Trademark protection for AI-generated virtual influencers and commercial synthetic personas

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Abstract: As virtual influencers gain popularity as a commercial medium, they are reconfiguring the legal conception of identity by shifting it from a personal identity or lived experience into an asset that can be programmed. Virtual influencers are designed to serve as a commercial signifier from their first day of existence rather than deriving their value from the experience of human influencers. The creation, ownership, and enforcement of personal identity raise difficult legal questions. This is because multiple parties produce such identities. They are also modified by algorithms and replicated easily on diverse platforms. Traditional trademark doctrines inadequately address uniqueness without a human creator, fragmented ownership stakes and infringement via behavioural imitation rather than direct copying. This paper proposes a modified framework for trademark protection of synthetic personas that safeguards innovation and prevents monopolisation of cultural aesthetics and creative expression. It suggests that legal doctrine should harmonise investment incentives, labour fairness, and cultural participation so that digital markets will not only be competitive but also socially sustainable, as synthetic identity is progressively becoming the key factor in commercial communication.

Keywords: Virtual influencers - Trademark protection - Synthetic identity - Metaverse Commerce - innovation.

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حماية العلامات التجارية للمؤثرين الافتراضيين المولَّدين بواسطة الذكاء الاصطناعي

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مستخلص البحث: مع تزايد انتشار المؤثِّرين الافتراضيين بوصفهم وسيطًا تجاريًا، يعاد تشكيل مفهوم الهوية من منظور قانوني، إذ لم تعد تُفهم باعتبارها نتاجًا لتجربة شخصية أو وجود إنساني، بل أصبحت موردًا اقتصاديًا قابلًا للبرمجة والتشكيل. فهذه الشخصيات الرقمية تُنشأ منذ بدايتها لتؤدي دور علامة تجارية، وتُستمد قيمتها من تصميمها الوظيفي لا من قيمتها ككيان بشري. غير أن إنتاج هذه الهويات وتملكها وحمايتها القانونية يثير إشكاليات معقدة، نظرًا لتعدد الفاعلين المشاركين في بنائها، واعتمادها على الخوارزميات، وقابليتها العالية لإعادة الإنتاج والانتشار عبر منصات متعددة. ويكشف هذا الواقع قصور قواعد العلامات التجارية التقليدية، التي تفترض وجود مبتكر بشري واحد، ولا تعالج بوضوح مسألة الملكية المشتركة، أو صور التعدي القائمة على المحاكاة السلوكية بدل النسخ المباشر. وانطلاقًا من ذلك، تقترح هذه الدراسة إعادة تصور إطار حماية العلامات التجارية للشخصيات الاصطناعية، على نحو يوازن بين تشجيع الابتكار ومنع احتكار الأشكال الجمالية والثقافية والتعبير الإبداعي. وتخلص إلى أن تطوير الوضع القانوني يقتضي مواءمة حوافز الاستثمار مع اعتبارات العدالة في العمل والمشاركة الثقافية، بما يضمن أسواقًا رقمية تتسم بالتنافسية والاستدامة الاجتماعية في آن واحد، في ظل تصاعد أهمية الهوية الاصطناعية في بنية التواصل التجاري المعاصر

الكلمات مفتاحية: المؤثرون الافتراضيون - حماية العلامات التجارية - الهوية الاصطناعية - التجارة في العالم الافتراضي - الابتكار.

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1. Introduction

With the advent of digital influencers - characters created by computers as brand representatives - there is a fundamental shift in how identities are used as products in a digital economy. Synthetic persons have transitioned from passive marketing tools to active participants in the digital marketplace, shaping consumer conduct and building communities around digitally generated identities that are indistinguishable from those of real people (Conti et al., 2022). The market relevance of virtual influencers brings up an important legal question: Can a virtual influencer's identity be protected by trademark? Traditional trademarks indicate the origin of goods and services. However, virtual influencer identities combine character, brand, and trademark into one asset made for profit (Audrezet & Koles, 2023). The conceptual foundation of trademark law is readily adaptable, as synthetic characters are increasingly being diffused across social networks, gaming cultures, and immersive commerce. Yet this shift necessitates a conceptual revision of distinctiveness and infringement for a posthuman market.

