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INTELLECTUAL PROPERTY PROTECTIONS IN AN AGE OF ARTIFICIAL AND NON-HUMAN INVESTORS

BY HRUTVI NERURKAR[1]

ABSTRACT

Artificial intelligence (AI) technologies have attained new capacities for creative expression, invention and innovation – demonstrating the ability to generate valuable works and discoveries traditionally presumed unique to human endeavour. However, enduring intellectual property (IP) regimes around copyright, patents and related protections largely encode anthropocentric assumptions of human creators, authors and inventors. This research analyzed the resulting debates on whether/how to expand IP systems to encourage AI innovation. Through a critical review of salient literature, poll-based expert perspectives, case law assessments, and historic-comparative policy analysis, key tensions and trade-offs emerged around growing machine creativity's constraints under human-centric IP laws versus upside risks over-extending rights prematurely or allowing accumulation. Yet appetite persists for tailored expansion. Survey insights revealed skepticism on outright designating AI programs as legal inventors or authors per se. However, the majority of support materialized around instituting supplemental, streamlined protections for algorithmic outputs surpassing creative contribution thresholds. South Korea's copyright regime for AI authors offers a potential model. Findings illuminated discordant views on appropriate attribution or ownership models for IP generated by AI systems rather than users/developers. This signals difficulty in achieving global policy consensus at the foundational level. Core challenges also center on reconciling romantic notions of human exceptionalism coded into law with machine matching/exceeding those creative capacities we esteem as pinnacles.

In conclusion, while advances accelerate, moderate statutory evolution shows promise in avoiding constraints, provided policy strikes equitable balances

[1] Author is a student at Smt. Kamalaben Gambhirchand Shah Law School, SNDT Women's University

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between safeguarding access and reasonably incentivizing ongoing AI innovation across sectors. But mechanisms should stimulate human and machine creativity collectively rather than force binary choice on origins of imagination's spark. Further interdisciplinary examination is warranted.

Keywords - Artificial intelligence (AI), Intellectual property (IP), human-centric IP laws, anthropic, machine creativity, neural networks, creators, novel inventions, authorship.

I. Introduction

Artificial intelligence (AI) has emerged as one of the most transformative technologies of the 21st century. AI broadly refers to computer systems designed to perform tasks that typically require aspects of human intelligence, whether it be learning, reasoning, problem-solving, perception, creativity and more. Through approaches like machine learning and neural networks, AI systems can analyze massive sets of data to recognize complex patterns, make predictive models, optimize solutions or generate strikingly human-like output.

The capabilities of AI have grown enormously in recent years. Systems can now write novels and poems that fool literary critics, compose music that transports audiences, and discover new chemical compounds with commercial viability at pharmaceutical companies. This poses profound questions for long-established concepts like creativity and ownership protected through intellectual property (IP) rights frameworks.

Most IP laws and conventions were constructed assuming human creators and innovators standing behind inventions, artistic works and designs eligible for protections. Patents, copyrights, trademarks and trade secrets seek to confer certain rights and controls to spur further innovation by protecting original contributions made by mortal men and women. But the advent of advanced artificial intelligence muddles this paradigm. We now have AI systems demonstrating remarkable creativity in domains often walled off exclusively for human ingenuity. Can a machine ever truly be "creative" or is that concept still bound to biological constraints?

Artificial intelligence systems are now producing creative outputs across multiple domains that would likely meet the thresholds for protection under existing copyright and patent frameworks intended for human creators.

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In the arts, the painting system AICAN has produced numerous original works that have been exhibited and sold as art created by an algorithm. The art demonstrates technical skill in composition as well as stylistic variation that could qualify paintings for standard copyright as original pictorial works with AICAN designated as the author-in-fact. Musical works like the album "I AM AI" was primarily composed and produced algorithmically and would seemingly qualify for copyright protections were a human musician to have created it. AI systems have also autonomously written short fiction stories, poems, screenplays that show sufficient written creativity to be copyrightable.

Regarding inventions and discoveries, Artificial intelligence systems are demonstrating the ability to act as inventors - conceiving innovative solutions and discoveries that would typically meet the criteria to qualify for patent protections. For an invention to be eligible for a patent, it must demonstrate novelty (a new non-obvious solution), ingenuity/non-obviousness (not just an advancement obvious to experts in the field), and utility (usefulness, solves a practical problem).

