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The Legal and Ethical Implications of AI Creation for Australia's Intellectual Property System

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Abstract. The advent of generative artificial intelligence undeniably disrupts the traditional paradigms of intellectual property law. In this context, this paper examines the implications of AI-generated content for Australia's current intellectual property framework. Specifically, it analyzes the existing policy landscape and regulatory measures in Australia, including the issuance of strategic policy frameworks, court decisions denying patent eligibility for AI-generated inventions, and seminal rulings on data infringement. Furthermore, by comparing major international practices and assessing gaps in Australia's AI governance framework, it proposes several potential development pathways for Australia, guided by policy objectives and ethical considerations. Following a policy pathway review, a moderate reform approach better aligned with Australia's current circumstances was selected. This approach directly targets the most controversial issues, providing the most feasible and balanced direction for reform, in line with the requirements of Australia's artificial intelligence development and the needs of the public.

Keywords: Artificial Intelligence, AI Creation, Patent Law, Intellectual Property

1. Introduction

Artificial intelligence (AI) technology has become increasingly mature and is now highly influential worldwide, with its presence evident across most industries. The ability of artificial intelligence to autonomously generate text, images, audio, and video, as well as its capacity for creative conception, constitutes an unprecedented transformative advancement. This capability strains the intellectual property system, posing a substantial challenge to the traditional human-centered framework. For instance, Australia's current situation illustrates the need to integrate AI innovation elements into its established intellectual property system in a scientific and rational manner, achieving a balance that enables the renewal and development of the traditional framework to better seize new opportunities. This paper analyzes the multifaceted content of Australia's intellectual property system. To situate the discussion, it outlines the current regulatory framework for AI-generated works and assesses the challenges they encounter. Against this backdrop, the DABUS case is introduced to examine its implications for patent law and the broader intellectual property legal system [1]. Building on these developments, it also assesses the integration of AI-generated content into the intellectual property system, highlighting potential risks in areas such as ownership

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and moral rights. On this basis, the paper proposes several reform directions, ranging from minimal to comprehensive, and identifies an optimal approach that balances risk and efficiency.

2. The AI governance and legal frameworks in Australia

2.1. Regulatory and institutional landscape

Australia has not yet enacted targeted regulations on artificial intelligence, nor has it established a clear legal framework for it. However, it has established an adaptive governance framework that integrates existing legal provisions with a range of voluntary standards and guidelines. The National AI plan issued in December 2025 set out key policy recommendations for AI development, aiming to steer AI growth in greater alignment with current legal standards [2]. In addition, the Australian government is actively involved in regulating AI-generated content, establishing safety standards to promote principles such as accountability and transparency. To support this governance structure, multiple institutions have been established to jointly oversee AI development and ensure alignment with existing legal standards, such as the AI Safety Institute (AISI), the National AI Centre (NAIC), and the Digital Transformation Agency (DTA) [3].

2.2. International approaches to AI governance

From a global perspective, Australia's AI policies reveal their distinctive features more clearly. It is widely accepted across most jurisdictions that "an inventor must be a natural person," a principle embedded in national patent laws. The European Union (EU) has enacted the Artificial Intelligence Act, which adopts a risk-based horizontal regulatory framework to manage AI systems, explicitly prohibiting certain infringing activities through written legal provisions [4]. At the same time, the EU's Digital Single Market Copyright Directive permits commercial text and data mining under a copyright exception with an opt-out mechanism for rights holders, addressing a key input issue for AI training distinct from the AI Act's risk-based framework. In contrast, the UK and the U.S. have not enacted comprehensive, unified artificial intelligence legislation; rather, they rely on a combination of sector-specific laws, administrative guidance, and framework-based regulatory approaches. In contrast to these countries, Australia prioritizes data security and risk management, restricting the use of unauthorized data in AI model training. While this approach may impose certain competitive constraints, it strengthens protection for human creative industries and mitigates copyright infringement risks. These policies illustrate how countries reconcile innovation, intellectual property rights, and ethical considerations in shaping AI regulation.

3. Key challenges and gaps in AI-generated content

3.1. Existing structural and regulatory challenges

This legal framework, which primarily depends on existing legal systems and institutional oversight, exposes significant structural and regulatory gaps in addressing AI-generated content.

In particular, challenges arise at the input stage of AI development, particularly in relation to training data. And this is because AI systems depend on large-scale datasets and textual materials. However, obtaining lawful licenses for such data is often costly and legally complex. As a result, AI developers face heightened risks of copyright infringement and regulatory uncertainty [5]. Besides, there is a protection gap at the output stage. Under current Australian patent law and copyright practice, legal protection is largely interpreted as premised on human authorship. Consequently, AI-

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generated content falls outside established protection regimes, creating uncertainty for high-value outputs and weakening incentives for innovation and investment. Meanwhile, a classification and identification gap persists. There is no binding legal standard for distinguishing AI-generated content from human-created works. Although voluntary watermarking guidelines exist, they remain non-enforceable, resulting in inconsistent identification and limited regulatory effectiveness. In addition, a liability allocation gap emerges when AI-generated outputs cause infringement or harm. Responsibility is dispersed among developers, users, and downstream deployers, yet current legal frameworks fail to clearly delineate their respective obligations, complicating accountability [6].