The proposed research aims to investigate the possibility that the synthetic persona identity can be identified and counted as a protectable subject matter based on trademark law. More specifically, it considers the critical mass of distinctiveness, the division of ownership in multi-stakeholder development platforms, and the degree of infringement in digital and decentralised ecosystems.

Following this introduction, the analysis proceeds by first examining the commodification of identity in a post-human market and reassessing the core tenets of trademark theory when applied to synthetic personas. The paper then explores the challenges of constructing distinctiveness without human authorship, the ownership complexities of distributed creative production, and the enforcement dilemmas of imitation in digital and decentralised ecosystems. Subsequently, it analyses the tensions between persona trademarks and the publicity rights traditionally associated with human celebrities, before presenting a comparative overview of trademark approaches across the United States, the European Union, and the United Kingdom, and proposing a framework for the trademark protection of synthetic personas, informed by the doctrinal, comparative, and case-based methodology outlined above.

1.1 Methodology and analytical framework

This study adopts a doctrinal and analytical legal research methodology to examine the emergent challenges of trademark protection for AI-generated virtual influencers and commercial synthetic personas. The doctrinal approach, which constitutes the foundational method of legal scholarship in common law traditions, involves a systematic analysis of legal principles, statutes, and case law to identify, interpret, and synthesise the applicable rules governing synthetic identity within trademark frameworks (Hutchinson & Duncan, 2012). The analysis is also normative in orientation, as it evaluates the adequacy of existing legal doctrine and proposes a modified structure for the protection of synthetic identities that balances commercial innovation with cultural expression and freedom of speech.

The study further incorporates a comparative legal component, following the functional method of comparative law that identifies common problems and examines divergent solutions across legal systems (Zweigert & Kötz, 1998). It focuses on the trademark regimes of the United States, the European Union, and the United Kingdom. These jurisdictions are selected for their significant influence on global intellectual property norms and their advanced engagement with digital economies, including the metaverse and non-fungible token (NFT) marketplaces, which provides a robust basis for assessing varied regulatory responses to the challenges posed by synthetic personas.

Finally, the doctrinal and comparative analysis is supplemented by applied mini-case studies that anchor the theoretical discussion in concrete legal disputes. These include an examination of the NFT-related trademark dispute in Hermès International v. Rothschild (the MetaBirkins case), which tested the boundaries of trademark protection in the context of digital assets, and an analysis of the expressive-use doctrine as clarified by the United States Supreme Court in Jack Daniel's Properties, Inc. v. VIP Products LLC (2023). Together, these cases illustrate the practical tensions between trademark rights, artistic expression, and digital replication that are central to the study's inquiry.

2. The commodification of identity in a post-human marketplace

Virtual influencers are the newest and potentially the most extreme expression of the commodification of identity. This trend has developed in parallel with the digitalisation of consumer culture. Historically, identity was valued commercially based on the identifiable persona of celebrities or human influencers. Virtual influencers differ from these traditional figures, who gain market power organically through public image and cultural relevance. Instead, virtual influencers have a deliberately engineered identity (Sharma et al., 2025). Their image is a product designed to be relatable, desirable, and aligned with brands.

The economic reasoning of influence changes in the transition from personal to programmable persona. Human influencers are inevitably limited by reputation sensitivity, personal labour constraints and unpredictability. These frictions are eliminated with synthetic persons; they are constantly available and can be tailored and manufactured to represent the demographic or ideological characteristics of a particular brand (Sjödin et al., 2023). They are not built from human experience but by a designed revenue model.

This transition alters the relationship between the brand and the audience. Whereas human influencers derive their authenticity from a perceived personality and a life story, virtual influencers must manufacture it. Their producers blend intimacy signals and participatory methods to simulate a human presence. Consumers are increasingly accepting of the "authenticity illusion" as long as a virtual influencer provides continuity, relatability and moral consistency (Jayasingh et al., 2025). The legitimacy of the persona is no longer based on its human form but on the audience's emotional response and the persona's algorithmic visibility.