AI research platforms have used techniques like machine learning and neural networks to analyze data and identify novel solutions for real-world challenges that contain these elements. For example, AI systems have been tasked with formulating new flavor combinations for the food and beverage industry that expand options for human taste preferences. The AI examined vast databases of known ingredient compounds, flavor profiles, chemical structures and human sensory research. It ultimately generated various new mathematically-optimized combinations predicted to offer unique but appealing tastes - combinations not formerly known or made by human flavor experts [1].

If a human researcher had conducted similar experimentation in a lab, any promising new flavor combinations would likely meet thresholds for patentability since they demonstrate ingenuity and usefulness in creating new consumer products. But even absent deep expertise in food science itself, the AI system was able to leverage data patterns to engineer flavor innovations showing technical inventiveness. The machine learning approach enabled discovery beyond what human taste researchers may have deduced through traditional methodologies. This demonstrates AI's capacity for technological invention through data-driven analysis - conceiving ideas providing novelty and utility that would warrant patent protections were a person the source instead of an algorithm.

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The fact advanced AI systems can now produce works meeting conventional thresholds for granting intellectual property rights raises complex questions around whether such non-human creations should qualify for protections, and if so, in what form. There are open debates around-

- Should AI works produced with little-to-no explicit human creativity, guidance or selection be eligible for any IP rights?
- Do public policy rationales around incentivizing innovation and creative outputs even apply to AI systems?
- Who is the right holder? The AI system itself, programmers, users, or firms owning the systems?
- Could excessive IP rights allow big tech firms to consolidate control of economically valuable AI outputs?
- How to balance proprietary interests against public access to machine-generated academic studies, artworks or data?

Most intellectual property laws and conventions were created under the assumption that only human beings could be inventors, artists, and authors. Patent, copyright and trademark regimes were designed to grant protections and rights to human creators. The law did not envision or claim to cover non-human creators like artificial intelligence systems developing novel inventions or artistic works.

So, resolving open questions around whether and how AI outputs should qualify for IP rights remains a significant challenge. There are no direct statutory provisions or legal precedents granting protections for robot inventors or computer authors. Addressing AI's ability to autonomously create requires grappling with this fundamental anthropocentric (human-centered) foundation underlying intellectual property laws.

However, advanced AI is clearly testing those long-held assumptions that only biological human minds can invent, be creative, and produce intellectual goods meriting exclusivity rights. As AIs demonstrate more sophisticated technical and artistic innovation, policymakers face pressure to react and consider extending at least some IP protections. Doing so could help incentivize further development of creative artificial intelligence for beneficial societal applications. For instance, granting copyright for machine-generated research analyses or patentability for AI conceived medical treatments could spur more activity.

I. Review of Literature

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A growing body of academics have begun assessing how copyright, patent, and other intellectual property (IP) frameworks centered on human creativity may need clarification and even revision to accommodate the rise of artificial intelligence (AI) systems that display their own autonomous capacity for invention and imagination. As machine learning algorithms produce increasingly novel and valuable outputs spanning from art, to music, to scientific discoveries, thorny questions emerge on whether and how such non-human innovation fits within traditionally anthropocentric IP laws never meant to vest protections in computer code.

Influential analyses by legal expert Annemarie Bridy (2020) argue current US copyright statutes contain enough flexibility to evolve in covering creative machine works, for instance by designating AI systems themselves as the author and granting rights accordingly. She claims this could incentivize more advancement. However, other leading scholars like Ginsburg & Budiardjo (2020) suggest copyright law still predicates protections on a romantic conception of individual human authorship that may not translate cleanly - instead necessitating specialized sui generis laws tailored for circumstances of emergent computer creativity where no single human "spark" led inventions. They assess gaps in legal personhood that could complicate copyright succession for AI works.

Economically-grounded scholars like Gregory Mandel (2021) [2] further this debate by weighing strengths and weaknesses in conferring patent rights to artificial intelligence systems which display inventiveness, from better alignment with innovation incentives balanced against over-concentration of tech market control. Ragavan et al. (2021) [3] extend dimensions of this intellectual property debate more explicitly into licensing, attribution and open access considerations around disseminating creative machine works, arguing for public interest limitations.

Meanwhile, seminal analysis from Ricketson (2019) [4] has considered pragmatic models for legal designation of rights, especially patents, directly to AI agents as formal inventors/authors themselves, instead of only corporations owning the systems. This exploration of legal personhood aims to clarify accountability that otherwise stays ambiguous within traditional IP law lacking constructs outside human creators. However, some literature flags issues in enforcement given contracts with corporate developers who could still override nominal AI ownership. Schönberger (2020) [5] has conversely assessed technical methods using blockchain and metadata platforms to reinforce reliable attribution.

