International Conference on IP and AI in the Age of Technology Race

19-20 May 2025

Durham University

Durham Law School

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Introduction

Durham Law School is pleased to partner with the JusTN0W Initiative, Durham Centre for Sustainable Development Law and Policy, the School of Law at the City University of Hong Kong and the School of Law at Texas A&M University to host the conference in Durham, United Kingdom.

Artificial Intelligence (AI) is reshaping industries, economies, and legal frameworks, driving nations into a competitive technology race. Intellectual Property (IP) law regulates AI-driven innovation, promotes technological progress, and ensures equitable access to its benefits. While much of the current discussion on IP and AI is informed by Western perspectives, emerging insights from Asia and other regions deserve further exploration. This conference aims to broaden the conversation by integrating diverse global and regional viewpoints, examining how different jurisdictions address the evolving challenges and opportunities in the AI landscape.

Conference Programme

Day 1: 19th May 2025, Monday Venue: Room CG218, Chemistry Department, Durham University, Lower Mountjoy, South Road, Durham, DH1 3LE	
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14:30-14:45	**Regulating Artificial Intelligence in the Digital Empires: A Comparison between China, the US and the EU** Charles C. Wang & Siyi Lin Durham University, School of Law Chinese University of Hong Kong, Faculty of Law
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	University of York, Department of Language & Linguistic Science
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Abstracts: Panel 1 Copyright, Authorship and Creativity

Generative Copyright: Challenges and Opportunities of a New Copyright Governance Model in the Era of AI

Thomas Margoni, KU Leuven

Generative artificial intelligence and EU copyright law have emerged as prominent topics in the ongoing scientific and policy discussions surrounding regulatory frameworks for innovation. The EU AI Act, on the one hand, adopts a product safety approach aimed at embedding "EU core values" such as the protection of health, safety, as well as the fundamental rights enshrined in the Charter, in AI development. On the other hand, EU copyright law, one of the fundamental rights enshrined in the Charter, has often had a contentious relationship with new technologies, as evidenced by numerous CJEU pronouncements and scholarly debate. This tension has nowadays crystallized in the practice of training generative AI models with copyright protected content. Notably, the AI Act explicitly recognizes the two text and data mining exceptions (Arts. 3 and 4) of the 2019 CDSM Directive as the statutory interfaces between copyright exclusivity and permitted uses for Generative AI model training (Rec. 107 AIA). As is customary with novel legislative developments, uncertainty persists regarding the precise contours and mechanisms of operation of these interfaces. Examples are numerous and include the concept of lawful access (Rec. 14-18 CDSM), the appropriate forms to "optout" from Art. 4 CDSM, or the alleged extraterritorial ambition of Rec. 106 AI Act. A particularly noteworthy development with the potential to significantly influence the AIA Copyright interfaces is the establishment, within the AI Act, of an administrative structure, the AI Office, with a range of important functions in the regulation of AI. Remarkably, among these tasks, two are particularly relevant for copyright: the development, through the adoption of codes of practice for GPAI providers, of a policy to comply with EU copyright law and of a template for the preparation of a "sufficiently detailed summary" of the training material (Art. 53(1)(c)&(d) AI Act). This represents a notable innovation in EU copyright law, akin to an (exogenously mandated) public shift in the governance of copyright which should provide adequate guarantees to right holders to exercise their rights while simultaneously fostering the development of a competitive, yet EU-valuesembedded, AI ecosystem. This presentation provides an overview of the most salient elements of this novel framework and purports to discuss in detail relevant examples.

Copyright as Welfare Right: What Non-Human Animals Can Teach Us about Natural and Artificial Authors

Johanna Gibson, Queen Mary University of London

What is an author? From the documentation of the use of artificial intelligence (AI) as tools in outputs, through to explainability problems with respect to inputs, the interaction between copyright and artificial intelligence often emphasises a transactional approach to the work. Critically, from both a legal and policy perspective, the author in fact is alienated from the author as legal fiction, with particular consequences for the architecture of copyright itself. This paper examines current approaches to copyright in the outputs of generative AI, together with the inextricable policy and technical questions raised with respect to inputs, in the context of copyright as welfare right. This paper approaches these questions through an ethological jurisprudence, as developed in Owned (2020) and Wanted (2025) and to be explored through the objects themselves in the forthcoming Made. Drawing upon welfare jurisprudence and cognitive science, the paper offers an ethological jurisprudence of authorship in a copyright system that is more than human.