The convergence of consumer culture and the creation of synthetic identities is now so complete that the word "influence" has become synonymous with a marketable commodity. Brands now seek to collaborate with virtual influencers not for any insight or lived experience these entities possess, but because they acquire an "identity asset" that has been completely engineered for commercial purposes. In this context, virtual influencers represent an efficient business model: providing access to the same persona across multiple markets and languages without the risk of personal scandal or inconsistent imagery. In fact, the thoroughly fabricated personas of virtual influencers like Lil Miquela and Imma have proven capable of sustaining brand collaborations as effectively as leading human influencers, entirely without any physical form (Shi, 2023).

The long-term implications extend beyond marketing. When identity becomes an alienable commodity, firms gain unprecedented control over personality as property untethered from human beings. Identity becomes modular, transferable, and commercially optimised. The legal system now faces a novel type of asset: artificial commercial identities, which are more than trademarks, images, or characters. Trademark law, which was originally designed to manage market signals, must now contend with digital identities engineered to transmit those signals. The commodification of identity is no longer merely conceptual; it is operational.

3. Reassessing the core of trademark theory

As virtual influencers assume the roles in the advertising world previously held by humans, virtual influencers that exist in a virtual environment operate similarly to the way brand names or trademarks operate. The virtual influencer's identity is the commercial origin signal in addition to being an endorsement of a product or service. Followers recognise virtual influencers' content and products through the distinct look, narrative, and actions that make up their persona. Identity thus works as a source-identifier, which is a key element of trademark protection (Thio et al., 2024).

This convergence of features breaks down the traditional separation of brand, trademark, and self. In the case of human figures, the character still has a life outside of business; the commercial link comes second. Virtual influencers reverse that causal relationship: personality exists to commercialise. Branding is embedded in the persona. As synthetic identity is constructed, the lines between personality, logo, and trademark blur meaningfully. The usual ideas about trademarks do not easily apply to brand identities, which change and grow as people interact with them (Gervais, 2019).

Virtual influencers are a reflection of the firms they represent as well as what they produce. While animated characters may represent a brand's values through animation or acting, corporate mascots exist solely to promote products/services. Virtual influencers have built and continue to build a relationship with customers through their emotional bond with the audience, as well as their ability to share content via social media platforms similar to what a traditional influencer would do. These relational elements create a semblance of the semi-autonomous identity as a commercial product that trademark law has not accounted for entirely yet. In addition, the alignment on a conceptual level between branding regulations and an entity without a human is quite unclear. Trademarks are built on the idea of a signifier that is different from the actual commercial entity - for instance, a word, a symbol, or an image that indicates a company.

Doctrinal complexity increases with the consideration of distinctiveness. Conventionally, market use and consumer perception build brand distinctiveness. Conversely, virtual characters are engineered for immediate distinctiveness by design, contrived to be recognisable, lacking the typical cultural maturation that human identities undergo. Whether this engineered distinctiveness satisfies the same legal threshold as organically developed distinctiveness remains an open doctrinal question. Furthermore, the capacity for rapid modification of virtual personas introduces temporal instability into the distinctiveness inquiry, challenging the traditional assumption that a protectable mark maintains a consistent identity over time.

When a virtual influencer expands its identity onto different platforms (such as merchandise and licensing), the risk to trademark rights becomes apparent in how they can be enforced against lookalike personas, parody accounts or derivative creative works. By enforcing trademark rights for the persona identity, the creator may suppress the ability to produce artistically reinterpreted versions of that persona or to engage in dialogue about the cultural implications of said persona. Legal scholars caution that granting a synthetic identity trademark protection without concurrently introducing doctrinal safeguards could lead to the monopolisation of "identity templates", which would ultimately stifle freedom of expression rather than protecting consumers (Bohaczewski, 2020).

The central question is whether trademark law, designed to defend consumers and keep business competition fair, is suited to controlling how a persona's image is used for commercial purposes. At the very least, some adjustments to the law seem needed to stop trademarks from becoming tools that create monopolies on identity rather than simply indicating market sources. Legal recognition of synthetic personas should not, without evidence of deception, allow firms to exercise exclusive control over the identity patterns or emotional bonds that govern digital culture. The challenge is to balance the commercial function of virtual personas against the risk of excessive enclosure of expressive material.