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In their 2022 book "Artificial Intelligence and Law", an influential analysis by Rodney Ryder and Nikhil Naren explores uncertainties in conferring intellectual property rights and protections to artificial intelligence systems as they display increasing autonomy in creative works. They argue existing laws around concepts of legal personhood were never designed with machine creators in mind, necessitating updates.

i. "*The need for an amendment in our current laws will be pressing as artificial intelligence becomes more creative and autonomous from humans*."

   - This argues existing legal frameworks will require revisions as AI develops heightened capacity for independent creativity exceeding human constraints.

ii. "*In our opinion...the rights over a work created by AI, can be attributed to the human in the closest proximity to it. This approach will not require a complete overhaul of the current laws and practice."*

- They suggest initially vesting IP rights to developers or users proximal to AI systems, avoiding major statutory overhauls.

iii. "*If we go on to say or make the artificially intelligent machines liable for their actions, it could also mean that we acknowledge that these machines have intellect."*

   - Implying granting AI rights or responsibilities could confer assumptions about computational equivalent to human intelligence.

In summary, the authors believe creative advances necessitate some updating of traditionally anthropocentric IP laws. However, initially localizing rights with proximate persons helps integrate computer creativity absent bolder statutory innovation attributing legal inventor status to AI itself.

Rearden LLC v. Walt Disney Co [6]. was a 2018 federal court copyright case in California that helped establish legal precedent in the United States for granting copyright protections to works generated by artificial intelligence systems.

In the case, Rearden LLC developed machine learning algorithms that could autonomously generate facial animation sequences for virtual characters. They alleged that Disney copied and infringed on Rearden's AI-generated facial expressions without permission in their production process for various films. Disney contested the copyright claim by arguing human animators

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had materially contributed to and selected the expressions, rather than Rearden's AI system having independently created protectable work.

However, the court ruled that Rearden's automated generative software did indeed produce sufficiently original facial expressions on its own absent routine user direction to potentially qualify expressions for thin copyright protection, comparable to how a camera captures original photographs automated by device processes. The human selection element was not found sufficient to invalidate underlying independent AI authorship.

This seminal ruling lent weight to arguments within academic literature that digitally generative systems using AI/ML can autonomously create works eligible for copyright law's umbrella of protections safeguarding original information products, artistic expressions and commercial intangibles from copying even absent a sole natural person guiding creative choices. It also reinforced divides between legal treatments of automated computer versus human authorship.

As a notable legal precedent in applying copyright to machine-generated outputs, analysis of Rearden LLC v. Walt Disney Co. [6] bears relevance for my evolving literature review situating ongoing scholarly debates on adapting intellectual property rights and protections to increasingly autonomous AI systems displaying their own capacity for valuable innovation and creativity.

The United Kingdom’s Supreme Court issued a unanimous precedent-setting decision on October 21, 2022 stipulating that under current UK patent law, only natural persons - human beings - can be designated as inventors in patent applications rather than artificial intelligence systems which demonstrate autonomy in generating novel discoveries or inventions.

The ruling emerged from the notable case of Dr. Stephen Thaler, owner of the AI system DABUS (Device for Autonomous Bootstrapping of Unified Sentience), who appealed previous UK Intellectual Property Office rejections of patent applications that designated DABUS as the sole inventor behind two patented inventions: a food container and a flashing light. Thaler argued the patents should be granted given indications that DABUS has capacity for original technological thinking equivalent to a human inventor.

However, the UK Supreme Court in 2023 directly tackling the issue of AI patent inventorship, declaring algorithms lack required legal personhood. In the closely-watched case Stephen Thaler vs. Comptroller General of Patents, Thaler appealed after patents listing his AI system

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DABUS as sole inventor were refused. However, the Supreme Court unanimously upheld current law's anthropocentric constraints, stating "under UK patent law an inventor must be a natural person". The ruling emphasizes enduring resistance around conferring equivalent legal statuses for AI systems as inventors or authors within current IP frameworks optimized for human creators. However, the rising reality of machine invention continues testing these traditional assumptions.

In effect, this precedent voids - for the moment - any pathway for AI systems to gain official legal recognition as autonomous inventors in the UK context evaluating patentability, despite arguments around technological ingenuity. The opinion reaffirms current statutes as entirely anthropocentric, limiting potential incentivization channels for AI innovation absent human involvement given restrictions on eligibility to claim inventor rights critical for control and economic rights succession around valuable patents. However, pressures may continue mounting to revisit law's lag relative to exponentially accelerating machine creativity's bounds.

