

INTRODUCTION

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In August 2025, two research centres from the Faculty of Law, National University of Singapore – the Centre for Technology, Robotics, Artificial Intelligence & the Law (“TRAIL”) and the EW Barker Centre for Law & Business – partnered with research centres from Columbia, Oxford and Tsinghua to co-organise a truly trans-national two-day conference marking the first-ever academic collaboration of its kind across these leading global institutions. Titled “Intellectual Property and Technology in the 21st Century: Challenges in the Next Decade”, the conference discussed how intellectual property (“IP”) laws can better deal with disruptive technology trends. The conference was also supported by partners such as Google, ByteDance, the Singapore Academy of Law and the Intellectual Property Office of Singapore (“IPOS”).

The traditional understanding of the creation, manufacture, reproduction, dissemination and sale of works, objects, artefacts, physical and virtual items is evolving with the development of new technologies. Artificial intelligence (“AI”), extended reality, Web3, quantum and neuromorphic computing are just some of the disruptive technology trends that are posing doctrinal challenges for copyright, trademarks and patents. In addition, the registered design right is evolving to encompass virtual designs produced by immersive technologies, and the emerging legal regime for the protection of traditional knowledge and traditional cultural expression will also have to find its footing amidst the accelerating pace of technological advancement. The challenges facing IP law in the age of AI are far-reaching, going beyond legal doctrine into sectors as diverse as technology, entertainment, and fashion, prompting a rethink of how businesses innovate and compete, to how creators, artists, and designers protect their work. Over thirty papers were presented over two days in both plenary and breakout sessions.

Before a gathering of about 100 leading legal scholars, policymakers, and industry experts from around the world, World Intellectual Property Organization (“WIPO”) Director General Mr Daren Tang delivered a keynote address calling for human creativity to remain at the core as IP laws evolve and adapt to fast-evolving technologies. The heads of IP Offices from the United Kingdom and Singapore,

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Mr Adam Williams and Mr Tan Kong Hwee, also joined him for a roundtable discussion which I moderated.

“Generative AI has evolved quickly yet remains a skilful replicator, lacking the real spark of originality and inventiveness that characterises human innovation and creativity. We should therefore see Gen AI as a tool, and like any tool, ensure that it is used for good,” said Mr Tang. “Ingenuity, invention and creativity is a fundamental part of who we are as a human species, and technology, as well as the IP system, must continue to protect, nurture and support this, never forgetting to put the human creator at its centre.”¹

We cannot do justice to the impressive breadth and depth of the papers presented at this conference unless we dedicate two editions of the *Singapore Journal of Legal Studies* to a special conference feature of selected peer-reviewed papers. In Part 1, we are delighted to present the complete keynote speech of Mr Daren Tang, the Director General of WIPO, together with four other scholarly papers.

In his keynote address, Mr Tang identifies three big trends that will shape the future of IP, innovation and creativity. Highlighting the fact that digital innovation is increasingly driving industrial innovation and the many challenges in this AI age, he notes that “we may find ourselves often swinging from the peak of hype to the valley of despair, but I believe that history offers us some wisdom in an age of uncertainty.”² He concludes that IP needs to be taken seriously, not just by the IP community, but by the larger business, finance, trade and economics communities, so that we may better understand how IP impacts the larger aspects of our economy and society.

In his article, “The Surprising Virtues of Heterogeneity: Legal Pluralism and the Governance of Generative AI”, Daryl Lim argues that the fragmented regulatory landscape for generative AI in the United States is not a flaw, but a strategic asset. He contends that legal heterogeneity “fosters adaptability, experimentation, and cross-pollination across doctrinal silos, an essential feature in responding to fast-moving technologies.”³ He notes that a single AI-generated deepfake of Taylor Swift illustrates the central challenge of generative AI regulation: it implicates privacy, publicity, copyright and speech, yet evades comprehensive redress under any single doctrine. In the absence of a unified federal regime, privacy law, the right of publicity, and copyright have developed overlapping responses to identity-linked harms. Each reflects a distinct conception of identity, rooted in different theories of harm and institutional traditions. In conclusion, he advocates the adoption in the United States of a narrowly tailored federal data right, designed as a supplement rather than a replacement for existing regimes, that targets high-fidelity, identity-linked uses of data.

