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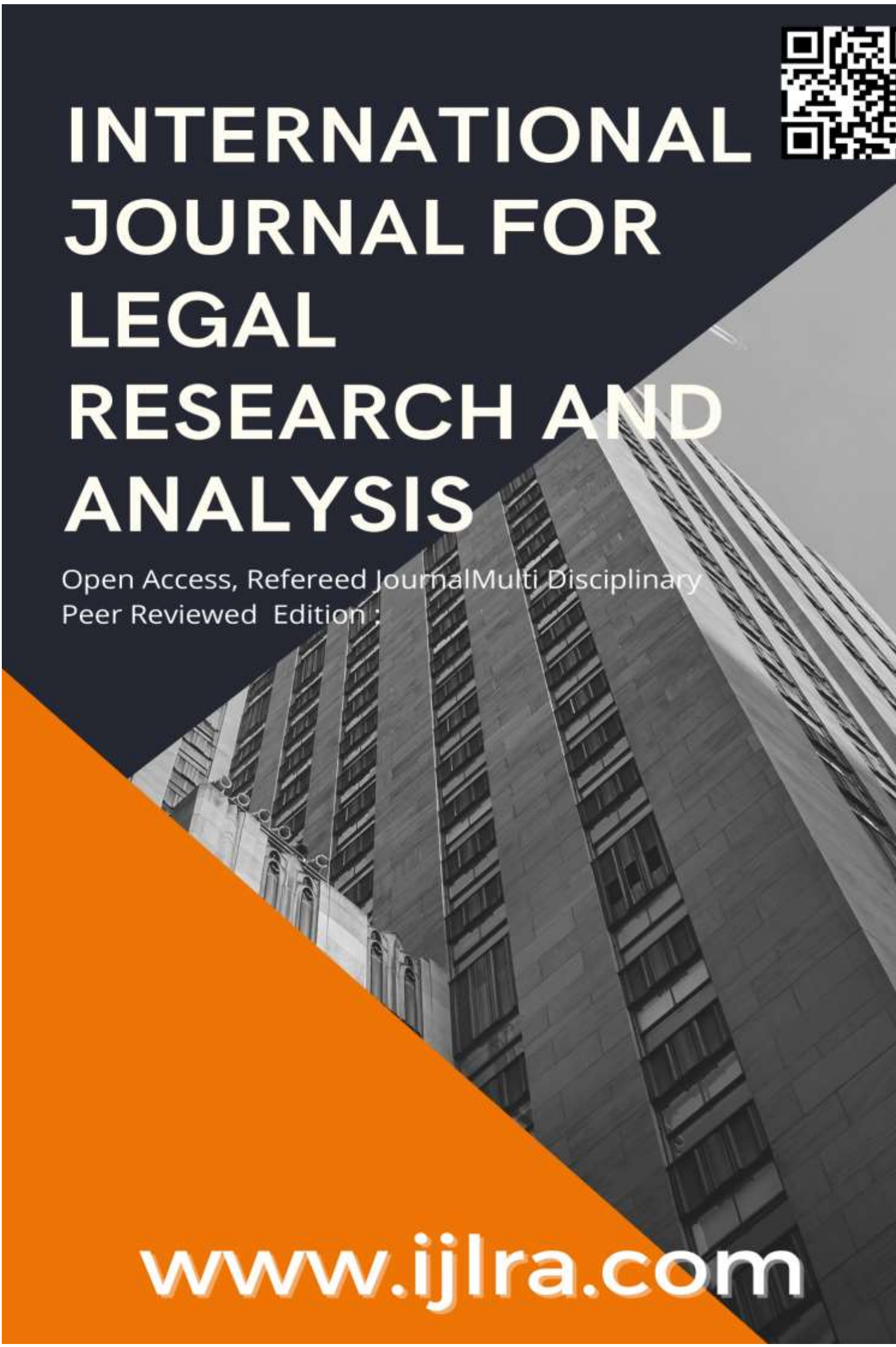

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DILEMMA OF OWNERSHIP OVER AI GENERATED ARTWORKS: AN IP OVERVIEW

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ABSTRACT

In a technologically driven world where Artificial Intelligence, Machine Learning and Deep Learning ('AI/ML') has engraved its mark in the futuristic techniques of growth in the field– there are several questions which arise in the domain of Intellectual Property Rights. The authors of this research paper are intrigued to explore the legal position in the discipline concerning several issues of pressing significance in the contemporary and futuristic premise of usage of AI/ML in technological spheres. For instance, AI-based bots are reproducing formatted artistic styles of artists like Vincent Van Gogh and other contemporary artists, wherein a tough legal question of copyright protection to the artist arises as against the Artificial Intelligence reproduction. Can AI be the rightful owner and claim copyright on the AI generated art, or does it receive a different protection under the governing laws of various jurisprudences? What will be the development in the jurisprudence in interpreting words like 'authorship', 'ownership' and 'creativity' under the existing copyright laws upon the widespread reach and applicability of Artificial Intelligence coming to the forefront of productive technology and digital media? The broader question of who owns the Copyright claims in gaming, art, and other creative production opens up to a number of contenders such as software developer involved in the machine learning process, the company who owns that AI/software, the entity who markets or sells that software or the user who provided his/her inputs– who is the owner, really?