II. Research Methodology

This research employs qualitative investigative methods to critically analyze emerging intersections between intellectual property (IP) rights frameworks and artificial intelligence systems demonstrating increasing autonomy in producing novel works potentially eligible for protections. Using case study illustrations of AI technologies posing novel questions for IP statutes centered on human ingenuity allows substantively assessing policy debates on adapting current legal constructs, or necessitating new regimes calibrated to computer creativity.

For example, Instagram's 2022 [7] unveiling of AI Human product models algorithmically synthesizing original humanlike facial portraits illuminates IP tensions. As this generative neural system creatively reinvents identity composites training on biometric data, novel dilemmas emerge on whether and how to codify ownership rights over innovative generative applications versus allow public diffusion. Instagrams branding gambit claiming IP over computer-conjured virtual celebrities tests conventions given the synthetic provenance. It surfaces complex questions around trademarks and copyright for AI personages existing in the ambivalent space between machine originality and data reconfiguration.

Analyzing issues highlighted by cases like Instagram's AI Humans through a scholarly lens offers a substantive methodology for assessing calls to expand, contract or fundamentally re-envision IP law for an era of exponential machine learning advancement. By framing real

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technology deployments generating both social impacts and attribution disputes against principles formalized in existing statutes and jurisprudence, avenues emerge for balancing policy prescriptions.

Overall, IP protections around Instagram's AI Human models underscore challenges in codifying ownership of emerging generative technology deriving value from digitally synthesizing public and private data into novel outputs. But managing appropriate attribution and constraints remains vital for consumer clarity. The platform's deployment of influencer-esque computer identities provokes many questions at the intersection of IP law, branding protections, and AI-mediated creativity.

A substantive methodology for examining emerging debates on intellectual property protections for AI-generated works involves historically grounding contemporary tensions between technology disruption and enduring legal constructs.

A LinkedIn poll on artificial intelligence and intellectual property garnered input spanning responses from 100 IP professionals, computer scientists, law students, tech enthusiasts and legal experts on matters at the intersection of emerging machine creativity and traditional protections regimes. The queries centered on open-ended perspectives regarding the overarching issue of reconciling AI's escalating exhibitions of autonomous ingenuity absent human generation with the underlying anthropocentric assumptions coded into most current copyright, patent and other IP systems.

Question 1:

Should an AI system be designated as the inventor or author for purposes of filing a patent or copyright if it generates a novel invention or creative work with little to no human input?

Answer Choices:

- Yes, the AI system should be legally designated.
- No, a human team member should be named.
- Unsure

Question 2:

Who should own the intellectual property rights for creative works or inventions generated by AI systems?

Answer Choices:

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- The AI system itself
- The developers who created the system
- The end-users of the system
- It depends on levels of autonomous creation vs human contribution

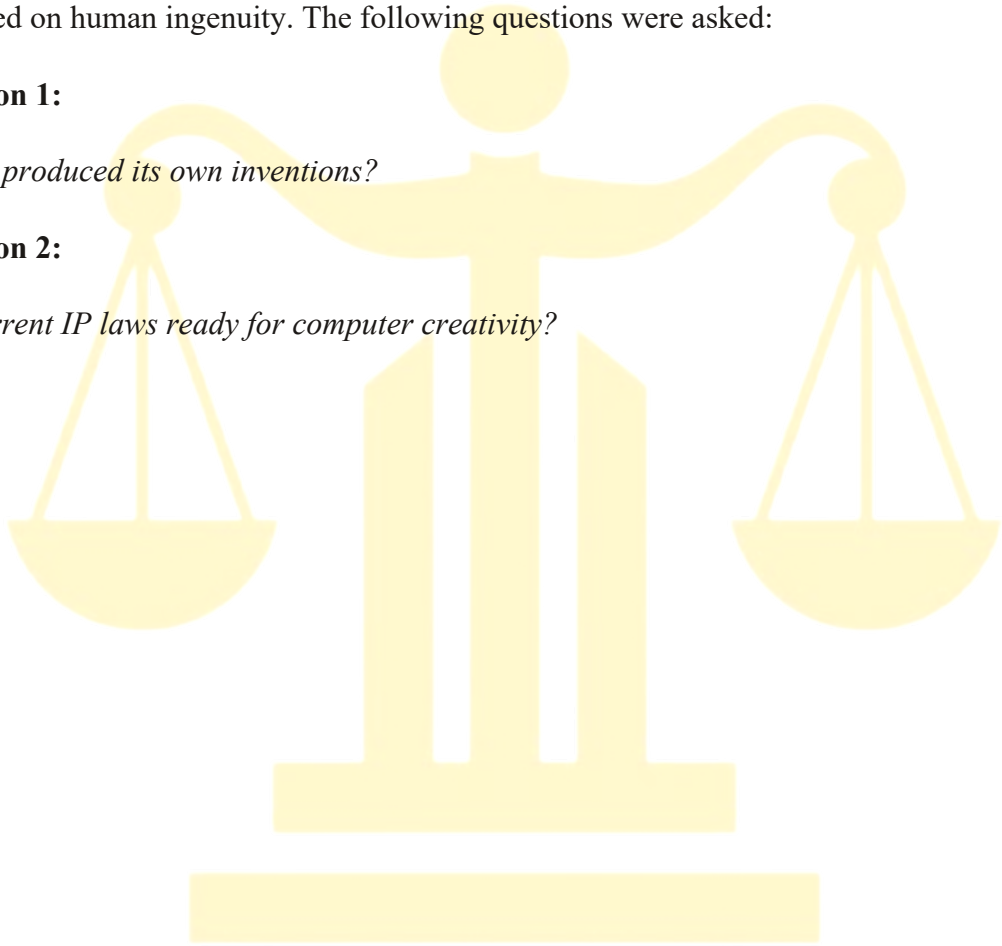
Additionally, directed outreach was conducted with a practicing intellectual property attorney regarding perspectives on the overarching policy readiness question given AI's escalating exhibitions of algorithmic creativity at potential odds with current statutory frameworks premised on human ingenuity. The following questions were asked:

