**INTERACTION BETWEEN COPYRIGHT LAW AND AI : COPYRIGHTABILITY OF AI GENERATED WORK**

Technological and scientific advancements have enabled machines and computer programs to perform increasingly complex task, this led Andres Guadamuz to state, “*The rise of the machines is here,” it has been said, “but they do not come as conquerors, they come as creators*.”[[1]](#footnote-1) Artificial intelligence (AI) has no single definition. The Organisation for Economic Co-operation and Development (OECD) defines AI as "*a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions […] designed to operate with varying levels of autonomy.”*[[2]](#footnote-2) Where as The World Intellectual Property Organisation (WIPO) defines AI as including "*machines and systems that can carry out tasks considered to require human intelligence, with limited or no human intervention … [and] techniques and applications programmed to perform individual tasks*." In simple terms Artificial intelligence (AI) is a machine capable of completing tasks though the use of processes typically associated with human cognition.[[3]](#footnote-3)

Rapid developments in AI technology combined with rapidly growing AI application that cuts across various sectors in the economy is giving rise fundamental topic of originality, authorship and ownership of works which are generated by using AI or AI assistance in the context of copyright law.

Originality is often described as the overarching principle of authorship.[[4]](#footnote-4) As per the provisions in the Copyright Act[[5]](#footnote-5), literary, dramatic, and musical works must be original to attract copyright protection.[[6]](#footnote-6) But one should remember that the work must be an “o*riginal expression of thought of its originator and must not be merely a copy of another work”.[[7]](#footnote-7)*

In *CCH Canadian v Law Society of Upper Canada[[8]](#footnote-8)*, the Supreme Court of Canada considered the threshold for originality and whether creativity should constitutes part of the test[[9]](#footnote-9) and held work requires “*an exercise of skill and judgement*” by the author.[[10]](#footnote-10)

The conceptualization of originality encompasses aspects of “*both the product (in that it cannot be a mere copy), and the process (in that it must be an exercise of skill and judgement by the author)”.[[11]](#footnote-11)* In *CCH Canadian, court held that* case summaries and headnotes constitute original works in the sense that author had to “*select specific elements of the decision*” and *“arrange them through an exercise of skill and judgement”*  and the court even held that reported judicial decisions is original work as it a compilation in which “*the authors have arranged the headnotes, judicial reasons, case summary, and title in a specific manner”.*

While I personally consider artistic expression as a *singular human attribute*, I heed to the fact that AI have proven to be capable of producing work which mimic the characteristics of human-created works. According to me, if an AI can use algorithms to learn from a data set and then by rearranging the elements it produces work, then that should be considered original work by using reasoning in *CCH Canadian.* Jukebox is one example where machine-learning model is capable of generating music that imitates different styles and artists, it can also incorporate singing in natural-sounding voices.[[12]](#footnote-12) Furthermore a Canadian engineer, Adam King by using OpenAI GPT-2 technology has created *TalkToTransforme*r which is an AI language generator which on being prompted with headline or complete short stories can write articles. [[13]](#footnote-13) The Society of Authors, Composers and Publishers of Music (SACEM) has officially endowed *AIVA* a music composition AI with “*worldwide status of Composer.”[[14]](#footnote-14)*

On a bare perusal it appears to me that work produced by AI is not prevented from being an original work under the Copyright Act, the issue pertains to if AI is able to produce outputs which are indistinguishable from works of human authorship the question arises then is whether copyright subsists or ought to subsist in such AI-generated works, or whether they more appropriately belong in the public domain ?

Going one step ahead , If copyright does or should attach to the outputs of AI systems, then the issue which remains to be established *is” who—or what—should be the first owner*” if there is no identifiable human author ?

Though Copyright act does not define the term author, but author of a work is generally the “*first owner the copyright therein*, unless the work is made in the course of employment, or unless there is an agreement to the contrary.”[[15]](#footnote-15)

Copyright Act seems to imply that authors must be human in that they must be “…*at the date of the making of the work, a citizen or subject of, or a person ordinarily resident in, a treaty country*”.[[16]](#footnote-16) In *Public Performance of Musical Works, Re[[17]](#footnote-17),* court held ordinary rules of statutory interpretation should be used to interpret Copyright Act. Plain reading of the act suggests to me that machines are not capable of holding citizenship or residence and hence would be ineligible to be an author. But the omission of any language which excluded non-natural person, appears to me as lack of clarity relating to authorship by non-humans.