Copyright and Other Property Interests in Training Data

Jyh-An Lee, Chinese University of Hong Kong

The success of large language models (LLMs) and other artificial intelligence (AI) systems relies heavily on the quality and quantity of training data. However, many AI model developers lack the capability to generate their own training data. As a result, there has been a significant increase in litigations related to the unauthorized use of training data across multiple jurisdictions over the past two years. While copyright infringement has been the predominant cause of action in these lawsuits, drawing the most attention, plaintiffs have also claimed other legal bases such as unjust enrichment, publicity rights, personality rights, and privacy.

This presentation aims to introduce the various causes of action observed in these litigations within jurisdictions including China and the United States. It will also provide a comparative analysis of their strengths, limitations, and policy implications. Moreover, the presentation will elucidate how existing copyright practices and debates have laid a solid foundation for legal reforms that extend beyond copyright law, aimed at aligning the interests of a broad spectrum of stakeholders amidst the rapidly evolving landscape of AI technology.

Abstracts: Panel 2 AI and Patents

Breaking the 'Vicious Cycle': Governing Knowledge Commons Framework in the AI-powered Drug Discovery and Development

Gabriele Cifrodelli, University of Glasgow

Nowadays, AI significantly contributes to, for instance, the design of new drug molecules or to analyse the toxicity of a certain compound, by reducing R&D expenditure and increasing the possibility to obtain new drug candidates. However, the massive amounts of data, that AI models are trained on, are often difficult to interpret, compile and access; they are also typically kept secret and are not available to other companies and/or individuals. Moreover, under patent law, there are noticeable difficulties in providing protection to AI technologies and AI-generated drugs, since the former can be deemed excludable subject matter, and AI-generated drugs might result from the inventive conception of an AI model, instead of a natural person, and thus unpatentable. These technical and legal issues result in what I call a 'vicious cycle' made of uncertain proprietary regimes, scarce available data, ineffective AI training and lack of new drugs.

To break this cycle, there is the need of a solution that sits between the exclusionary property provided mostly by patents and the ungovernable absence of property within the public domain. That solution could be Governing Knowledge Commons (GKC) which is 'institutionalized community governance of the sharing and, in some cases, creation, of information, science, knowledge, data, and other types of intellectual and cultural resources'. (Frischmann et al. 2014, 2) This testing framework underlines the complementarity between property and non-property, such as in the case of patent pools – recognized commons resources – that have also to deal with issues of e.g. patent term and non-obviousness. Therefore, the contribution of my work will consist, first, in comparing different AI platforms in the drug discovery and development process, by testing the GKC Framework. Second, I will formulate a series of best practices, drawing from such GKC Framework testing, that would contribute to break the identified 'vicious cycle'.

Doctrines of AI Inventorship

Lior Bercu, Hebrew University of Jerusalem

Recent years have seen increased involvement of AI in the innovation process. This raises the question of inventorship – can and should an AI, or individuals in nexus to it, be considered inventors, thereby making the invention patentable? This issue is multi-faceted and, in my dissertation, I intend to take several routes to explore it. Currently, I am focusing on the doctrinal route.

I will examine the alternatives contemplated in the literature and courts' cases, namely: viewing the AI as an autonomous inventor; The AI's owner receiving the patent through accession; and granting the patent to an individual bearing some nexus to the invention. I will argue that none of these alternatives is doctrinally reasonable under current laws.

Examining the first alternative, an AI might not satisfy statutory requirements because: procedure prevents listing an AI as an inventor; the relevant law is interpreted to include only natural persons as inventors; the AI cannot be considered as an inventor due to its nature. Neither courts nor the literature have methodically tackled the issue of AI's nature as an inventor. I will draw from philosophy, psychology and computer science to explore this question. I will show that even though AI's nature might not be decisively dissimilar to humans', there are limitations to deeming it an inventor.

In discussing the second alternative, I will note that patent rights are special, by excluding others from using the invention even if they invented it independently.

Concerning the third alternative, there are conflicting views in the literature and judgements. I will demonstrate that alleged inventors have to make a mental inventive step themselves and that it has to be evaluated objectively.