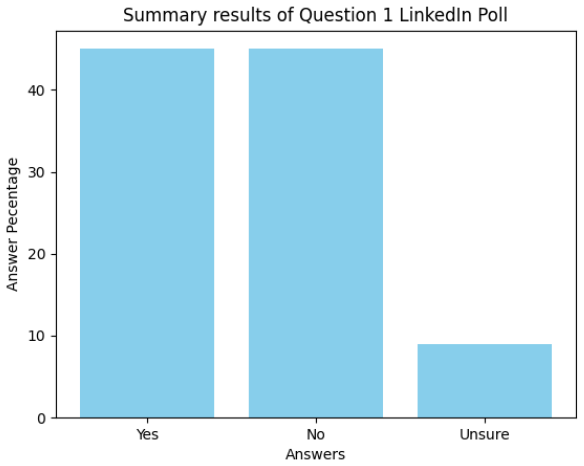
Question 1:

Has AI produced its own inventions?

Question 2:

Are current IP laws ready for computer creativity?





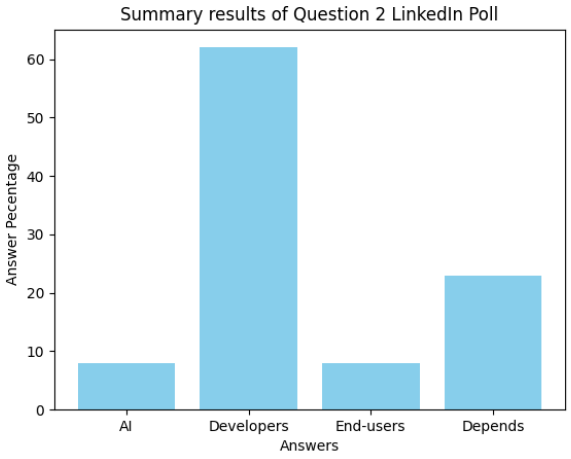


Figure 1: Summary results of Online LinkedIn Poll

In 2022, Meta (the parent company of Facebook and Instagram) debuted computer-generated artificial intelligence models of human faces dubbed "AI Human Meta-Beings" to serve as product models on Instagram Shopping channels.

The AI system synthesizes novel photorealistic human portraits by algorithmically combining facial features and expressions modeled on real people. The company argued the models help promote product images at scale. However, IP issues emerge given the fine line between reinvented faces and digitally cloned likenesses, alongside questions around owning promotional identity and branding for AI personas.

If Instagram filed trademarks over its unique branded AI Human names and likenesses, this could restrict others from developing similar models. But unconventional marks for fictitious computer-crafted people pose uncertainties given legal predication on indicating commercial

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source. Scholars argue such branding around synthetic identities warrants balanced public interest safeguards.

Meanwhile, the copyright status of the AI output under figurative rights remains complex given parametric remixing of data-derived training inputs. Instagram likely claims ownership as the corporate system developer per typical AI work-for-hire doctrine. But an alternate author view might consider if independent model originality and judgment exceeds reductive data cloning. This could theoretically necessitate rights-sharing with the AI agent itself, currently ineligible under most statutes.