With these questions in mind, the authors aim to develop a paper in understanding of the current governing laws, precedents and possible future alternatives in order to contribute to the building jurisprudence in the field both nationally and internationally.

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I. INTRODUCTION:

By now, majority of us are familiar with the concept of copyright granted in respect of literary, dramatic, musical, and artistic works. However, in this era of tech, where the innovation flows in a digital format, the traditional notions of copyrightability changes. Computers have ceased to being mere dumb machines as we used to define them traditionally, with the advancement of Artificial Intelligence (AI), there are significant changes owing to the rapid development of Machine Learning Languages (MLL). From the auto-correct feature in our keypads, to talking to Alexa in handling our basic chores like playing music and turning on/off fans or lights, the modern AI equipped machines have made our lives cosier than ever. However, this AI generated comfort brings with itself some complex questions of copyrightability, but before diving into that lets briefly discuss about AI.

What is Artificial Intelligence?

Every tech enthusiast tends to define AI in his/her own way owing to which we have multiple definitions, however, fundamentally it is a simulation created by modern computing devices through Machine Learning Languages (MLL) wherein certain data sets are analysed by the system and then arranged in such a way that the resultant output seems to be created by an intellectual being (human). In order to refine this output, the AI follows inductive analysis methods wherein it continuously arranges and rearranges data sets which is called learning or training phase of AI,[1] and after a point of time AI automatically produces desired results even though it is not particularly programmed for it. During the learning or training phase of AI, the output gets analysed by a team of developers or programmers to get suitable results and enhance its performance.[2] Owing to this human intervention there are undoubtedly some inherent biases in the AI,[3] however, this issue is beyond the scope of the current discussion. Certainly, with the arrival of new digital assets like NFTs, the AI generated artwork is gaining popular traction, due to the AI platforms like DALL-E, DreamBot, MidJourney etc., wherein the users are willingly paying considerable subscription fee to reap the benefits of AI enabled creations, ultimately reducing the human labour.

[1] Jair Ribeiro, 'Introduction to Inductive Learning in Artificial Intelligence' (*Medium,* April 28, 2021) <https://medium.com/tech-cult-heartbeat/introduction-to-inductive-learning-in-artificial-intelligence-dafc2796405b> accessed December 26, 2022.
[2] AI Data, 'How do you train artificial intelligence' (*TELUSInternational,* May 19, 2021) <https://www.telusinternational.com/insights/ai-data/article/how-to-train-ai> accessed December 26, 2022.
[3] James Manyika and Jake Silberg, 'Tackling Bias in Artificial Intelligence (and in Humans)' <https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-bias-in-artificial-intelligence-and-in-humans> accessed November 9, 2022.

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The authors of this paper intend to implore the reader's mind by providing for an experimental setting which helps in highlighting and drawing the research questions of the paper. The experiment is done with the case study of DALL-E by OpenAI, in the next segment.

A. CASE STUDY: EXPERIMENT VIA DALL-E

DALL-E and DALL-E 2 are OpenAI machine learning models which were initially launched in January 2021.[4] The proposed purpose of this AI tool is to generate digital art in the form of images from individually fed prompts (text-based input). For instance, a prompt inserted by us read, "a non-binary person with piercings, blue hair and long eyelashes, glitter makeup and stars in the background". The image generated by DALL-E is shown in Figure 1.