The Devil's in the (lack of) Detail! What your ML Patent Should Disclose to Ensure its Validity

Mason Birch, Gill Jennings and Every LLP

In July 2024, the Technical Board of Appeal (TBoA) of the European Patent Office (EPO) handed down its decision on case T 1669/21, which concerned a European patent for a method of monitoring the condition of an inner lining of a blast furnace used to melt metals. In particular, this method determined inner lining's condition by using a computational model created from data regarding the inner lining (such as its material, thickness, and construction) and data regarding the melting process (temperature, duration, and material being melted).

After being granted, the patent was opposed. The opponent asserted that the computational model had not be described with sufficient detail to enable a person skilled in the art of metallurgy to carry out the protected method. The patent owner argued that the skilled person would understand the term "computational model" to mean any machine learning model which could be trained, using the inner lining data and melting process data, to predict the inner lining's condition. In the owner's view, the patent provided sufficient detail despite not explicitly providing a specific example of a machine learning model and how it would be used – this detail could be worked out by the skilled person without any undue burden. The Opposition Division (OD) of the EPO disagreed, and subsequently revoked the patent. The owner filed an

appeal, but the TBoA upheld the OD's decision, finding that the patent did not sufficiently describe the computational model used in the method.

I aim to take an in-depth look at the TBoA decision, as it provides helpful guidance – to both inventors and patent attorneys alike – as to what a patent for an AI/ML-based invention should contain to ensure its validity.

Abstracts: Panel 3 AI Regulation, Data Protection and IP Issues

Challenges and Possible Solutions of Generative Artificial Intelligence for the Protection of Personal Data and Trade Secrets

Huang-Chih Sung, National Chengchi University

Since the end of 2022, generative artificial intelligence (GenAI), based on large language models, has brought profound benefits to human society. Unfortunately, in addition to dramatically improving the quality and efficiency of human work, GenAI also raises a number of legal and ethical issues, including lesser-mentioned challenges to the protection of personal data and trade secrets. This article shows that GenAI can pose a threat to personal data and trade secrets at three stages: model training, usage and content generation. First, the data used to train GenAIs sometimes contains sensitive information. Second, users of GenAIs often unintentionally enter personal or confidential business information into the GenAI prompts. Third, the content generated by GenAIs may contain personal data or trade secrets that could be misused or misappropriated. This article then examines the difficulties that the current legal system has in dealing with the threats to personal data and trade secrets posed by GenAIs. These include the difficulty of implementing the 'informed consent' required by the Data Protection Act, and the difficulty of requiring the GenAI developers to stop using or delete the confidential information once it has become parameters of the large language models. This article identifies four aspects to strike a balance between innovation in GenAI and the protection of personal data and trade secrets, namely the implementation of existing laws and regulations, the promotion of industry self-regulation through policy frameworks, the continuous development of 'unlearning' technology for large language models, and the continuous optimisation of regulatory frameworks. The aim of this Article is to provide clear principles and rules to guide the behaviour of the industry, while ensuring adequate protection of personal data and trade secrets.

Islamic Law in the Era of Artificial Intelligence: Incorporating Copyright and Addressing Challenges in the Kingdom of Saudi Arabia

Norah A. Al-Dashash, University of Leeds

This research examines the intersection of Islamic law, copyright law, and artificial intelligence (AI) in the Kingdom of Saudi Arabia (KSA). As AI technologies continue to develop rapidly, they bring new challenges to copyright protection, particularly in a legal system like Saudi Arabia's, which is deeply rooted in Islamic principles. This

study aims to explore how the KSA can harmonise its traditional Islamic legal framework with modern copyright laws to effectively regulate AI while respecting core religious values.

The research focusses on the objectives of Islamic law (Maqasid al-Sharia), which prioritise the welfare of society, the protection of individual rights, and the promotion of justice. These principles serve as the foundation for examining how Islamic law can address the complexities introduced by AI technologies in areas like copyright and the public interest. The study also considers the flexibility of Islamic law, particularly through mechanisms like independent reasoning (ijtihad) and public interest (Maslaha Mursalah), to adapt to modern legal challenges without compromising its core values.

By analysing both Islamic legal theory and contemporary copyright issues, this research seeks to develop a framework that can guide Saudi policymakers in regulating AI-generated content. The goal is to ensure that innovation and technological progress can flourish within a legal system that upholds Islamic ethics and principles. The findings of this research are not only significant for the KSA but may also provide insights for other Muslim-majority countries facing similar challenges in regulating emerging technologies.