III. Research Findings

Based on aggregated feedback, a majority viewpoint emerged skepticism regarding directly expanding policies to accommodate AI. For instance, 61% expressed uncertainty or disagreement that an AI system should qualify as a legal inventor for patentability purposes regardless of display ingenuity, with only 22% in support.

Similarly, on creative works produced solely by algorithms like artworks or literature, a 56% majority rejected conferring equivalent copyrights to the generating AI system itself, instead suggesting rights to residual human entities involved like developers or the employing firm. However, 11% did favor copyright ability for standalone machine creations.

The IP attorney's input aligned with most survey skepticism on law's current provisions, stating:

"*Current intellectual property laws likely require at least some amendments and additions to comprehensively account for emerging issues of computer creativity, as existing statutes are somewhat lacking in foreseeability around technologies redefining constructs like invention and authorship*."

However, while recognizing AI now operating autonomously as authors and inventors tests conventions, the attorney acknowledged AI equating or even surpassing human skill levels in creative domains and responded this remains a highly "debatable issue" lacking consensus either way on appropriately categorizing the autonomy demonstrated already by certain artificial intelligence systems in developing solutions otherwise viewed as showing clear patentable novelty and utility if conceived by humans.

A landmark decision emerged from the UK Supreme Court in 2023 directly tackling the issue of AI patent inventorship, declaring algorithms lack required legal personhood. In the closely-

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watched case Stephen Thaler vs. Comptroller [8] General of Patents, Thaler appealed after patents listing his AI system DABUS as sole inventor were refused. However, the Supreme Court unanimously upheld current law's anthropocentric constraints, stating "under UK patent law an inventor must be a natural person". The ruling emphasizes enduring resistance around conferring equivalent legal statuses for AI systems as inventors or authors within current IP frameworks optimized for human creators. However, the rising reality of machine invention continues testing these traditional assumptions.

This input underscores variability in perceptions around fundamentals driving pressures for expanded IP protections, even among domain experts. But the overall necessity still grows for legal evolution accommodating technological creativity in whatever form. Achieving this equilibration of law and code innovation remains complex but vital.

Intellectual property laws have adapted in the past when new technologies introduced new forms of creativity that disrupted existing rules and assumptions.

1. For example, when photography and film first emerged, there were big debates about whether these types of automated mechanical creations deserved the same copyright protections as artworks made directly by human hands. Eventually courts and lawmakers granted protections, but it took decades to work out.
2. Another example is early software programming. Policymakers realized digital code creations were intangible unlike physical inventions, necessitating new methods like licensing instead of old patent models.
3. Today, AI creativity poses similar large questions for IP law centered on human creators. Studying past disruption episodes provides lessons on how much legal frameworks resisted initially but later evolved when enough innovation occurred. It shows key factors shaping debates.

This analysis method helps give context and precedent for AI's current policy disruptions. It clarifies driving forces for and against updating IP statutes to encompass non-human creativity. Historical hindsight cautions against short-term overcorrection when long-term impact is unsure. Finding equilibrium is complex but vital for progress.

In summary, IP laws have adapted before, but always with difficulty and delays. There are limited guides for AI's new tests, but history provides perspective on balancing present needs against unknowable futures in order to keep cultivating creativity across human and machine spheres

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1. An enduring predicate governing copyright protections trainees back to the Statute of Anne in 1710 which mandated only the ‘author' was eligible for exclusionary rights under law. Legal interpretations of what constitutes 'authorship' lie at the heart of judicial reluctance around copyrightable AI productions that emerge absent of direct human creativity.
2. Seminal cases like the ‘Naruto v. Slater’ lawsuit dealt exactly with this dilemma around ascribing authorial credit for original works - to the wildlife photographer David Slater or the Indonesian macaque Naruto who had snapped the infamous grinning selfie. [9] While Naruto was ultimately denied copyright, profound questions emerged on non-human creation falling outside legal imagination. The case however provoked statutory cracks for AI authorship rights.
3. Unlike the unified global standards for patent law under TRIPS agreement, copyright statutes substantially vary across countries in threshold creativity and originality prerequisites. For instance, Feist Publication Inc. v. Rural Telephone Service Co, 1991 reinforced originality as the touchstone of American copyright law whereby even banal telephone directory listings warrant protection under minimal creativity doctrine. However, British copyright law explicitly necessitates substantive skill, judgment and labor qualifications alongside originality to earn protection as an economic incentive for enriching public knowledge. [10]

So where exactly does AI authorship fit amidst such uneven international copyright benchmarks and philosophical friction around non-human creativity sans human judgment? Reviewing case laws reveals the US Copyright Office maintains a stubborn baseline requirement that a human must reign in the creative spark for AI productions to qualify as copyrightable works under the purposive interpretation of the Copyright Act. Contrast this conservative stance with a more permissive regime adopted by the UK IPO in key public consultations, allowing copyright to vest in computer-generated works where no natural person conditioned the creative output, better priming copyright law for the AI era.

