consumer asks Alexa for tea, what happens if Alexa suggests an infringing product and the consumer buys it?

It is envisaged that in time products such as Amazon Echo will move towards automatic purchasing. The so-called “shipping-then-shopping” model highlighted earlier. Here the AI would completely take over the purchasing decision. However, in this scenario how does the AI know which brand to choose? Does AI get confused by two similarly named products available? An AI assistant such as Amazon Echo in future will be able to trawl the whole of the internet based on a relatively general request



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from a consumer, assess the branding information, make the purchase and have the product delivered to the consumer, without any human interaction in that process. Although for the “shipping-then-shopping” model to work, retailers will need to facilitate a sophisticated returns infrastructure, as consumers will naturally not be happy with all the purchases made by their friendly AI assistant. This model will increase the need to assess issues such as post purchase confusion.

To illustrate some of the issues associated with automatic purchasing, it was reported in the press in January 2017, that a six-year-old girl from Texas, said to her parents’ Amazon Echo, “Alexa could you play dolls house with me and get me a dolls house,” which prompted Alexa to order a dolls house and, oddly, a bag of cookies. A nice story, but the little girl was not involved in the product selection or product purchase decision. Further, when this story was reported on local news, it is claimed that other Amazon Echo products were triggered, on hearing the report, to order dolls houses in other homes. Presumably different dolls houses were ordered based on the individual parameters of each Alexa system in each home. However, there wasn’t a human factor as no human was involved in the product suggestion and purchasing process, beyond the initial very wide product request of the little girl.

Another example of AI already in the marketplace are bots, also known as chatbots. Bots are effectively automated assistants. Many consumers do not even know that they are interacting with a bot in the online retail or customer service environment. One notable example of a bot in the retail field is eBay’s ShopBot, a personalised shopping assistant that helps users find the best deals from eBay’s one billion listings. The stated vision is to make shopping with eBay as easy as talking to a friend, whether you are looking for something specific or

just browsing for inspiration. However, there still is the issue that ShopBot is not a human friend, it is an automated AI platform. What happens if the ShopBot suggests the purchase of counterfeit articles on sale on eBay? Still, the influence of bots seems only on the rise. Keith Weed, chief marketing officer at Unilever, was recently quoted in *The Economist* as saying, “We’ll be having bots trying to influence your bots about buying our products.”

Yet another Amazon product which is powered by AI is the Amazon Dash and the corresponding replenishment service. Dash at present is a Wi-Fi linked button which can replenish consumable products. However, in time such replenishment services could become completely automatic. The Dash button itself needs to be linked to a product by the customer, but what is more interesting is the replenishment service. This service is intended for consumable products such as groceries or goods as ink cartridges, coffee pods or water filters. Dash will automatically re-order consumable items before you run out, so you’ll never run out of your coffee pods again. But this throws out the question, which items are being re-ordered automatically? Are these the same brand as the previous? What if there are compatible products? Does this allow for competition in the marketplace (possibly a whole different topic)? Now, this service is tightly controlled by the brand owners who have signed up to the Dash Replenishment Service, but as it becomes more widely available or other providers beyond Amazon enter the market, there are likely to be more consumables available and AI will no doubt be making the decisions.

Ed Huber, vice-president at The Clorox Company, the owner of the Brita water filter brand, states in a promotional advert for the Amazon Dash service “that some of the best technology is the technology that you are unaware of, the fact that something



AI is now even taking on a more human form, with the release of Pepper the robot

is being done for you, in such a seamless way, the benefits are meaningful, yet elegantly simple.” It takes steps out of the purchasing process. It makes replenishment simple, it removes the human from the purchasing process. Just think about those statements and their impact on trade mark law.

Taking the Dash technology further, AI replenishment applications could be applied to white label domestic appliances and linked to the internet of things. It is quite possible in the future that your fridge will have the ability to monitor its contents and re-order products such as cheese or milk. But this raises several questions. When making purchases on your behalf, is AI considering branding at all? Or does it simply focus on price, taste, nutritional information, availability, speed of delivery?

Moving on to fashion, AI is starting to appear in the form of virtual shopping assistants or personal stylists. One such example is Mona, a personal shopping app that learns customer preferences and then makes purchase suggestions based on the user’s style and price bracket. Now, Mona learns from customer feedback to adapt and tailor the suggested items and the more you use it, the more it learns. It is entirely possible that in future Mona, or applications like Mona, will reach the stage where the customer can simply request a whole new wardrobe and Mona will select, order and deliver it.

When considering IP issues surrounding AI applications such as Mona, it is important to consider the role of the trade marks and designs. Mona can be set to alert the user to certain branded products, but also to styles. So, Mona could be making selections purely on the look of an item rather than its brand. And if a user likes a style of product, will Mona show lookalike products? Does this lead to implications with trade mark and design rights for fashion retailers?

Lastly, AI is now even taking on a more human form, with the release of Pepper the robot. Pepper can read customer’s moods and identify their needs. In a retail environment, Pepper can be used to help customers with product selection and, in the future could even replace shop assistants altogether. As with the previous examples, Pepper could be making the purchasing decisions for the consumer, or at least, influencing the purchasing decisions, effectively replacing that human shopping assistant of old.