4. Constructing a synthetic persona

It is not enough to say that virtual influencers' recognisability arises from their personal history. Virtual influencers are designed strategically to create recognisability. This is done by creating unique voices, visual styles, narratives and behaviours that create an instant distinction in today's attention economy (Audrezet & Koles, 2023). The combination of these elements creates a brand identity architecture. This includes a vocal tone that communicates an empathetic connection to the audience; colour palettes for visual engagement; story continuity to build a relationship between the influencer and the audience; and aesthetic signatures to create a sense of brand memory across various platforms (Shi, 2023). The aim is less about mimicking specific human features and more about the persona being recognisable and consistent in different contexts of commercial persuasion.

Distinctiveness, in this context, is a concept from product design that specifies the degree of the persona's differentiation rather than being a spontaneous cultural phenomenon. The persona's traits are adjusted using audience interaction data, sentiment assessment, and analytics from different online systems (Conti et al., 2022). This allows for the persona's recognition to be measured, changed, and scaled deliberately. Marketing teams do not wait until a narrative has emerged; they actively develop narrative lines based on brand motives and consumer expectations (Lu et al., 2021).

This dynamic raises questions about the sustainability of identity over time. Unlike human influencers, whose identities evolve through lived experience, virtual influencers can be updated on demand to remain current, altering their appearance, personality characteristics, political views, and even morality (Jayasingh et al., 2025). This ability to change opens up both commercial opportunities and legal ambiguities. Where protectable distinctiveness can be reconfigured without limits, the fundamental requirement of a trademark - that it functions as a consistent source signal - becomes hard to reconcile.

The risk of endless modification is compounded by technological advancement. With the expansion of AI generative tools, synthetic personas may fragment into different versions. These versions could include local adaptations or spinoffs that might keep similar stylistic features, but have different personalities or narrative roles (Sharma et al., 2025). Where does variation constitute a new identity, and where does it constitute infringement? The divisibility of digital identity complicates the rationale of distinction, revealing a boundary between legitimate adaptation and imitation.

Trademark law has traditionally relied on the assumption that signs are stable and separable from the product they represent. Synthetic personas challenge both assumptions; identity is neither stable nor separable because personality is the product. As virtual influencers move toward increasingly immersive commercial spaces, the law will need to recognise that “distinctiveness” can no longer be a single, static logo, but rather a dynamic, algorithmically managed personality constantly evolving through optimisation.

5. Ownership in a distributed creative ecosystem

The digital-native origin of virtual influencers fundamentally distinguishes their identity from that of human influencers. The creation of a synthetic identity can involve multiple creators. Each individual involved contributes their area of expertise to develop the many aspects associated with a digital character. This includes the appearance and physical motion of the character through design and 3D animation, the personality and continuity of the character’s story through writing and scripting, the sound of the voice through sound production, and the behavioural aspects of the character as they relate to audience engagement metrics through data science. Identity thus shifts from being an organically developed one to that of a meticulously planned product. This mode of collective authorship can blur legal boundaries that are based on the idea of a single commercial origin, as the persona is not necessarily that of one individual but a joint creation where every element is a separate entity of its own uniqueness (Audrezet & Koles, 2023).

The collaborative aspect of virtual personas makes establishing identity ownership harder than it is for human influencers. Often, companies that fund the persona’s creation claim complete ownership, similar to how they would treat a trademark. Work-for-hire agreements are common in studio-development models to consolidate rights. Still, uncertainties can occur if contributors keep rights over their creative contributions. The community-based models that place personas through crowd-based story lines or participatory design make their model more challenging to enquire about entitlements to commercial benefit. The mark is reconstituted by distributing labour, but trademark law traditionally assumes that the plaintiff in rights would claim only the mark. The doctrine of trademark is put under pressure when the distinctive feature of an entity stems from collective creative input and not from one single commercial origin (Gervais, 2019).

Furthermore, as the use of artificial intelligence continues to produce new personality features in real-time based on audience feedback, another complication arises with the generation of personality features by advanced animation models, voice-synthesis tools and text-generation systems, which do not simply replicate human commands but create new identity traits. In such cases, the line separating the designer, the company, and the AI model becomes unclear. Thereby, if the uniqueness is in part resulting from the machine-generated output, it is the issue that the creators of the algorithm or the operators of the model might be able to claim ownership rights over persona attributes. A risk arises in governance when personal identity is fragmented among contributors. These individuals may have all aided in the persona’s commercial recognition, yet none of them can claim sole ownership (Kalyvaki et al., 2025).