Furthermore, copyright in Canada subsists for “the life of the author, the remainder of the calendar year in which the author dies, and a period of fifty years following the end of that calendar year. Almost 30 years ago, Sam Ricketson noted that “*such a provision would be inappropriate in the case of non-human entities, which may have an infinite existence*.”[[18]](#footnote-18)

With AI authorship and no express parliament intent disallowing authorship to AI or non-human, there appear to me that there are three possibilities for suggesting copyright ownership in AI created works: 1) the creator of the AI, 2) the AI’s users, and 3) the investor/owner of the AI.[[19]](#footnote-19)

Copyright Act states for cinematographic works that copyright subsists in the work’s “*maker*” – which can even be a corporation[[20]](#footnote-20) and maker is defined as “*the person by whom the arrangements necessary for the making of the work are undertaken*”[[21]](#footnote-21). I find that AI created work possess similar complexity and collaborative nature and hence a similar provision should be introduced for works created by AI.

In September 2021 in India, the copyright office recognized for the first time an AI tool (*RAGHAV*) as co-author of copyright protected artistic work titled “S*URYAST*” along with co-author Ankit Sahni who owns the AI app. While the Copyright office in India rejected AI as the sole-author, it accepted AI as co-author. However, in December 2021 the copy right office issued notice of withdrawal to Ankit Sahni asking him to specify the legal status of AI (*RAGAHV*) as per the term author.[[22]](#footnote-22)

What I found interesting is that in 2022 the Canadian Intellectual Property Office (CIPO) has also registered Ankit Sahni and “*RAGHAV”* (AI) as author artistic work titled “S*URYAST*” (Registration No. 1188619). The copyright registration lists Ankit Sahni as the owner, while the authors are listed as Sahni and "*RAGHAV* “Artificial Intelligence Painting App.[[23]](#footnote-23)

It is interesting to see if “*SURYAST*” will face the similar obstacles in Canada as it is currently facing in India.

This has opened a highly polarised debate regarding authorship and AI on the lines of copyright. To one group Copyright is meant to encourage and disseminate work and how economic harm will occur as human beings will not be able to *create* at the same pace and advancements . To proponents of AI, denying copyright protection to AI generated work would hamper innovation specially after seeing how AI is favourable to boosting economy all around the globe by boosting investment .

In *Galerie d’art du Petit Champlain Inc v Théberge*, the court has rightly said that , “*copyright must seek to strike a “balance between promoting the public interest in the encouragement and dissemination of works of the arts and intellect and obtaining a just reward for the creator”.[[24]](#footnote-24)*

*INDU,* in its review recommends copyright act should “*be adapted to distinguish works made by humans with the help of AI-software from works created by AI without human intervention," to "help Canada's promising future in artificial intelligence become reality.”[[25]](#footnote-25)*

According to me copyright should be granted to the maker of the AI similar to the provisions for cinematographic works. I find this will attempt to strike a balance between , “*promoting the public interest in the encouragement and dissemination of works of the arts and intellect and obtaining a just reward for the creator’* and “*encouragement and dissemination of works of the arts and intellect*” which is the objective of copyright law.

1. Andres Guadamuz,“*Artificial Intelligence and Copyright*” (2017) 5 WIPO Magazine 14 at 17 online: WIPO Magazinehttps://www.wipo.int/wipo\_magazine/en/2017/05/article\_0003.html. [↑](#footnote-ref-1)
2. Organization for Economic Co-operation and Development [OECD], Legal Instrument 0449 (2019), Recommendation of the Council on Artificial Intelligence, online: OECD <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL> 0449?\_ga=2.124697866.1898590258.1621541868-1852956558.1620326402. [↑](#footnote-ref-2)
3. Stuart Russell & Peter Norvig, Artificial Intelligence: A Modern Approach, 3rd ed (Upper Saddle River:

   Prentice Hall, 2010) at 1-61 [Russell] [↑](#footnote-ref-3)
4. Jane Ginsburg, “The Concept of Authorship in Comparative Copyright Law” (2003) 52 DePaul L Rev 1063. [↑](#footnote-ref-4)
5. Copyright Act, RSC 1985, c C-42, [↑](#footnote-ref-5)
6. *Ibid*  s. 5 [↑](#footnote-ref-6)
7. *Klivington Bros Ltd v Golberg* (1957), 8 DLR (2d) 768 at para 4. [↑](#footnote-ref-7)
8. 2004 SCC 13 [↑](#footnote-ref-8)
9. 2004 SCC 13 at para 15. [↑](#footnote-ref-9)
10. *Ibid* at para 16 [↑](#footnote-ref-10)
11. State of the Arts: How Should Canadian Copyright Law Treat Works Generated by Artificial Intelligence? Online https://www.cba.org/CBAMediaLibrary/cba\_na/PDFs/Sections/IP-Copyright-of-AI-created-works-AODA.pdf [↑](#footnote-ref-11)
12. Prafulla Dhariwal, Heewoo Jun, Christine Payne, Jong Wook Kim, Alec Radford & Ilya Sutskever, “Jukebox: A Generative Model for Music” (30 April 2020), online: arXiv https://arxiv.org/pdf/2005.00341.pdf. Curated examples of Jukebox’s outputs are available online: https://openai.com/blog/jukebox/. [↑](#footnote-ref-12)
13. James Vincent, “ *Use This Cutting-Edge AI Text Generator to Write Stories, Poems, News Articles, and More*” online: The Verge https://www.theverge.com/tldr/2019/5/13/18617449/ai-text-generator-openai-gpt-2- small-model-talktotransformer; James Vincent, “OpenAI’s New Multitalented AI Writes, Translates, and Slanders” online: The Vergehttps://www.theverge.com/2019/2/14/18224704/ai-machine-learninglanguage-models-read-write-openai-gpt2. TalkToTransformer.com is now being offered as a paid service online: https://inferkit.com/. [↑](#footnote-ref-13)
14. AIVA Technologies, Press Release, “composing the music of the future”, online: <https://www.aiva.ai/>. [↑](#footnote-ref-14)
15. *Copyright Act*,s 13. [↑](#footnote-ref-15)
16. *Copyright Act*,s 5(1)(a) [↑](#footnote-ref-16)
17. 2012 SCC 34 at para 71 [↑](#footnote-ref-17)
18. Sam Ricketson, “People or Machines: The Berne Convention and the Changing Concept of Authorship” (1991) 16:1 Colum. V.L.A. J. L. & Arts 1 at 11. [↑](#footnote-ref-18)
19. Shoyama, supra note 18 at 135, citing Barry Sookman, Computer, Internet, and Electronic Commerce Law (Toronto: Carswell 1991). [↑](#footnote-ref-19)
20. *Copyright Act*, s 5(1)(b [↑](#footnote-ref-20)
21. *Ibid* S.2 [↑](#footnote-ref-21)
22. <https://www.managingip.com/article/b1vvyqphyskcrg/exclusive-indian-copyright-office-issues-withdrawal-notice-to-ai-co-author>. [↑](#footnote-ref-22)
23. Canada: AI And IP: Who Or What Can Be An Author Or Inventor In Canada? Available at https://www.mondaq.com/canada/patent/1163414/ai-and-ip-who-or-what-can-be-an-author-or-inventor-in-canada. [↑](#footnote-ref-23)
24. [2002] 2 SCR 336 at para 30 [↑](#footnote-ref-24)
25. Canada, Parliament, House of Commons, Statutory Review of the Copyright Act: Report of the Standing Committee on Industry, Science and Technology, 42nd Parliament, 1st Session, No 16 (June 2019) [INDU Report], online: House of Commons https://www.ourcommons.ca/DocumentViewer/en/42-1/INDU/report-16. [↑](#footnote-ref-25)