Regulating Artificial Intelligence in the Digital Empires: A Comparison between China, the US and the EU

Charles C. Wang, Durham University

Siyi Lin, Chinese University of Hong Kong

This article examines China's recent developments in AI regulation from a comparative perspective. China, the US and the EU diverge in categorizing AI risks and adopting correspondent regulatory attitudes. In terms of regulatory infrastructure, China's centralized single-agency regulatory infrastructure is different from the centralized multi-agency governance in the US and the decentralized governance model in the EU. The EU imposes the strictest administrative fines among the three digital empires, and distinguishes between multiple stakeholders and different levels of punishment to achieve the deferent effects. In terms of transparency measures, China's filing system focuses on AI systems with public opinion influence, while the US and the EU require high-risk systems to fulfill reporting and certification obligations. China, the US and the EU have all employed sophisticated systems of AI detection and labeling. Rules of user notification and stakeholder protection in China are not as sophisticated as those in the US and the EU. In terms of security assessment, the US and the EU emphasize continuous risk management post-deployment, while China integrates assessments with national security and ethical considerations. They have obvious formal and functional divergences in mandatory nature, effect and methods of security assessments. The AI technique has been widely applied in specific fields such as content regulation and

judicial reasoning. China, the US and the EU have different regulatory philosophies, focuses and methods in content regulation. We argue that China should learn from the EU model to solve the coordination problems and relieve the central government excessive regulatory burdens. To supplement governmental regulation, China should learn from the US to encourage the AI industry to self-regulate. In regulating judicial AI, China should learn from the EU model, especially in criminal justice.

Abstracts: Panel 4 AI's Impact on Industry

A Review of AI Enabled Patent Analytics and the Impact on the Future of Patents and the IP Profession

Nigel Swycher, Professor in Practice, School of Law, Durham University

Founder of Cipher, now part of LexisNexis IP Solutions

Over the last decade there have been significant improvements in patent search and analysis, with moves away from conventional Boolean search to the widespread adoption of AI. The recent launch of many sophisticated Large Language Models (LLMs) has heralded a new era of analytics implementing and incorporating generative AI (GenAI). This AI revolution has enabled a greater understanding of patents and the technologies they protect across a broad range of patenting and portfolio management activities. At the same time the teams tasked with risk management (including litigation) and exploitation (including licensing) now have access to actionable intelligence about trends effecting every sector and market resulting in more efficient and rational business decisions.

These improvements are not simply better, faster and cheaper than what went before but a game changer for all those engaged with innovation and technology. We are approaching the end of an era where patent rights are solely the domain of the IP professional and entering a period where the availability of trusted analytics will enable the integration of IP into a range of business and technology related decisions.

While these changes are positive on every level, they will not be without consequences. AI poses difficult questions about the role of patents and specifically on how they should be used and exploited. For too long, we have accepted the same rules for patents across all sectors.

Will AI drive an increase or decrease in patenting? Will patents trend towards higher or lower quality? Will companies be compelled to be increasingly transparent about the IP they own and use? Will there be an increase litigation and/or licensing? And what profound impact will the answers to these questions have on the IP profession as it exists today?

Trying Questions on Training AI Models

Poorna Mysoor, University of Cambridge

A significant amount of focus and attention has been given to the question of protecting the content generated by AI models. While it is acknowledged that whether the output

can be protected depends on how the AI models are trained, there is often much less direct focus on the processes involved in training the AI model itself. Copyright legislations such as the UK Copyright, Designs and Patents Act do recognise a statutory exception if text and data mining is for non-commercial and research purposes. However, it must be recognised that from a technological viewpoint, text and data mining is a different process from training an AI model, and each engages with intellectual property laws differently. The question as to whether and the extent to which training as a process infringes copyright or any other rights (such as database right) is not yet decisively answered by the courts. To some extent, the answer to this question depends on how the model is designed and the techniques adopted for training. There are several lawsuits across different jurisdictions seeking to resolve the issue of whether training an AI model infringes any of the exclusive rights of the copyright holders when their works are used for such training. In the meanwhile, those wanting to continue to train their AI models play it safe and look for content that provides the widest licence which may impliedly incorporate a permission for this purpose; or operate without regard to such permissions. Pending a decisive answer from the courts, this paper unpacks the process of training and looks at the vulnerabilities for intellectual property infringement in the process of training. It goes on to examine how these vulnerabilities may be addressed, looking at the legal and ethical issues surrounding the process of training an AI model.