When teams disband, organisations dissolve, proprietary ideas are reallocated, or organisations split their resources amongst other partners, the fragmentation risk to virtual identities increases. Disaggregating intellectual property as if the virtual persona is made up of separable parts creates threats to the continuity and integrity of virtual identities (Ujjainwala, 2025). For example, if one party owns the rights to synthesise the voice while another party owns the visual rigging, neither will have the ability to reproduce the virtual identity of the persona, which could violate the rights of the other parties involved. Disputes over the ownership of constituent elements of a persona not only diminish its commercial value but can also compromise the very distinctiveness upon which trademark protection depends (Thio et al., 2024).

In addition, these challenges indicate that virtual influencers reveal a structural gap in the assumptions of trademark law relative to the realities of synthetic identity production. Trademarks are based on the notion that a single mark exists in the form of a one-to-one signature. Yet virtual personas are constructed in networks of creativity that do not reside under a single control. If commercial law is to accommodate new digital economies while still maintaining legal certainty, additional doctrines or standard contracts may be necessary to clarify the allocation of rights and mitigate identity fragmentation.

6. Infringement in a world of replicability

The rise of virtual influencers as a substantial commercial force has led simultaneously to a rise in the practice of identity imitation, primarily due to significantly improved capabilities in generative technology (Alim et al., 2025). Deepfake systems, voice-cloning tools, and image generation methods can produce near-exact replication of a synthetic persona's visual and auditory characteristics, gestures and behaviour patterns (Romanishyn, Malytska & Goncharuk, 2025). Infringement in this context centres more on replicating a persona's overall style and narrative than on copying set or established logos or slogans, as is the case with most standard trademark claims. A copy-persona can recreate the well-known visual style, story elements, posting habits, and way of speaking of a digital character that already exists. As these copy-based personas spread on social media and in online worlds, it gets harder to tell the difference between being inspired by someone and appropriating their identity. This puts the commercial worth of a unique persona at risk of being slowly destroyed (Sharma et al., 2025).

The imitation problem becomes more complex when parody is involved. A parody of human celebrities typically receives expressive protections because it critiques, comments on or humorously engages with a public figure. But when the subject is a virtual influencer, the scope of parody becomes unclear (Sorosrungruang et al., 2024). When a synthetic persona has trademark status but is not regarded as a public figure, parodies are more likely to be viewed as acceptable trademark use or protected critique instead of violations. Yet a broad allowance for parody can let people exploit commercial creations by labelling their copies as commentary. A regulatory balance is therefore required that carefully weighs both freedom of speech and the protection of brand identity, a critical consideration for artificial personas. Excessive enforcement of parody restrictions may suppress both public discourse and creative expression, while insufficient regulation may destroy the business viability of digital persona markets (Bohaczewski, 2020).

As virtual influencers exist across decentralised ecosystems, the difficulties in enforcement are amplified by their presence across many platforms as well as in game worlds, augmented realities (AR) overlays, and NFT marketplaces. Infringers can create 'copy' personas on alternative online or international sites outside the geographical limits of rights holders (Li et al., 2022). These environments have different, inconsistent, and sometimes entirely absent enforcement systems for intellectual property, creating fragmented, reactive approaches to protection rather than proactive ones (Zakir et al., 2023). Even with cooperation from these platforms, the technology they implement to enforce IP rights generally identifies only traditional trademark infringements; automated systems often fail to detect lookalikes whose resemblance is based on narrative or behavioural characteristics rather than direct copying of the underlying asset (Conti et al., 2022). Because synthetic identities can be reproduced and shared through decentralised systems, it is difficult for any central authority to keep up with them.

Tokenised identity components make enforcement even harder. When elements such as avatars, clothes, voices, or stories are converted into NFTs, they can be resold and used in various online spaces without proper tracking of who owns the rights. Purchasers may wrongly believe that their token ownership confers the right to publicly recreate the persona. This is a fundamental misunderstanding of the difference between owning a token and holding rights over a persona's identity. This confusion leads to both unintentional and intentional violations. Consequently, the financial motivation to use well-known persona traits keeps growing in virtual economies that are not strictly controlled (Thio et al., 2024).