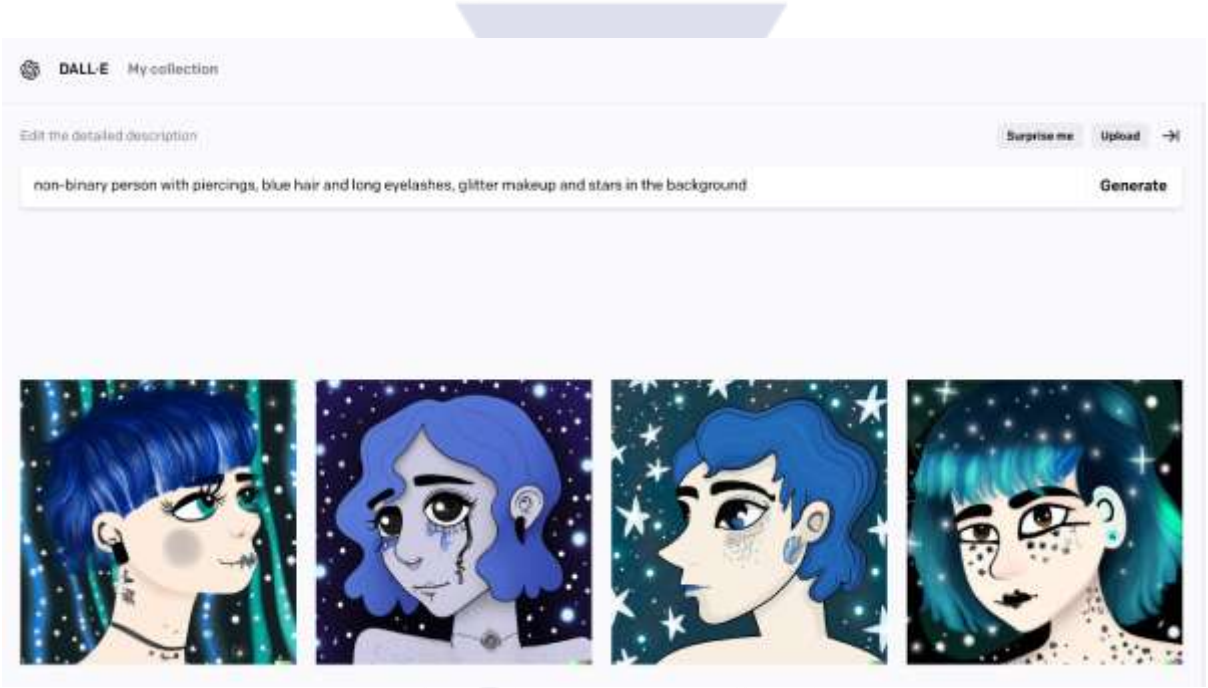

Figure 1

Another prompt if we write a prompt which says, "Murakami style impression of a non-binary person with Orion constellation in the background", the results generated by DALL-E are attached in Figure 2.

[4] Aditya Ramesh, 'DALL·E: Creating Images from Text' <https://openai.com/blog/dall-e/> accessed October 13, 2022.

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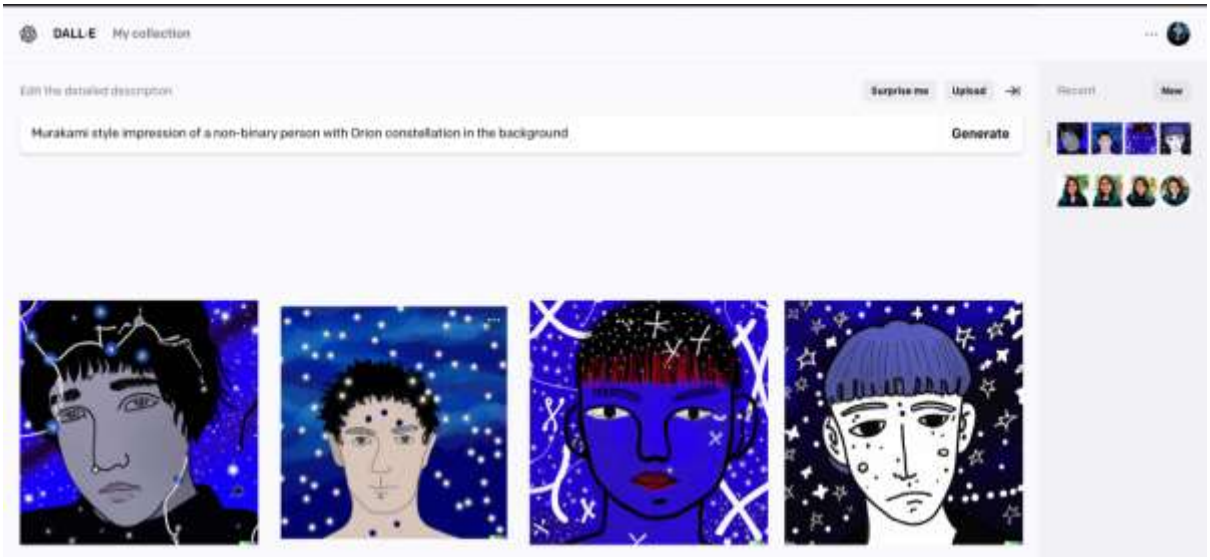

Figure 2

In the final prompt one of the authors uploaded their own image and prompted DALL-E to generate 'a variation of me'. The result is showcased in Figure 3.