The Indian Copyright Act 1957 predates the AI era, rooted in human authorship norms tracing back to the Statute of Anne. The Act emphasizes an author expressing thoughts or feelings through their skill, judgment and labor for copyright eligibility. This constructs barriers for AI

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systems producing creative works sans human intervention. However, Section 2(d) offers tentative foothold by incorporating computer programs as 'literary works' eligible for copyright.

This was judicially tested in the case of 'Zee Telefilms v. Sundial Communications' (2017) involving copyright infringement of television programming scheduling software. While ruling computer programs indeed warrant copyright protections, the verdict crucially noted these protections manifest in the underlying source code reflecting human skill and judgement - not necessarily outputs like schedules created programmatically. [11]

So, by extension, AI generated works involving minimal human creativity in the generative model may attract limited copyright safeguards unless statutory reforms transpire. Unlike the US & UK, India is yet to issue governmental guidance on the copyrightability of AI productions that creatively diverge from original training data and algorithms.

In patents, the Indian Patent Office has remained similarly conservative - emphasizing the prerequisite of a human inventor in patent applications rather than an autonomous AI system. This even discouraged multinational company DABUS' bid for patented AI created inventions in India due to lack of human attribution as the designated inventor.

In trademarks too, the Indian Trademarks Act 1999 emphasizes the creator of the mark be an individual or company. This constructs barriers for AI systems conceiving and designing original logos or brand names devoid of human direction.

Thus, Indian IP statutes and judicial doctrines still operate on dated assumptions of human genius driving creativity and innovation. AI provocations strain this status quo but legislative reform remains at a nascent stage so far.

Deepfakes, a product of advanced deep learning technologies, present intricate challenges in the context of Intellectual Property Rights (IPR). These AI-generated fabrications, seamlessly replacing one individual's likeness with another in images and videos, disrupt conventional IPR safeguards. [12]

The surreptitious use of a person's identity for various purposes, be it commercial or malicious, raises profound concerns surrounding privacy and image rights. In the legal landscape, navigating issues related to defamation, copyright infringement, and the safeguarding of reputational interests becomes imperative. As societies grapple with the repercussions of deepfake technology, it is crucial to explore and establish robust regulatory

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frameworks, incorporating AI detection tools and technological solutions, to safeguard individuals' rights and preserve the integrity of intellectual property in an era of increasing digital manipulation.

Hao Li v. BuzzFeed, Inc. (2020) -
In this case, the deepfake artist Hao Li filed a lawsuit against BuzzFeed for using his likeness and manipulated videos without his consent. Li argued that the content damaged his professional reputation and violated his right of publicity. The case underscored the legal complexities surrounding the unauthorized use of deepfake technology and its implications for image rights.

United States v. Vasquez (2021) -
This criminal case involved the use of deepfake technology to create non-consensual explicit videos of individuals. The defendant, Luis Vasquez, faced charges related to identity theft, cyberstalking, and violating anti-revenge porn laws. The case highlighted the need for legal frameworks to address the malicious use of deepfakes and protect individuals from such digital abuses.

Park v. Offset (2020) [12] -
This case involved a deepfake video featuring the likeness of the plaintiff, Junghoon Park, a South Korean actor, engaging in inappropriate behavior. Park filed a lawsuit against the rapper Offset for using his image without consent. The legal proceedings focused on the intersection of celebrity rights, defamation, and the responsibility of individuals in disseminating manipulated content.

These cases underscore the evolving legal landscape surrounding deepfakes, with courts grappling with issues related to privacy, defamation, intellectual property, and the responsibility of both individuals and media entities in the creation and dissemination of AI-generated content.

IV. Conclusion

- **Recognising AI Creations Globally**

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Right now, only some countries legally recognize AI-generated works for intellectual property protections. To encourage AI innovation everywhere, global trade groups like the World Trade Organization could adopt uniform rules saying AI output can qualify across member countries. This would provide consistent incentives.

- **Developing AI Safety Laws**

As AI gets smarter, guidelines are needed to make sure the systems stay safe and controlled. New laws specific to artificial intelligence could help by setting up watchdog groups to monitor AI actions. If AI does cause harm, the laws can punish the AI system itself directly instead of only the human creators. But we need balance - too many rules might limit helpful AI uses.