Commodified Database and Its Legal Protection in China in the Context of Big Data

Tong Liu, City University of Hong Kong

Commodified database in private domine has been widely recognised as the basic unit for processing and analysing data, as well as the most possible “assets” to be taken into data circulation and disposal, and this is especially the case in light of the high-volume, high-velocity and high-variety natures of Big Data technologies in advancing database development. Meanwhile, these changes by Big Data also raise the concern on whether the “big” enough database will bring about new challenges qualitatively to existing legal institutions.

Since the diverse natures of data fragments are far from being categorized, China’s legislators are hesitated to impose a whole alien legal framework upon database, and the current solutions remain within its exiting legal regimes such as intellectual property law, unfair competition law and contract law. By analysing the EU’s copyright and quasi-copyright (sui generis right) trend approach as well as the US’s “tort of misappropriation” approach, and also considering of the common law’s looser sense of “property” against civilian law’s orthodox view in recent leading data cases, we may conclude a trust and context-based right explanation of database protection to attribute or assign the rights to parties involved “contextually”, in especially non-stare-decisis civilian law systems like China.

Abstracts: Panel 5 Reflection of AI Governance

Typological Application of Copyright Rules to Machine Learning Training Data

Linfan Li, Renmin University of China

When the training data is a copyrighted work, the basic requirements of copyright law should be responded to. It is a violation of copyright law to directly harm the economic rights or personality rights of copyright holders. The generation of the main content of a work, the reproduction of parts of the work with accuracy, the distortion of the meaning of a work, and the use of a work that has been explicitly declared not to be used for machine training, should all be considered as instances of copyright infringement. For algorithms with commercial purpose that negatively impact the interests of the original authors, the application of the statutory licensing system can achieve a balance between efficiency and fairness, while also protecting the authors' right to receive compensation. Similarly, for non-commercial purposes that directly affect the interests of the authors, statutory licensing should also be applied. Authors are entitled to refuse AI companies using their works for training purposes.

The application of fair use should fulfill the premise of ‘not infringing the interests of the original author’ and satisfy the ‘three-step test’. Therefore, the fair use system can only be applied in most non-commercial scenarios, and a few commercial scenarios, such as a small amount of copying that does not affect the author's interests. Due to the fundamental differences between machine learning and human learning, some scenarios that do not ‘use a work as work’ should not fall within the scope of copyright law. The question of whether a particular use constitutes 'use of work as work' should be based on the audience's adjustment, rather than on a simplistic definition based on the fragmentation of text and images.

Is Anything Still New Since CONTU: Artificial Intelligence, and What We Failed to Learn at the Birth of The Internet

Llewellyn Joseph Gibbons, University of Toledo

In the rapidly evolving landscape of technology, the question of whether Artificial Intelligence (AI) necessitates a unique legal framework is a topic of intense debate. This paper delves into the historical context of legal development for emerging technologies, examining whether AI presents unprecedented legal challenges that warrant a distinct "Law of AI." It draws parallels between the dilemmas faced at the birth of the internet, as reflected in early internet scholarship such as Arthur R. Miller's "Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?" and Frank H. Easterbrook's "Cyberspace and the Law of the Horse," and the current AI revolution. The paper explores the challenges of

regulating rapidly evolving technologies, highlighting the successes and failures of past efforts like UCITA and UCC 2B. It further analyzes the unique characteristics of AI, such as autonomy and learning capabilities, and their potential impact on existing legal doctrines. It concludes by emphasizing the importance of learning from the past, considering the potential consequences of premature regulation, and allowing for flexibility in the face of rapid technological advancements.

How Close is too Close? An Interdisciplinary Examination of the Nature and Protectability of the "Un-Fixed" Voice in a World of Digital Replicas

Peter S. Harrison, University of York,

Jennifer Chubb, University of York,

& James Tomkinson, University of York

The ease and accuracy with which a deeply convincing digital replica ("DR") of a human voice can be made has grown significantly in the last few years with the development of powerful generative artificial intelligence ("GenAI"). Such systems can generate DRs which can be used for beneficial and deeply nefarious uses and everything between. Rarely a week goes by without a story of a celebrity complaining that their voice has been "cloned". The aim of this interdisciplinary project is to examine the legal, sociological and forensic linguistic aspects of whether we should, and how we might, protect the "un-fixed" voice. "Un-fixed" voice here means the voice in an uncaptured form, in contrast to a voice that has been fixed in, say, a recording. Though the un-fixed voice of someone who has a degree of commercial goodwill attached to a distinctive voice may attract IP protection through the law of passing-off or unfair completion (and even then not without difficulty) where we look at the voices of those without such goodwill we find that there is potentially a significant lacuna in protection (outside of clear fraudulent use of a DR clone) – existing IPRs are simply not built to do such work. This has led to calls for the creation "personality rights" in those jurisdictions which do not have them to address this deficit. Our examination looks at what such a personality right may (and should) look like, and in particular what the subject matter of such a right would be. This brings us to the difficult question(s) of what the voice actually is, the importance of individual perception of the voice, and the impact of familiar versus unfamiliar voices – all within the context of societal perception of the risks, and opportunities, of GenAI-created DR clones.