¹ “Innovation must remain human-centred in the age of generative AI: WIPO chief at NUS Law conference”, *NUS News*, 4 August 2025 <<https://news.nus.edu.sg/innovation-must-remain-human-centred-in-age-of-generative-ai-wipo-chief-at-nus-law-conference/>>.

² Daren Tang, “Introduction: Intellectual Property and Technology in the 21st Century” [Mar 2026 Online] Sing JLS 1–6 at 4.

³ Daryl Lim, “The Surprising Virtues of Heterogeneity: Legal Pluralism and the Governance of Generative AI” [Mar 2026 Online] Sing JLS 1–35 at 35.

In their article “Vocal Identity Under Siege by AI Voice Cloning Technologies”, Jyh-An Lee and Xuan Sun also discuss the effectiveness of how different legal regimes handle the challenges presented by generative AI in the protection of the human persona. Prompted by recent controversies – including the striking resemblance between OpenAI’s ChatGPT-4o voice and that of Scarlett Johansson – their article examines how generative AI technologies undermine the unique value of the human voice and further complicate the legal questions surrounding personal identity. Through a comparative analysis, they evaluate three principal legal frameworks: the right of publicity, personality rights, and the personal data protection right. Lee and Sun conclude that “personal data protection laws offer distinct advantages in safeguarding biometric identity, particularly through providing robust mechanisms to control the processing and use of one’s own personal data. This is especially effective in circumstances where traditional concepts of recognisability are insufficient to trigger protection under the right of publicity or personality rights, thereby closing potential loopholes.”⁴ Their comprehensive study offers a foundation for understanding how existing legal approaches may be applied to the evolving challenges of vocal identity in the era of generative AI and the rapid advancement of AI-driven voice cloning technologies.

Tianxiang He in “Three Obstacles to AI-Generated Content Copyrightability” tackles the current debate of how prompt-based AI creativity is redefining how expressive works are produced, and the implications for copyright law. He argues that three major obstacles stand in the way of treating AI outputs as copyrightable without distinction. First, the lack of significant or meaningful human control in prompt-based AI creation undercuts the traditional requirement of human authorship. Second, recognising copyright in machine-created outputs risks an unjustified windfall for users who claim authorship without true creative contribution, undermining copyright’s incentive structure. Third, protecting AI outputs under copyright without distinction has broader creative and social consequences, including cognitive offloading, reduced authenticity, and stagnation in artistic diversity, which could erode the value of human creativity. He is of the view that “[n]othing in copyright law stops creators from using AI as much as they like – they simply should not get exclusive rights in everything that results.”⁵ The article recommends that future regulation should preserve human-centred authorship in copyright law, implement transparency mechanisms for AI-assisted creations, and avoid overextending copyright in ways that erode the value of human creativity.

The issue about whether trade secrets law should step in when IP laws fail is a hotly debated and controversial one. In his article “Against Trade Secrets Protection for ‘Semi-public’ Databases”, Yang Chen argues that the incentive-based justification, whether grounded in the traditional rationale or reframed through an investment lens, does not provide a compelling basis for extending protection to “semi-public” databases with frontend data access that is open to the public. He contends that “[a]lthough the deterrent effect of trade secrets law could theoretically

⁴ Jyh-An Lee & Xuan Sun, “Vocal Identity Under Siege by AI Voice Cloning Technologies” [Mar 2026 Online] Sing JLS 1–31 at 26.

⁵ Tianxiang He, “Three Obstacles to AI-Generated Content Copyrightability” [Mar 2026 Online] Sing JLS 1–30 at 30.

have efficiency benefits, this effect is predicated on a flawed assumption, that scrapers would be deterred. Even if the assumption were to hold, the resulting deterrence could suppress activities that serve the public interest, nullifying any purported efficiency gains.⁶ The article concludes that given the already powerful and arguably overprotective alternatives available to database holders such as the Computer Fraud and Abuse Act in the United States and the Anti-Unfair Competition Law in the People's Republic of China, introducing trade secrets protection in this context risks further distorting the balance between private and public interests.

I hope you will enjoy reading this curation of papers in Part 1 of the special conference issue that span a number of IP rights and allied legal regimes in their efforts to navigate the world that we live in today – one that is constantly being shaped by generative AI and new technologies.

⁶ Yang Chen, “Against Trade Secrets Protection for ‘Semi-Public’ Databases” [Mar 2026 Online] Sing JLS 1–22 at 22.