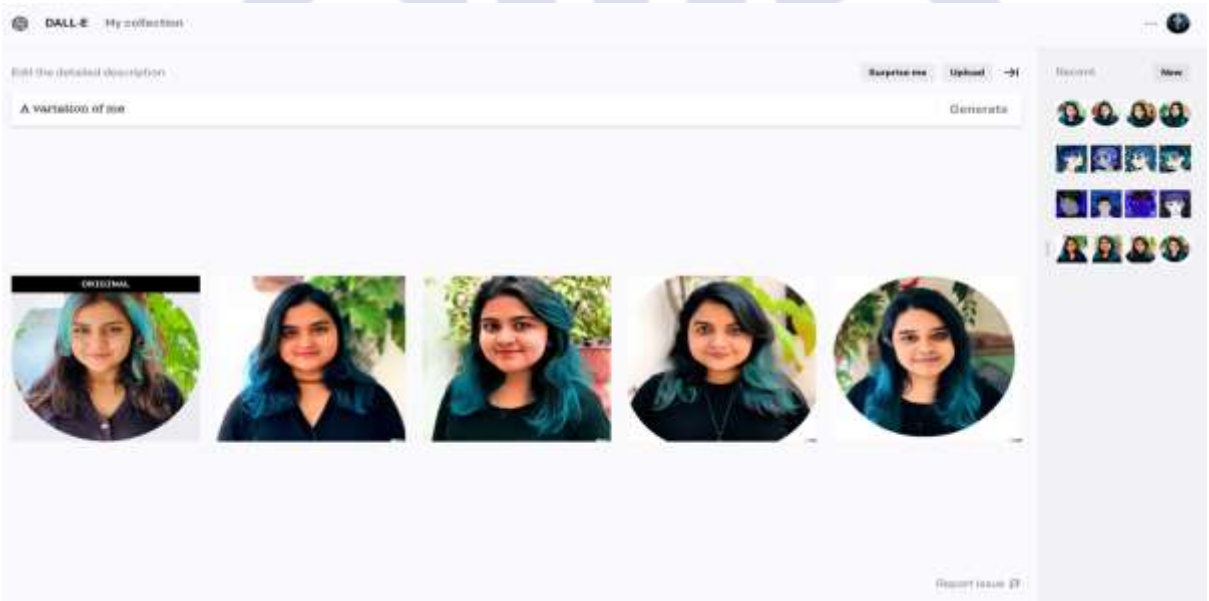

Figure 3

B. Observational Points:

In this experiment, some direct questions that arise are as follows:

1. *Who is the owner of the image generated via AI and Machine Learning Bots?*

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2. *Does the user as the owner of his/her/their uploaded image have rights over the variations generated with the help of DALL-E?*
3. *Can Murakami or any other artist whose style is being blended into these images using technology, claim copyright infringement over the reproduced images or over his artistic style?*

The first question is of primal importance as it talks about the artwork which is produced by amalgamated efforts of various contenders. The answer varies on a case-to-case basis as the jurisprudence is still developing, the laws are not entirely clear and there is no strict precedent on this issue. The potential contenders for claiming ownership could be the AI which has processed and analysed the input and provided a suitable output, or the developer(s) of that AI who trained it, or the end-user who has provided the input, or may be the AI platform itself i.e., DALL-E as a corporate legal entity (legal person).

Now, the traditional or even the contemporary notion of authorship is traced back to humans owing to the utilitarian principle and AI has not been accorded with any legal personality in majority of the countries, at least not in any of the common law countries.[5] So, prima facie AI alone is out of the list, however, there is a bit more discussion on this issue in the latter part. The second contender could be the developer(s) of AI, but as a matter of industry practice, they always work under a 'contract of service' with the AI platforms like DALL-E (OpenAI) wherein they surrender all their proprietary rights including Copyright in exchange of monetary consideration. The third and the most suitable candidate could be the end-user who provided the input: as that person has applied creative mind and skill, not only while giving the input but also while selecting the most desired output out of the hundreds as reproduced by the AI. Prima facie, it may seem unfair that merely by pressing some buttons the user has been provided authorship but isn't that what happens in case of a photograph? Wherein the photographer holds the copyright over the picture which is clicked by means of a single tap/click. Thus, the entire controversy of labour should not be an issue, the gravamen is how creative is that labour and that will depend on individual prompts.

However, grant of authorship rights does not necessarily imply grant ownership rights, the thumb rule in copyright law is that the *author is the first owner of the copyright unless there is an*

[5]https://ersj.eu/journal/1245/download/Legal+Status+of+Artificial+Intelligence+Across+Countries%3A+Legislation+on+the+Move.pdf

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agreement to the contrary. The issue with these open AI platforms (like DALL-E) is that they do not explicitly claim authorship over the AI generated artwork but at times claim ownership on that work based on an agreement which is mandatorily agreed to by the end-user (subscriber) for using the services of the platform. Owing to the agreement (Terms of Use) such users tend to lose ownership rights over the generated artwork and at times are not able to commercially exploit the resultant output (artwork). Thus, the terms of use must need to be read thoroughly to avoid future conflicts.

In any case, the two most suitable candidates for securing Copyright ownership over the newly generated artwork are either DALL-E (Open AI) as a corporate legal entity or the end-user, who, in the absence of legal recognition to AI as a person can be the author as well. The foregoing dilemma could be solved if a mechanism is devised wherein, both these entities could become joint-authors and ultimately the co-owners of the resultant artwork.[6] Such ownership rights could be shared through an agreement (embedded in the user agreement), wherein both of these entities could mutually reap benefits from the resultant work, when such work is commercially exploited. For instance, OpenAI has very recently added a new "sharing & publication policy"[7] under which the user may publish his/her content anywhere, but the publication must mention that such work has wholly or partly been created with the help of OpenAI and it must not otherwise violate their content policy. This could be seen as a positive step by AI platforms like DALL-E (OpenAI) wherein the end-users or creators would get their due right provided the contribution of AI has been duly mentioned in their respective works.