Abstracts: Panel 6 Global Perspectives of AI and IP

The Intersection of AI inventions and Patents: A comparative analysis of Australia and the USA

Prasadi Wijesinghe, Griffith University

Innovation, once exclusively a human endeavour, is now shaped by artificial intelligence (AI), which introduces new inventions transforming the innovation landscape. The growing impact of AI innovation has sparked a significant debate in many countries, including Australia, as traditional patent law only allows human inventorship. The Federal Court of Australia in Thaler v Commissioner of Patents made history by allowing AI to be named as the inventor on a patent application while affirming that the ownership of the resulting patent could be attributed to the person who owns the AI. This decision reflected recognition of AI's profound impact in advancing innovation and the essential human input in AI-driven innovation by awarding the patent to a human. However, this ruling was overturned by the Full Federal Court, reaffirming that only humans could be recognised as inventors under Australian patent law. While this judgment reinforced the status quo, it sparked significant legal and academic debate regarding the future of patent law and AI, suggesting that future legislative reforms may be necessary to address the challenges posed by AI inventorship. The absence of a tailored legal framework in patent law for AI inventions is a major contributor to ongoing uncertainties. Meanwhile, the USA is a step ahead of Australia as it facilitates patenting AI-assisted inventions if a human has significantly contributed to the inventive step. This paper investigates the propriety of patents to foster AI inventions in Australia by analysing the challenges and strengths of traditional patent law regarding AI inventions and comparing it with the patent laws and policies in the USA. It highlights the need for a lucid regulatory framework to navigate Australia's evolving landscape of AI inventions.

Voice, Value, and Visibility: AI, IP, and the Global Recognition of Marginalised Creators

Angelia Wang, Durham University

In the context of Generative Artificial Intelligence (AI) and the global imperative to protect Intangible Cultural Heritage (ICH), traditional copyright concepts centred on individual authorship are increasingly inadequate. This article re-evaluates authorship as a polyphonic, relational, and deconstructive construct based on theoretical insights from Roland Barthes, Mikhail Bakhtin, and Jacques Derrida. These perspectives challenge Intellectual Property (IP) frameworks that prioritise singular authorship and

originality, revealing their limitations in addressing both technologically mediated and culturally embedded creativity.

The article analyses how generative AI systems and community-based cultural expressions, such as oral traditions and collective rituals, generate outputs that resist clear attribution. In both cases, creativity emerges not from isolated individuals but from entangled networks of human, communal, and technological contributors. However, prevailing IP regimes continue to marginalise such multiplicity.

In response, this work proposes three legal reforms. Flexible attribution mechanisms would enable recognition of multiple contributors based on relative input, avoiding reductive authorial designations. Collective rights management would empower communities to steward and benefit from shared cultural resources. Finally, explicit legal recognition of algorithmic and communal co-creation would help IP frameworks accommodate hybrid creative processes that do not conform to the author–tool binary.

Will AI Reshape the Non-Obviousness Standard in Patentability? A Comparative Legal Examination Across Jurisdictions

Mingyue Xu, Durham University

In assessing patentability, examiners compare the techniques of an invention with those of the prior art and evaluate non-obviousness from the perspective of a hypothetical skilled man in the art. Unlike typical situations where human inventors rely solely on their ingenuity to create inventions, AI tools may augment human inventive capabilities. Debates have emerged regarding the level of expertise attributed to the skilled man, with some arguing that the current standard in terms of common knowledge and ordinary skills should be recalibrated. Additionally, prior art plays an equally important role in examining obviousness. In practice, inventors may employ AI tools to draft technical specifications and patent claims that slightly exceed the actual scope of their inventions, to secure technical space ahead of potential competitors pre-emptively. Although such practices are considered tactics in patent applications, a lack of precision in specifications and claims may introduce risks that undermine the reliability of the prior art derived from such applications once the associated inventions are published.