Collectively, these enforcement pressures destabilise the distinctiveness that trademark law is designed to protect. Continuous exposure to replicas dilutes the source-identifying capacity of a persona, transforming identity from a controllable intellectual property asset into a replicable commodity. The legal system must therefore consider whether synthetic persona identity requires continuous protection from behavioural imitation, not merely from visual or symbolic reproduction.

7. Persona rights and the shadow of human celebrity

As the use of artificially created characters has increased, there is now a unique conflict between trademarks and publicity rights typically associated with celebrities. Famous people rely upon the legally protected rights of personality and likeness, which stem from the belief that one's identity is rooted in physical presence, as reflected in early right of publicity doctrine (Haelan Laboratories, Inc. v. Topps Chewing Gum, Inc., 1953) and later constitutional treatment of publicity interests (Zacchini v. Scripps-Howard Broadcasting Co., 1977). Artificially created characters have no physical form and thus do not connect their identity with an actual individual. The image, personality, and cultural meaning of these personas are created with the market in mind, making their identity a commercial asset from the start. This creates a key conflict: trademark law treats synthetic persona identity as something that can be sold and owned, but publicity laws regard human identity as inherently personal (Harbinja, Morse & Edwards, 2025; Rothman, 2012). The legal system must confront a philosophical question: Can identity legally exist without a person?

When this problem is applied to digital cultural economies, it becomes even more urgent. Human influencers used their own experiences, relationships, and cultural capital to become a commercial commodity. Synthetic personas disrupt this model, eliminating the human labour that originally created market value. Synthetic influencers can mimic the relatability and authenticity of human creators without the burdens and agency of human participation. As companies reallocate their advertising funds from human creators to virtual characters, the labour that underpinned the influencer industry is rendered increasingly dispensable. This transition reflects a broader cultural concern: if identity can be manufactured, purchased, and optimised, the emotional labour and selfhood constructed through human-generated content may lose its value. This shift does not merely redistribute commercial benefit but transforms how identity itself is culturally valued, with engineered likeability displacing lived experience.

The policy implications extend beyond labour markets to the potential monopolisation of identity. Overly broad trademark protection for synthetic personas may allow corporations to monopolise aesthetic and cultural codes that have historically existed within the public domain. Conversely, inadequate protection could permit unrestricted copying of virtual characters, undermining the commercial incentive to invest in persona development. The regulatory challenge lies in calibrating protection to encourage innovation without enclosing identity as private property.

This tension demonstrates that persona rights cannot be resolved only within the realm of publicity or trademark laws. Publicity rights assume identity is personal and inherent; trademark assumes a sign is external and commercial. Synthetic personas inhabit the space between these poles: their identities were never human, but they function as identity-bearing commercial actors. The law may therefore have to develop an additional "Persona Rights" category that will safeguard virtual identities from monopolising human-like expression whilst providing scope to allow commercially distinctive signalling to be protected and to maintain cultural and creative freedom. If the increasing number of artificial characters is not accompanied by such a doctrinal innovation, the very concept of identity might be transformed in such a way that it becomes one of the commodified fields in which cultural selfhood can be possessed, bargained and kept out.

8. A comparative overview of trademark approaches

The challenges identified in the preceding sections are not confined to a single jurisdiction. A comparative examination of the United States, the European Union, and the United Kingdom reveals both convergences and divergences in how trademark doctrine addresses source identification, confusion, dilution, and the interface between trademark rights and expressive freedoms.

In the United States, the Lanham Act provides the primary federal framework. Section 43(a) protects unregistered marks against uses likely to cause confusion as to origin, while Section 43(c) addresses dilution of famous marks. The multi-factor likelihood-of-confusion test, applied circuit by circuit, assesses factors such as mark similarity, proximity of goods, and actual confusion (AMF Inc. v. Sleekcraft Boats, 1979; Polaroid Corp. v. Polarad Elecs. Corp., 1961). For expressive uses, the Rogers v. Grimaldi test historically provided a heightened threshold, requiring plaintiffs to show that the defendant's use had no artistic relevance or was explicitly misleading. However, the Supreme Court's decision in Jack Daniel's Properties, Inc. v. VIP Products LLC (2023) narrowed this defence, holding that Rogers does not apply when a mark is used 'as a mark'. The United States also recognises state-level rights of publicity, which protect human identity but do not extend to synthetic personas (Restatement (Third) of Unfair Competition § 46; Indiana Code § 32-36-1-6).