To answer the second question, a careful run through of specific paragraphs of DALL-E's *terms of use* is required which are mentioned hereinunder. An important observation is that DALL-E explicitly permits the users to upload their images which have direct rights of ownership related to the one who uploads. However, any form of resale, distribution or commercial exploitation in the AI-generated art, unless expressly authorized, is prohibited by DALL-E. OpenAI (creator of DALL-E) reserves the *"non-exclusive, worldwide, royalty-free, fully paid-up, transferable, sublicensable, perpetual, irrevocable license to copy, display, upload, perform, distribute, store, modify and otherwise use the User Content for any OpenAI-related purpose in any form, medium*

[6] Boyden B, "Emergent Works", (2016) 39 COLUM. J.L. & ARTS 377, 384-88.
[7] OpenAI, "Sharing and Publication Policy" <https://openai.com/api/policies/sharing-publication/> accessed November 16, 2022.

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or technology now known or later developed."[8]

The terms of use have been continuously updated where earlier OpenAI permitted the uploading user to have ownership rights over the prompt-based image generated with respect to any copyright over it and indefinite right to reproduce or commercially use the image,[9] now that right is subject to the express authorization of DALL-E (OpenAI). As an uploading user, not only is one agreeing to surrender all rights upon the image variation done by Open-AI under the governing technology and law but is also agreeing to any future modifications based on technologies which are yet to be discovered as well. The user-content policy is very vaguely defined, it is not clear what 'OpenAI related purpose' actually is. This unexplained periphery and threat of personal security for instance, deep fake is pressing for judicial scrutiny.

The data misuse aspect by these tech-based platforms is not under the direct purview of the present discussion, suffice it to say that the question of copyright ownership of one's own image/prompt is inextricably combined with the aspect of data privacy laws. Those jurisdictions that have strict data-laws for instance, the European GDPR[10] may sufficiently tackle these issues by recognizing those self-image-based prompts as 'personal data' of the user, which cannot be manipulated or stored for prolonged period by these AI platforms.[11] However, in jurisdictions like India, wherein we are yet to have robust data protection laws, the fate of ownership of such self-image prompts and their modifications is shaky. Nonetheless, the '*right to forget*'[12] has now been recognized in India, and the user may ask OpenAI to erase his/her personal data or its derivative prompts (self-images herein), to prevent any further exploitation. So, to answer the principal question as to who owns the AI generated image by DALL-E, as a reproduction of the user's prompt (self-image), upload or otherwise, currently the ownership rights vest with DALL-E and are not commercially reproduceable at the user's convenience or interest, as per their terms of use. As the owner of their prompts, the maximum rights attributable to the users are specific to the upload, but not pertaining any reproduction, modification, AI-based generation of the same, now and in the future. However, as discussed earlier, the answer may substantially vary depending upon the 'personal data laws'

[8] OpenAI, "Terms of Use" < https://openai.com/terms/> accessed December 4, 2022.
[9] Guadamuz A, "DALL-E goes commercial, but what about copyright?" < https://www.technollama.co.uk/dall%C2%B7e-goes-commercial-but-what-about-copyright> accessed December 4, 2022.
[10] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
[11] Ibid.
[12] *Jorawer Singh Mundy v Union of India and Ors* (2021) Del 2306 (SCC Online).

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of the individual countries.

In order to deplore the third question about artistic styles and the linked rights therein, it must be understood that there is no question of infringement in the digital art work that is derived from an art which is already a part of public domain (like Van Gogh's) but if the user's input relates to an existing copyrighted work, for instance an artistic style of an artist, would the end result will cause infringement? The answer is not in black or white, and before attempting to find the answer lets analyse a situation wherein a young artist (X) visits an Art gallery, observes multiple artistic creations of a popular artist (Y) and then creates an artwork based on the artistic style of Artist-Y. Can it be said that the piece of work so created by Artist-X would cause infringement? The most likely answer would be, "that depends", i.e., it would depend on multiple other factors like creativity, originality of thoughts, theme, quality, artistic style and the skill demonstrated, so the 'artistic style' though a major parameter is not the only criterion to determine infringement in an artwork. Only if there are other compelling factors present (including artistic style) wherein the newly formed work appears to be a direct derivation of a copyrighted work i.e., when substantial amount of expression and not the idea of the original work is illegally appropriated then a case of infringement is made out.[13] The same goes with digital AI platforms, if the user feeds a prompt asking the output to be in a particular artistic style, it would not necessarily constitute infringement and each individual case must be decided on merits, keeping all the above-mentioned parameters in mind. However, this issue brings with itself an incidental issue, which is important and is discussed next.

Whether web-scrapping of copyrighted images by AI to generate the desired output as demanded by the end-user amounts to Fair Use?