This article aims to identify the thresholds at which the standards of a hypothetical skilled man and the quality of prior art are sufficient to adapt to the changes resulting from the use of AI tools. First, this article will examine the existing requirements of non-obviousness in the United Kingdom, the European Union, the United States, and China to evaluate whether these standards are sufficiently flexible. Moreover, the discussion will focus on whether it is necessary to assume that the skilled man possesses enhanced capabilities. Given the fact that inventors are not obligated to disclose the use of AI tools and patent examiners may be unaware of their use, it could be challenging

to determine when to assume that the skilled man is equipped with AI. Even though examiners can be informed by the inventors' conduct in voluntarily disclosing based on good faith and AI tools become commonly used, the further issue to be addressed is to what extent the improvement is sufficient and not rendering every invention obvious. In addition, considering the varying quality of AI-generated references consisting of prior art, this article will also address the challenge of drawing a clear distinction between materials that qualify as prior art and those that should not be considered valid references.

Abstracts: Panel 7 The Future of Copyright

Proportionality, The 'Three-Step' Test, Fair Use and Copyright Exceptions

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The principle of proportionality, originally developed by German administrative courts in the late 19th century and widely adopted in public law, provides a framework for evaluating whether government interventions infringe upon fundamental rights. Traditionally, the proportionality test assesses the appropriateness of an intervention, the availability of less restrictive alternatives, and the balance between its benefits and drawbacks. This article explores how the proportionality test operates within intellectual property law, focusing particularly on copyright exceptions and limitations. It first addresses the application of proportionality in IP law, then examines its interaction with the three-step test under international treaties, and finally discusses the potential reinterpretation of national copyright exceptions. The article concludes by reflecting on the broader implications of proportionality in shaping copyright doctrine.

Reviving "Computer-Generated Works": Should Hong Kong Copyright Law Adapt the Rule to Harness AI Opportunities?

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In July 2024, the Hong Kong Government published a public consultation paper on Copyright and Artificial Intelligence, seeking input from relevant stakeholders on emerging copyright issues in the era of generative AI. One particularly eye-catching section of the paper is the government's interpretation of current Hong Kong copyright protection for AI-generated works (AIGWs). By analyzing the provisions of the existing Copyright Ordinance (CO) related to computer-generated works (CGWs), the government concludes that "the existing provisions of the CO already provide the backbone for copyright protection of AI-generated works, covering both AI-generated LDMA works and AI-generated non-LDMA works." According to the government, the current CO offers sufficient incentives to invest in AI technology, advancing creative endeavors and encouraging creativity through AI.

However, in reaching this seemingly satisfactory conclusion, the government makes several questionable assumptions. First, it assumes that the requirement of originality naturally extends to computer-generated literary, dramatic, musical, and artistic works (LDMAs), allowing the courts to function as gatekeepers by applying CGWs provisions to grant protection only to AIGWs that meet this requirement. Second, it presumes that the necessary manager rule for CGWs poses no significant issues for the protection of AIGWs, and even if it does, contractual arrangements can provide effective practical

solutions. Third, it assumes that granting copyright protection to AIGWs efficiently boosts incentives to create AIGWs and invest in AI technology development. This article challenges these assumptions and cautions against extending the provisions on CGWs to AIGWs. (UK consultation paper is outdated and now there can be harms) While the article agrees with the government's decision not to engage in substantial legal amendments to the CO, it raises concerns about the reasoning behind that decision.

Notational Justice: Forensic Musicology and Copyright Law in the Age of Artificial Intelligence

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Forensic musicology (FM), despite being a relatively young discipline, has played an increasingly important role in assisting judges in adjudicating on music copyright disputes. However, FM, unlike its elder forensic scientific cousins (especially forensics used in criminal investigations), is much less well-studied and understood. This paper intends to open the black box of FM by examining its overlying methodology and underlying ontology in a legal context, which will eventually lead to a discussion of some new challenges posed by generative AI.