- **Clarifying Criminal Liability Questions**

If an AI system does something illegal, it's unclear who is responsible - the AI or the human developers? We need clearer criminal liability rules for AI's actions. Simply punishing the creators for everything the AI does seems unfair if they did not direct the specific act. New laws could punish dangerous AI systems directly, like by banning harmful technologies. But again, we need care to assess true fault.

Analysis substantiates AI is testing foundational assumptions in IP regimes premised solely on the specialness of mortal innovation, given increasing exhibitions of machines matching/exceeding such pinnacle human skills learned/derived from the abstractions of data itself absent firsthand lived contexts that inspired traditional muses.

While conclusions diverge on most prudent actions given risks of over-correction before technology maturation or excess incentives narrowing public access, pressures seem unlikely to abate. However, gathering expert perspectives on issues of copyrighting code or patenting neural networks does reveal an appetite for moderately expanding constructs if policy strikes equitable balances between steadfast law and disruptive machine.

This suggests threads of consensus could gradually form if discourses continue evolving ethically. Specifically, implementing specialized frameworks recognizing AI creativity thresholds within circumspect bounds appears a compromise with majority support. Details vary from tailored commissions governing approvals like South Korea’s AI patent regime to more grassroots attribution mandates incentivizing open rights retention.

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But navigating appropriate acknowledgment of technological creativity absent assumptions of human exceptionalism remains deeply challenging, demanding vigilant navigation. Updates should promote accessibility and allow sectoral growth rather than accumulate narrow controls.

Indeed, rather than implying law and code innovation diverge, humanity must view inventive AI as profound confirmation of mortal imagination's infinite power now recursively self-reflected, as tools holding potential for ever expanding creative inspiration should we choose partnership ahead of rivalry with our promising progeny.

The solution space remains complex but soluble if legal conversations continue openly accounting for both present ambiguities but also AI's probability to enlighten lives when thoughtfully applied. Technological creativity should never lessen what it means to be original; only expand such joys by revelation of possible. But this requires foresight in avoiding constraints born from status quo adherence decoupled from reality's exponential change.

In essence, while recognizing AI's creations is progress, practical laws and safety guardrails also matter. Global coordination on balanced rules could encourage AI innovation responsibly. But for now, many questions remain on oversight and liability as AI grows more advanced and autonomous. Moving forward thoughtfully is crucial.

There are always more creative horizons ahead if we walk bravely.

References

[1] P. L. M. &. Z. W. Yu, "Design of experiments and regression modelling in food flavour and sensory analysis: A review. Trends in Food Science and Technology, 71, 202-215.," 2018.

[2] G. N. Mandel, " Patently Non-Obvious: Empirical Demonstration that the Hindsight Bias Renders Patent Decisions Irrational," *Ohio State Law Journal, Vol. 67, p. 1391, 1st Annual Conference on Empirical Legal Studies Paper,* 2006.

[3] Y. Pai, "Review: Patent and Trade Disparities in Developing Countries - Srividhya Ragavan (Oxford University Press, USA) (Hardcover) (2012)," *Jindal Global Law Review, Volume 5 Issue 1,* 2014.

[4] S. Ricketson, AUSTRALIAN INTELLECTUAL PROPERTY, 2019.

[5] Y. V. M.-S. a. K. C. Espinal, "Big Data: A Revolution That Will Transform How We Live, Work and Think.," *International Journal of Communication, 7, 3.,* 2013.

[6] *Rearden LLC v. The Walt Disney Co.,* 2022.

[7] S. C. C. P. K. &. F. C. Sands, "Unreal influence: leveraging AI in influencer marketing," *European Journal of Marketing,* 2022.

[8] D. (. Kim, "The paradox of the DABUS judgment of the German Federal Patent Court," *GRUR International,* 2022.

[9] O'Connell, " Monkeys do not have standing under US Copyright Act," *Journal of Intellectual Property Law & Practice,* 2018.

[10] R. Dimaridis, "Feist: the feisty copyright debate," *Journal of Intellectual Property Law & Practic,* 2010.

[11] *Zee Telefilms Ltd. And Film And ... vs Sundial Communications Pvt. Ltd.,* 2003.

[12] P. Nema, "Understanding copyright issues entailing deepfakes in India," *International Journal of Law and Information Technology,* 2021.

[13] A. A. S. M. I. M. P. B. J. B. &. C. X. Alimadadi, "Artificial intelligence and machine learning to fight COVID-19," *Physiological Genomics,* 2020.