A 'fair use' is nothing but a reasoned doctrine wherein an act is deemed non-infringing even though it technically violates someone else's rights (copyright herein). Various jurisdictions across the world tend to include scientific, technological and research-based works under the category of fair-use. To answer the issue from the copyright-owner's perspective, it is indeed a violation of his/her 'right to reproduce the copyrighted work' and by feeding that work into the AI-system without his/her express consent the developers of AI have committed an act of infringement. However, the supporters of AI generally argue that this practice comes under fair-use as it is done to promote *innovation* in the tech-industry and as the same is done for a

[13] *S.M. Dyechem Ltd. v Cadbury (India) Ltd* (2000) AIR SCW 2172.

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'transitionary period' in order to train the AI, the AI upon training would not need any of that copyrighted work.

Now, the reality lies somewhere in between wherein the data (copyrighted work) consumed by the AI even for learning purposes is never lost (forgot), unlike a human mind. The subsequent outputs, even though newer works are based on the copyrighted data-sets that are consumed by the AI during its training phase and are permanently attached in its memory. Nevertheless, the purpose for which an artwork is created by an artist is distinct from the use and purpose for which the developers of AI use that work. Artists tend to create artwork as per their lived experiences and emotions, and tend to trade them for their livelihood, whereas AI platform's purpose is to train its algorithm and provide users an easier access to creative arts at affordable prices. Art lovers tend to buy expensive artistic pieces and would not easily switch over to digitally created derivatives of that work.[14] Therefore, the artistic value of the original man-made artwork would not necessarily be diminished by AI generated artwork, however, there might be some overlap in case of budget art-buyers. Therefore, the authors propose a mass-licensing mechanism that needs to be adopted by these AI platforms like Dall-E, wherein, the copyrighted works that are digitally available must not be freely exploited. A positive recent development in this regard occurred when Shutterstock[15], announced that it will collaborate with DALL-E to provide its content for AI generated artwork by compensating artists. They are working on a revenue sharing compensation model wherein artists whose works are utilized for AI generated artwork would be routinely receiving a certain share of the entire contract value paid by the platform partners proportionate to the quantity of their content used in the purchased data sets[16].

II. JURISDICTIONS ACROSS THE WORLD

1. UNITED STATES

According to the United States Copyright Act of 1976, a work must have been created by an "author" in order to be protected by copyright.[17] The term "author" is not defined in the statute.

[14] Blog, 'A Deep Look at Digital Art and Social Media' (*Artwork* Archive) <https://www.artworkarchive.com/blog/a-deep-look-at-digital-art-and-social-media> accessed December 20, 2022.
[15] A popular online service provider of photographs, videos and related media on subscription or pay-per-click model.
[16] Benj Edwards, 'Shutterstock partners with OpenAI to sell AI-generated artwork, compensates artists' (*arsTECHNICA*, October 25, 2022) <https://arstechnica.com/information-technology/2022/10/shutterstock-partners-with-openai-to-sell-ai-generated-artwork-compensate-artists/> accessed December 19, 2022.
[17] 17 United States Code § 102.

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However, the subject of human and non-human authorship has been examined in recent US legal proceedings. The US District Court for the Northern District of California addressed the issue of animal ownership in photographic works in *Naruto v. Slater* (also famously referred to as the "Monkey Selfie Case")[18], where a monkey named Naruto clicked a picture of itself using a photographer Slater's camera. As the copyright legislation primarily refers to a "person" involved in the creation of the work and that for a work to qualify as a copyright protected work it has to have been created "in whole or in part,"[19] the Court dismissed the action in 2016 and rejected the monkey's claim for authorship of the photograph. Defending Naruto, PETA filed an appeal against the district court's ruling; the dispute was ultimately resolved outside of court in 2017.[20] In *CoStar Group v. LoopNet*[21] which deals with online piracy and non-consensual downloading of images. Here, the US circuit court have highlighted that "LoopNet is not liable for direct infringement for the temporary, automatic response to the user's request" i.e., generating temporary artworks on a computer for a transitory period would not cause infringement. This could be indicative of the fact that AI generated output based on certain copyrightable data sets may not constitute infringement and could be a fair use.

2. EUROPEAN UNION

Copyright directives at the EU Level do not deal with the issue of whether only humans can be regarded as authors. In *Infopaq International A/S v. Danske Dagblades Forening*,[22] the Court of Justice of the European Union expanded the definition of originality as the author's own intellectual creation to all categories of work. The Court further held that Copyright protection should only be extended to subjects that are unique in the sense that they are the "author's" own intellectual creation for all types of work. In other significant rulings, the CJEU noted that the phrase "author's own intellectual creativity" refers to the author's "stamp of his own touch or reflection of his personality in the sense that he exhibits his creative powers in original manner by making free and creative choices."[23] Thus, AI will not be able to pass this test as it will not be ascertained as an author and the work that is created by AI will not be considered as original

[18] *Naruto v Slater* 888 F.3d 418 (9th Cir. 2018).
[19] Ibid.
[20] Toliver Z, 'Settlement Reached: 'Monkey Selfie' case broke new grounds for animal rights' <https://www.peta.org/blog/settlement-reached-monkey-selfie-case-broke-new-ground-animal-rights/> accessed December 5, 2022.
[21] *CoStar Grp Inc. v LoopNet Inc* 373 F.3d 544, 546-47 (4th Cir. 2004).
[22] *Infopaq International A/S* v *Danske Dagblades Forening* (2009) ECLI:EU:C:2009:465 Case C-5/08.
[23] Edward Elgar (ed), *The governance of IP in EU and China* (*Edward Elgar Publishing:* 2016).