3.2. Rights and accountability in AI-created works

The legal treatment of AI-generated works under intellectual property law involves three essential dimensions: moral rights, ownership, and accountability.

First, moral rights, such as the right of attribution and the right to integrity, should not apply to AI-generated works, as they are grounded in personality theory and presuppose legal personhood, which AI lacks. However, in practice, AI-generated outputs still require appropriate attribution and recognition mechanisms, which remain underdeveloped. Besides, ownership raises more complex legal questions. When AI is used as a primary assistive tool, it remains unclear whether the resulting outputs should be owned by the users operating the system, the developers who trained the models, or the parties who contributed the underlying datasets. In the absence of clear statutory rules or default contractual frameworks, this ambiguity increases the risk of commercial disputes and creates legal uncertainty for industries relying on AI tools. Compared to ownership, issues of accountability are even more difficult to resolve. Liability for infringement or harmful outputs is often dispersed across multiple actors, making it difficult to identify a single responsible party and increasing the likelihood of disputes. While AI user prompts can play a significant role in shaping outputs and may be regarded as a direct causal factor in some cases, determining liability remains complex when issues like copyright infringement, trade secret violations, or defamation arise [7]. Even when responsibility is evaluated along the AI production chain, liability attribution remains uncertain, as multiple actors may share it simultaneously. While Australia has incorporated aspects of accountability into its cybersecurity framework and AI safety standards, liability for AI-related harms remains fragmented across different legal regimes, including copyright, defamation, and consumer law, rather than governed by a unified legal standard.

4. Patent cases and ethical considerations in AI development

4.1. Patent law and the DABUS case in Australia

The *DABUS (Device for the Autonomous Bootstrapping of Unified Sentience)* case, initiated by Dr. Stephen Thaler, tested whether an artificial intelligence system could be recognized as an inventor under Australian patent law [8]. In this case, patent applications were filed listing DABUS as the sole inventor. However, the Full Federal Court of Australia rejected the applications, emphasizing that the Patents Act 1990 (Cth) requires inventors to be natural persons [9]. The court clarified that patent rights are grounded in human agency and must be granted to legal entities capable of holding rights and bearing obligations. From this decision, it is evident that non-human entities cannot be named as inventors under Australian patent law. Under Australian patent law, inventors must be natural persons, which constitutes a central challenge for AI-generated creations within the current patent framework.

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4.2. Global responses to AI inventorship cases

A central feature of global patent systems is the human-centered conception of inventorship, which links patent rights to human agency, legal personality, and accountability. This framework underlies how countries assess AI-generated inventions and shapes their treatment of cases such as DABUS. Within this context, major jurisdictions including the UK, the U.S., and the European Patent Office have consistently rejected the recognition of artificial intelligence as an inventor [10]. Their decisions emphasize that inventorship requires identifiable human contribution and responsibility. Some exceptions exist in procedural practice. In South Africa, a DABUS-related patent was granted through a registration-based process, but this did not involve substantive examination and therefore did not amount to formal recognition of AI as an inventor. In addition, other jurisdictions exhibit nuanced approaches to human involvement [11]. For example, China recognizes copyright in AI-assisted works where human creative input is evident, while the U.S. requires demonstrable creative control by a human author beyond mere prompting [12]. These variations reflect procedural and doctrinal divergence rather than a departure from human-centered inventorship.

4.3. Policy and ethical implications of AI patents

The *DABUS* case and broader debates on AI inventorship highlight a fundamental tension within Australia's patent system, namely the mismatch between emerging AI capabilities and a human-centered legal framework for attributing inventorship. These legal developments have generated significant institutional implications for how innovation, ownership, and responsibility are defined within the patent regime. Accordingly, Australia's National AI Plan articulates three core principles: seizing the economic opportunities of AI, ensuring that its benefits are broadly distributed, and safeguarding the security of Australians. These principles reflect a policy orientation that seeks to promote AI development while maintaining a strong commitment to human protection and legal certainty. In this institutional context, Australia prioritizes human-centered fairness, especially in copyright and AI training data use. This approach emphasizes legal clarity for human creators, fair remuneration mechanisms, and clearly defined accountability structures. Meanwhile, this policy orientation also reflects trade-offs in innovation strategy. A strong emphasis on legal certainty and rights protection may limit flexibility in AI experimentation and could redirect investment and research activities toward jurisdictions with more permissive regulatory environments. Nevertheless, it also reinforces incentives for traditional inventive activity, particularly in long-term, resource-intensive innovation processes. Although Australia has not adopted comprehensive AI-specific legislation comparable to the EU, its existing legal and policy framework demonstrates a cautious regulatory posture toward AI-generated outputs, particularly in relation to intellectual property protection [13].