The European Union's trademark regime, governed by Regulation (EU) 2017/1001 (EUTMR), assesses infringement through a likelihood-of-confusion analysis under Article 9(2)(b), considering the similarity of marks and goods and the distinctiveness of the earlier mark (Sabel BV v. Puma AG, 1997; Canon Kabushiki Kaisha v. Metro-Goldwyn-Mayer, 1998). The EUTMR does not contain an explicit expressive-use or parody defence, although Article 14 provides limited exceptions for descriptive and referential use. The European Union Intellectual Property Office has classified virtual goods and NFTs under Class 9, confirming that digital assets fall within the trademark registration system (European Union Intellectual Property Office (EUIPO), 2023). Additionally, the EU AI Act (Regulation (EU) 2024/1689) introduces transparency obligations for AI-generated content under Article 50, requiring that synthetic media be disclosed as such - a provision with direct implications for the commercial deployment of virtual influencers.

The United Kingdom's Trade Marks Act 1994 mirrors the EU framework in its infringement provisions under Section 10, applying a likelihood-of-confusion test for similar marks and goods (Section 10(2)). Unlike the United States, the United Kingdom has no statutory right of publicity or personality right. Protection of personal identity relies instead on the common law tort of passing off, which requires proof of goodwill, misrepresentation, and damage (Reckitt & Colman Products Ltd v. Borden Inc, 1990). The decision in Irvine v. Talksport Ltd [2002] extended passing off to false endorsement claims, but its application to synthetic personas remains untested. The absence of a dedicated personality right in the United Kingdom creates a regulatory gap that is particularly acute for AI-generated identities that have no natural person behind them (Marshall, 2023).

Across all three jurisdictions, the core challenge is the same: existing trademark frameworks were designed for static, symbolic marks and human-authored identities. None has yet developed a bespoke doctrine for synthetic personas whose identity is the product itself. The comparative analysis confirms that any proposed framework must address the common problems of source identification, confusion beyond visual copying, and the preservation of expressive freedoms, while accounting for the jurisdictional differences in how these doctrines are applied.

9. A proposed framework for trademark protection of synthetic personas

The preceding analysis has identified five structural challenges that synthetic personas pose to trademark doctrine: establishing a protectability threshold, assessing distinctiveness without human authorship, allocating ownership across distributed creative ecosystems, defining infringement in the context of behavioural and narrative imitation, and balancing trademark protection with defences for parody and artistic expression. Drawing on the doctrinal, comparative, and case-based analysis presented above, this section consolidates these challenges into a unified decision framework. Table 1 summarises the five criteria and their proposed application.

Table 1: Proposed Decision Framework for Trademark Protection of Synthetic Personas

Criterion	Proposed Test	Rationale
1. Protectability Threshold	The persona must function as a source identifier in commerce, demonstrated by evidence of consumer recognition, consistent commercial deployment, and market association with a single commercial origin.	Prevents protection of purely artistic or expressive creations that lack a commercial signalling function.
2. Distinctiveness Factors	Distinctiveness is assessed by the unique configuration of engineered traits (visual design, voice, narrative, behavioural patterns) that consumers perceive as identifying a specific commercial source, excluding generic avatar aesthetics or cultural archetypes.	Adapts the distinctiveness inquiry from lived experience to designed identity, while preventing monopolisation of common digital styles.
3. Ownership & Control Test	The trademark vests in the entity exercising overall commercial control over the persona, irrespective of the number of contributing creators. Contractual frameworks must allocate rights at inception, particularly for AI-generated traits.	Resolves the fragmentation problem inherent in multi-stakeholder persona development.
4. Infringement & Confusion Test	Infringement extends beyond direct copying to encompass behavioural, narrative, and stylistic imitation where such imitation is likely to cause consumer confusion as to commercial origin. Enforcement must account for cross-platform and decentralised environments.	Addresses the reality that synthetic persona imitation operates through style and behaviour replication rather than logo copying.
5. Defences & Safeguards	Parody, commentary, and artistic reinterpretation remain protected where the use is non-commercial in purpose and does not create a likelihood of confusion as to source. The Rogers v. Grimaldi test applies to genuinely expressive uses; Jack Daniel's confirms it does not apply when a mark is used as a source identifier.	Prevents trademark protection from suppressing legitimate cultural participation and free expression.