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creative work.[24] However, in the UK Copyright Act[25], Section 178 talks about "computer-generated" work i.e., a work generated by computer in circumstances such that there is no human author of the work. As per Section 12(7) such works are protectable for up to 50 years when it was first made. It clearly indicates the statutory progressiveness in the English jurisprudence regarding non-human computer-generated works which can be equated with AI generated works and it also provides a new term of protection.

3. INTERNATIONAL COPYRIGHT INSTRUMENTS

The three prominent international treaties for Copyright Law briefly discussed in this segment of the paper are Berne Convention, the WIPO Copyright Treaty and the TRIPs Agreement.

The Berne Convention does not explicitly define the term 'author', even though it uses it frequently.[26] As per legal scholars Goldstein and Hugenholtz, natural persons are the ones coming under the purview of the Convention.[27] Pursuing common law understanding, the scope of authors as per the Convention is yet to be expanded to include AI as a part of it. The WIPO Treaty and TRIPs agreement remain silent with regard to the definition of 'author' as well, and thus the EU jurisprudence, apart from the UK, is unable to accommodate space for AI authorship for Copyright Protection yet.[28]

III. INDIA'S POSITION AND SOME CRITICAL ISSUES TO PONDER

1. Whether Indian Copyright Act envisages AI as an author?

The origin of authorship under the Indian Copyright Act are traced to Section 2(d), wherein clause (vi) states that the author for any computer-generated work is the person who causes the work to be created. This word "created" is very superfluous, ambiguous and subjective – as what could cause a work to be created could very well be a collective effort of an AI platform like OpenAI, with their employees, the artist whose artistic style is modified and used, or the machine

[24] Janne Ihalainen, 'Computer creativity: Artificial Intelligence and Copyright' (2018) Journal of Intellectual Property Law & Practice Vol 13 Issue 9.
[25] Copyright, Designs, and Patents Act 1988.
[26] J.C. Ginsburg, 'The concept of authorship in comparative copyright law' (2002) *DePaul L. Rev.*, *52*, p.1063.
[27] Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights.
[28] WIPO Copyright Treaty, Article 1; TRIPs, art 2(2).

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developers who enable AI/ML to be run or the end-user whose commands were followed in designing the output. The stance becomes clear, as the Act refers to only those computers-generated works which require at least some interaction with a human being, or under the agency of humans to be operated.[29] Thus, unlike UK copyright Act which talks about computer-generated work with no human intervention, Indian laws do require some human intervention and the protection will not be accorded to the computer (AI) but to the person(s) who worked on that computer generated work. In any case, the Indian statutes has no specific provision to accommodate AI and Indian copyright jurisprudence has not encountered with such issues till now.

2. Advocacy for AI as an Author

In order to grant authorship rights to AI, it needs to be accorded with certain legal personality. Grant of such personality rights may seem far flung for now but could be required in the near future. However, we first need to update a few basic definitions like that of "computer-generated" works as used in the Indian Copyright Act that has now become obsolete. Nowadays, computers are not used as mere tools by humans but are deriving ideas from them, as computers are now futuristic and behaviourally adaptable. An AI painting called *Edmond de Belamy*[30] became famous and was sold for $432,500 USD[31], and the ability of these tools to reproduce artistic music,[32] digital art, gaming[33] and other such forms of media[34] are unimaginable and would require certain regulations and IP protections. Artificial Intelligence should qualify as a legal identity as it stores more intelligence than mere animals including humans, it is more animate than rivers or idols and

[29] Rehan, 'Who Owns Computer Generated Works' (*Learn and Digest Blog*, June 2014) <http://learndigest.blogspot.com/2014/06/who-owns-computer-generated-works.html> accessed December 2, 2022.
[30] Edmond De Belamy (*Obvious Art*) <https://obvious-art.com/edmond-de-belamy.html> accessed December 23, 2022.

[31] A J Dellinger, 'AI-generated painting sells for $432,000 at auction' (*End Gadget*, October 25, 2018) < https://www.engadget.com/2018-10-25-ai-generated-painting-sells-for-432-000-at-auction.html#:~:text=It%20was%20expected%20to%20fetch,based%20art%20collective%20called%20Obvious> accessed December 20, 2022.