5. Reform pathways for AI-related intellectual property

5.1. Policy context and reform rationale

At present, Australia adopts a cautious and relatively conservative approach toward AI-generated content, relying on existing intellectual property frameworks and incremental policy development rather than dedicated AI legislation. This reflects a preference for risk-managed, institutionally grounded governance of emerging technologies.

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However, several structural limitations have emerged, including inefficient copyright licensing that increases the cost and complexity of training data access, lack of legal recognition for AI-generated outputs under IP regimes, and fragmented dispute resolution that weakens the system's capacity to address AI-related IP conflicts. In response, reform discussions focus on improving licensing efficiency, clarifying the legal status of AI-generated outputs, and strengthening dispute resolution mechanisms. Measures include streamlining copyright licensing and creating specialized AI dispute bodies to cut compliance costs while upholding existing legal principles [14]. At the same time, policy development is extending to the position of AI-assisted innovation within the intellectual property system. Although Australia is unlikely to recognize AI as a legal subject, there is growing acknowledgment of the need for supplementary protection for AI-assisted inventions, which operates within the existing patent framework, preserving its human-centered foundation while supporting innovation incentives [15].

5.2. Minimal reform measures

Minimal reform focuses on incremental adjustments within the existing AI policy framework administered by Australian authorities. Key measures include distinguishing AI-generated outputs from human inventions, reinforcing voluntary AI safety standards, applying existing legal rules to AI development, and allowing emerging business models to evolve under regulatory oversight.

These measures can address limited operational issues, such as improving regulatory clarity between human and AI-generated works and providing basic guidance for AI enterprise compliance under existing legal structures. In addition, they help maintain short-term legal stability and reduce immediate regulatory disruption to the intellectual property system. Despite these effects, they remain insufficient to resolve structural problems in AI governance. The absence of binding legal recognition for AI-generated content leaves persistent uncertainty in rights attribution. In addition, issues such as the use of improperly sourced training data and unclear liability allocation remain unresolved under a policy-based approach. These problems require substantive legal rules rather than voluntary standards or administrative guidance, as they directly affect infringement assessment and accountability determination. As a result, while minimal reform is low-cost and highly feasible, it primarily maintains the status quo rather than addressing the underlying institutional gaps in AI-related intellectual property governance.

5.3. Moderate reform measures

A moderate reform approach aims to balance innovation incentives with intellectual property protection by addressing key barriers to the development of AI-generated content. This approach aligns with ongoing policy discussions in Australia and reflects an emerging international trend toward calibrated regulatory reform.

First, a more efficient and transparent copyright licensing mechanism should be established to facilitate access to training data while ensuring fair returns for rights holders, with appropriate regulatory oversight to address existing market frictions. Second, the intellectual property system should be updated to accommodate AI-generated content by clearly distinguishing it from human-created works, thereby providing legal recognition without granting disproportionate economic benefits. Third, a dedicated dispute resolution body should be established to handle AI-related IP conflicts outside traditional courts, reducing litigation costs and improving procedural efficiency. This method addresses three core issues, like data access, legal classification, and dispute resolution,

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thereby partially filling existing regulatory gaps while maintaining a balance between innovation and protection.

5.4. Comprehensive reform measures

Australia's current AI regulatory framework is no longer adequate for the pace of AI development, making comprehensive reform inevitable. And these tensions involve unclear legal status for AI-generated outputs, gaps in dispute resolution, and limited mechanisms for data access and licensing.

To address these issues, comprehensive reform would require a full restructuring of the intellectual property system to accommodate AI development, potentially including the enactment of a dedicated law addressing all foreseeable issues, a relatively radical approach. Such reform could integrate AI-generated content into the legal framework, clarify rights and responsibilities, and establish consistent rules for licensing, ownership, and dispute resolution. Internationally, the EU's Artificial Intelligence Act (AI Act) provides a reference, offering legal clarity on emerging AI issues and facilitating innovation [16]. However, radical reforms carry significant risks. Resistance may arise from established business models, potentially destabilizing existing economic structures. In addition, rigid statutory provisions can limit adaptability, turning legal frameworks into obstacles as AI technology evolves. In light of these challenges and the cautious stance of the international community, comprehensive reform remains the most ambitious yet least feasible path.

6. Conclusion

The rise of AI-generated content has exposed fundamental challenges in Australia's intellectual property system, making reform unavoidable. The current conservative stance has slowed progress, leaving AI-generated innovation in a regulatory gray area. Among possible approaches, a moderate reform path is most suitable. By addressing the most urgent and contentious issues, like copyright licensing, ownership clarification, and dispute resolution, this approach allows Australia to seize opportunities in AI development while limiting risks to the existing ecosystem. Gradual, policy-driven reform aligns with technological evolution and supports the complementary development of the intellectual property system and AI-generated innovation. Overall, careful, incremental reform provides a balanced path: it preserves human-centered protections, enhances regulatory clarity, and positions Australia to benefit from AI innovation without destabilizing its intellectual property framework.

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