AI and trade mark law

So, with all the advances in AI technology and their invasion into the retail industry, where does this leave trade mark law? As stated above, retail will no longer be reactive but predictive, and potentially the human will be removed from the purchasing process.

Currently in trade mark law, we have the common tenets of the average consumer, phonetic, aural and conceptual similarity, imperfect recollection and blurring of trade marks all of which have their roots from the 19th century when Trade Mark Law was first developed.

Taking the first concept, the average consumer, in current law the average consumer is deemed to be reasonably well informed and reasonably circumspect and observant, but rarely has the chance to make direct comparisons between marks and must instead rely upon imperfect recollection of the relevant marks. Furthermore, the average consumer’s level of attention varies according to the category of goods or services in question. These are all inherent human “faults” built into trade mark law.

But when AI is the consumer, do these parameters still apply? Would AI be likely to suffer from imperfect recollection? Does an AI’s level of attention vary according to the product? We think it unlikely, AI does not have a memory like humans, it is a computer program and is capable of perfect recollection. There is often a large amount of debate in trade mark cases, in the UK at least, over who is the average consumer in the market under consideration. With AI, is it now the average consumer? Is there an average AI consumer with parameters of purchase varying in each household?

Similarly, the concept of confusion or likelihood of confusion in trade mark law as to whether trade marks are considered similar, is unlikely to apply to AI. If an AI program has a perfect recollection, it will not be confused as to the brand name of a product. Can AI associate trade marks? Does AI consider the repute of trade marks? Does AI slur trade marks and place the

emphasis on the beginnings of trade marks rather than the end? Does AI even consider brand names in purchasing decisions which may solely be based on price, quality and speed of delivery and the like?

Turning to infringement provisions, if the AI program suggests a product that infringes a registered trade mark or is a counterfeit, would the AI be deemed a secondary infringer?

We do not know how these questions will be answered in the future, nor how these issues will unfold, but it is quite possible that many of the long-held tenets and principals of existing trade mark case law will simply become irrelevant in the age of AI, or will at least need to be contemplated in a new way.

How must trade mark law adapt?

To date, there has been only one case that could be described as dealing with the interaction between AI and trade mark law. In *Cosmetic Warriors and Lush v Amazon.co.uk and Amazon EU* ([2014] EWHC 181 (Ch)), Amazon was not held liable for infringing Lush's trade marks when an Adword advertisement did not incorporate the Lush trade marks and was linked to the Amazon product suggestion system, which as highlighted above is a form of AI.

However, it seems likely that the number of trade mark decisions concerning AI will rise. Although, we are yet to see any in practice, we can make some predictions as to the key issues they may address and the expected outcomes.

On the important issue of liability of AI applications, we expect that the courts will interpret the involvement of AI in trade marks and purchasing decisions in a similar way to the Google France cases (CJEU, March 23 2010). In these well known cases, Google was not held liable for trade mark infringement in the automated Adword suggestion system, unless it had been put on notice of the infringing activity. The Adword system is a basic form of AI which generates and suggests Adwords for retailers to purchase and use to promote their websites through search engine optimisation.

Further, in *L'Oréal v eBay International* (CJEU July 12 2011), eBay was not held liable for IP infringements unless they were on notice of infringing activity. Thus, we would expect a case involving AI to be decided in a similar way, with the AI or its owner, not being held liable unless put on notice of infringing activity. It seems that if an AI application was acting in such a way that it could enable infringing activity, and the owner of that AI application was put on notice of such activity and did nothing then they would be liable.

Guidance can also be taken from the WIPO Overview with regards UDRP disputes. With respect to "automatically" generated pay-per-click links, where the automatic service is a form of AI, WIPO panellists have held that a respondent cannot disclaim responsibility for content appearing on the website associated with its domain name. However, while a respondent cannot disclaim responsibility for links appearing on the website associated with its domain name, panels

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have found positive efforts by the respondent to avoid links which target the complainant's mark (for example, through "negative keywords") to be a mitigating factor in assessing bad faith.

Further guidance can be taken from old copyright cases. In *CBS Songs v Amstrad Consumer Electronics* (RPC December 1 1988), Amstrad the purveyor of tape-to-tape recorders was not held liable for secondary copyright infringement on the basis their products were not promoted or designed specifically to infringe copyright. Similarly, AI systems are not specifically designed to infringe IP rights, they are designed to make consumers lives easier and the product purchasing process easier.

Overall, we theorise that the courts would treat AI in a similar way to the internet service providers as per the decisions discussed above. If the AI or the programmers behind the AI have been put on notice of the potential infringing activity, only then will they be liable under trade mark law.

Further, we expect that the assessment of the "average consumer" and issues of confusion and association will be transposed into the world of AI and trade mark law by courts assessing the actual algorithms behind the operation of AI applications in trade mark cases. The algorithm providing the parameters of the purchasing decision. This obviously raises the issue of confidentiality and commercially sensitive information, but if infringing activity is occurring this may be the only way to assess it.

An impact that cannot be overstated

AI is indeed coming and to a degree it is already here. Its impact on trade mark law and IP law more widely cannot be overstated and in fact it is quite possible that some of the historic concepts and principles of trade mark law will simply no longer apply, or more likely will have to be interpreted differently to reflect the new retail reality.



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