[32] Blog (*Deep Mind*) < https://www.deepmind.com/blog> accessed December 24, 2022.

[33] D. Kehoe, 'Designing Artificial Intelligence for Games' (2009) Intel Developer Zone Papers, <https://software.intel.com/en-us/articles/designing-artificial-intelligence-for-games-part-1> accessed December 20, 2022.

[34] Publications (*Deep Mind*) <https://deepmind.com/research/publications/> accessed December 20, 2022.

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can be represented by corporations as pools of individuals.[35] As per the Lovelace Test, a machine ought to be creating original ideas if it is claiming to be considered intelligent.[36]. Despite all these factors, the current legal system, be it national or international, is not yet ready to accept the innovativeness or creativity introduced by AI, owing to lack of strict evidence, which is obvious as technology evolves faster than laws.

3. What are the basic hurdles in recognizing AI as an author or copyright owner?

The computer-generated or AI-based works under the present discussion falls under the category of either literary or artistic works, which are protected for a term of sixty years after the death of the author/artist as per section 22 of the Indian Copyright Act. This creates following hurdles, firstly, it will be hard to determine the 'term of protection' for AI-based works as it is not clear how the "lifetime of author" will be calculated as AI is a tool which does not die, in accordance with the requirements of section 22. Secondly, can AI be held responsible for infringement? It is a no brainer that any technology at the end of the day is a means to an end. Even if nurtured like a child, it grows some implicit bias depending upon the parent and environment it is developed with. So, it is not far-fetched to assume that this innovation, even if it works on its own, could very well infringe proprietary rights of certain authors/artists. In that case, how could the authorities be able to hold AI accountable or impose sentence on it. Mere grant of personality rights without imposing corresponding duties on it would be against the set legal jurisprudence and could create a havoc. One possible solution could be to train the AI in such a way so that it can automatically detect copyrighted work and should not reproduce an output that is forged or a direct derivative of any copyrighted work. In this regard, the authors propose an ethical certification for AI trainers which could be *Pari Materia* to the CEH certification[37] as granted to Ethical Hackers or 'white hats' by the European Council.

4. Is copyright protection the only way to incentivise AI or its stakeholders?

Equating AI generated artworks as literary or artistic works and granting them more than sixty years of protection is probably a very long period. This assertion is made because the speed and the scale (amount) with which AI can create content is unimaginable and granting each or majority

[35] Ryan Abbott, 'I Think, Therefore I Invent: Creative Computers and the Future of Patent Law', 57 B.C. L. Rev. 1079 (2016).
[36] P Kapoor, 'Approaches to measuring the intelligence of machines by quantifying them' (2015) *International Journal of Advanced Research in Computer and Communication Engineering*, 10(4), pp. 81-83.
[37] EC Council: Ethical Hackers <https://www.eccouncil.org/programs/certified-ethical-hacker-ceh/> accessed December 18, 2022.

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of such piece of work as a separate copyrighted work would create an unbridled monopoly in the hands of few AI-based platforms. Therefore, the authors would like to suggest a new class of IP Right for AI generated artworks that could be granted protection for a limited period, for instance 10 to 15 years wherein, all the stakeholders like the developers and copyright owners could enjoy a certain Royalty share from the exploitation of those AI generated artworks. This will serve the dual purpose, firstly, it will incentivise the stakeholders of AI and will not stop innovation in this field and secondly, it will not let these tech-giants to have unrestricted monopoly over a prolonged period.

CONCLUSION

Copyright protection in the realm of AI technology is expansive and subject to contemporary adjustments. It is notable however, the pace at which the technology is growing as compared to the pace at which the laws are accommodating of changes. As per the principles of copyright law – it becomes evidently clear – that the artist whose work is being put to creation deserves acknowledgement and legal recognition in case of it being reproduced in a different form (digital art herein). This is imperative and important because the moment a viewer looks at the picture, they are reminded of Murakami's or some other artist's existing copyrighted work. Such issues would be subject to a case-to-case interpretation depending on the dispute arising on similarity of resultant expression (artwork), as the law is unclear on the AI based works as of now.

The authors of this paper would first like to conclusively opine that there shall be an understanding between the copyright owners/authors and the leaders of tech industry, wherein the latter must provide certain royalty or compensation to utilize the works of the former for training AI, under as mass-licensing mechanism, as discussed. Once this is arranged, the AI based platforms should then work on liberalising their current policies (terms of use) of ownership over the 'AI generated artworks', i.e., they should allow the end-user to commercially exploit the output of their prompts, at least for the paid subscribers. It is only through such mechanism, a true balance can be achieved among the relevant stakeholders, where everyone is being compensated for their efforts. Giving more leeway to any one entity would defeat the very purpose of copyright laws, i.e., 'to spread creativity in the society', which should not be monopolized either by the tech-giants or even by the copyright owners. And finally, there is a need to recognize 'AI generated works' as a separate class of copyrighted works wherein the term of protection should be cautiously decided, preferably kept between 10 to 15 years, as discussed.