The paper is divided into three parts. First, it surveys a brief history of FM since its beginning in the 20th century. The focus is on one of FM's primary tasks, which is to analyse music similarity for determining if there is a causal link and/or substantial taking between the given complaining and defending music works. Second, it examines FM's notation-based methodology and its ontological underpinnings. It shows the difficulty of maintaining FM experts' objectivity and impartiality due to the adversarial legal system, in which these experts have to work. This inevitably results in endless battles of rivalry modelling of music similarity, which could ironically renders disputed musico-legal artefacts even more ontologically unstable. Thirdly, the paper addresses some new challenges from generative AI for FM. It examines the claim brought by some leading music companies (including Universal Music Group, Sony Music Entertainment, and Warner Records) against two young music AI companies Suno AI and Udio. It argues that AI is unlikely to entirely replace human experts to decide on music copyright infringement disputes regardless of whether music contents are AI-generated or human-created. The paper concludes that FM will continue to play a crucial role in music copyright cases and the advent of AI will only complicate rather than solve those old copyright puzzles. The judgment by AI machines, just like any human endeavors, is far from infallible, but it is just as falsifiable.

Abstracts: Panel 8 Copyright Plus

Copyright in AI-Driven Education Content: Bangladesh Perspective

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The integration of Artificial Intelligence (AI) in educational content has transformed learning but poses critical copyright challenges, particularly in Bangladesh, where legal frameworks remain outdated. The Copyright Act 2000 was designed for human-created works, creating ambiguity in applying copyright law to AI-generated educational materials. The lack of clear authorship whether the AI system, its deployer, or a human-AI collaboration raises ownership disputes. Furthermore, the absence of explicit legal provisions on AI-generated content leaves a regulatory gap, increasing the risk of copyright infringement and fair use disputes in AI training.

Internationally, jurisdictions have taken steps to address these challenges. The EU's Artificial Intelligence Act (2024) mandates AI providers to disclose training data and comply with copyright laws. Meanwhile, Penguin Random House has prohibited AI training on its books. In the UK, section 9(3) of the Copyright, Designs and Patents Act assigns authorship of computer-generated works to those arranging their creation, but it does not guarantee copyright. The UK government's 2024 consultation suggests allowing AI to use copyrighted content unless creators opt out, raising concerns among artists. In the US, the Copyright Office (2025) ruled that works created without human authorship cannot be copyrighted, while the Generative AI Copyright Disclosure Act (2024) requires disclosure of copyrighted materials used in AI training. In China, cases Feilin v Baidu and Tencent v Yinxun show increasing recognition of AI-generated works with human involvement. The World Intellectual Property Organization (WIPO) has also been actively discussing these issues. In September 2024, WIPO's Ninth Session on IP and AI explored copyright challenges in AI training datasets, and in December 2024, its Tenth Session examined whether AI-generated content should receive copyright protection. These discussions highlight the need for a balanced legal approach that fosters AI innovation while protecting creators' rights.

To address these gaps in Bangladesh, legal reforms should modernize copyright laws, define AI authorship, and clarify AI-generated content ownership. Aligning with global best practices will ensure a fair and effective intellectual property framework for AI-driven education in Bangladesh.

Copyright Law and Generative AI in Design Creation: towards Inclusivity and Diversity in Fashion

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The growing use of Gen-AI in the fashion industry over the past few years is unprecedented. AI technology is being utilised in several stages, from the clothing design process to the production of marketing material. Such systems are trained on a vast corpus of data and are capable of producing multimedia content as output based on prior and new input data. This is a valuable tool for widening the creative perspectives of fashion designers, particularly when diversity is to be achieved in a sector dominated by trends, largely dictated by Western society and culture. This paper argues that whilst AI has inevitably transformed the way fashion is being created and in some cases, it can even promote greater diversity and inclusivity in this sector, this does not paint the whole picture.

First, the paper introduces an accessible technical overview of Gen-AI systems, including a discussion of the training process, and the concepts of bias and generalisation in ML models. This allows a discussion of model performance characteristics, framing the need for adequate, diverse and transparent dataset curation for Gen-AI systems for fair and ethical use.

Second, it stresses that the use of AI in design creation raises important IP concerns. More precisely, concerns related to copyright originality are raised due to gen-AI's operation, which involves the replication and analysis of pre-existing designs to produce new outputs. In light of EU copyright law, the paper analyses the circumstances under which fashion designs that have been produced with both the assistance of gen-AI technology and the input of fashion designers post-generation, can satisfy the originality criterion under Infopaq.

The paper concludes that gen-AI can have considerable impact, for facilitating greater diversity and inclusivity in the fashion sector, whilst also enriching our common cultural heritage, through its contributory role in the creation of novel works of fashion that constitute 'their author's own intellectual creation'.