As a doctrinal baseline, the criteria operationalise the core trademark function of indicating commercial origin and the infringement focus on likelihood of confusion across the US, EU, and UK frameworks (Lanham Act, 1946; Regulation (EU) 2017/1001 (European Union trade mark, EUTMR), 2017; Trade Marks Act 1994, 1994; AMF Inc. v. Sleekcraft Boats, 1979; Polaroid Corp. v. Polarad Elecs. Corp., 1961; Sabel BV v. Puma AG, Rudolf Dassler Sport, 1997; Canon Kabushiki Kaisha v. Metro-Goldwyn-Mayer Inc., 1998).

Against this doctrinal baseline, the application of this framework can be illustrated through two recent disputes. In Hermès International v. Rothschild (S.D.N.Y. 2023), the court applied the Rogers v. Grimaldi test to Mason Rothschild's MetaBirkins NFTs, which depicted faux-fur versions of the Birkin handbag. Despite Rothschild's claim that the NFTs constituted artistic expression, the jury found trademark infringement, dilution, and cybersquatting, awarding USD 133,000 in damages. Under the proposed framework, the outcome aligns with criterion 1 (the Birkin identity functioned as a source identifier in commerce), criterion 4 (the MetaBirkins name and imagery created a likelihood of confusion), and criterion 5 (the use was not genuinely non-commercial). The case demonstrates that digital reproductions of brand identity, including those marketed as art, may constitute infringement when they exploit the source-identifying function of a protected persona.

In Jack Daniel's Properties, Inc. v. VIP Products LLC (2023), the United States Supreme Court held that when an alleged infringer uses a trademark 'as a mark' - that is, as a source identifier for its own goods - the heightened Rogers test does not apply, and the standard likelihood-of-confusion analysis governs. This ruling is directly relevant to synthetic persona disputes: where a copy-persona adopts the distinctive traits of an established virtual influencer to market competing goods or services, the use is 'as a mark' and should be assessed under criterion 4 without the benefit of the expressive-use defence. Conversely, where a third party creates a parody account that clearly signals its satirical purpose and does not compete commercially, criterion 5 preserves the space for legitimate cultural commentary.

A sustainable application of this framework requires doctrinal calibration. Protection should attach to specific, highly configured persona traits that reliably indicate commercial source, rather than to broad aesthetic categories or cultural archetypes. Parody and artistic reinterpretation must remain protected where no consumer confusion arises. Ownership rules should ensure corporate accountability while preventing identity from becoming an unlimited proprietary resource. Without these limits, trademark law risks reshaping digital markets and the conditions for identity and cultural participation.

10. Conclusion

Virtual influencers represent a fundamental shift in how identity is constructed, owned, and commercialised in digital markets. This study has demonstrated that synthetic personas fulfil the same source-identifying functions as traditional trademarks, yet they challenge every foundational assumption of trademark doctrine: distinctiveness is engineered rather than earned, ownership is distributed rather than singular, and infringement operates through behavioural imitation rather than symbolic copying. The comparative analysis of the United States, the European Union, and the United Kingdom confirms that no jurisdiction has yet developed a bespoke framework for these challenges. The five-criterion decision framework proposed in this study offers a structured approach to protectability, distinctiveness, ownership, infringement, and defences that is calibrated to the realities of synthetic identity. As the applied case studies demonstrate, this framework can accommodate both the protection of legitimate commercial investment and the preservation of expressive freedoms. Future legal development should ensure that trademark protection for synthetic personas promotes innovation and market competition without monopolising cultural aesthetics or displacing the conditions for creative participation in digital economies.

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