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A Modern Copyright Framework for Artificial Intelligence: IP Scholars' Joint Submission to the Canadian Government Consultation

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Consultation on a Modern Copyright Framework
for Artificial Intelligence and the Internet of Things

Submission by IP Scholars
Artificial Intelligence

Dear Ministers / Chers Ministres,

In response to the consultation process on the modernization of the copyright framework launched in the summer 2021, we hereby present our analysis and recommendations concerning some of the issues involved on the interaction between copyright and artificial intelligence (AI), and copyright and the Internet of Things (IoT). Although there are similar structural issues and overlaps involved in AI and the IoT, for practical purposes we are submitting two concurrent separate briefs addressing the interaction between copyright and AI on the one hand, and the interaction between copyright and IoT on the other hand.

This submission concerns the interaction between copyright and AI. The recommendations herein reflect the shared opinion of the intellectual property scholars who are signatories to this brief. They are informed by many combined decades of study, teaching, and practice in Canadian and international intellectual property law. Should there be hearings set up pursuant to the written submission phase, the signatories would welcome the opportunity to appear separately or together before the consultation committee to explain and expand upon specific aspects of this brief and/or other copyright reform proposals not addressed herein.

In what follows, we explain:

- The importance of approaching the questions raised in the consultation with a firm commitment to maintaining the appropriate balance of rights and interests in Canada's copyright system, consistent with a robust principle of technological neutrality.
- The importance of ensuring that text and data mining (TDM) activity can be undertaken in Canada without the threat of potential copyright liability. We therefore propose both an opening up of Canada's fair dealing doctrine to better accommodate TDM activities, and the enactment of a specific statutory provision to confirm that uses of copyright works and other subject matter for TDM (whether commercial or non-commercial) do not infringe copyright.
- The importance of resisting calls to extend copyright protection to AI-generated outputs. We therefore propose maintaining and confirming the existing principled requirements of human authorship and original expression as preconditions of copyright protection, and we

caution against any move to establish new neighbouring or *sui generis* rights in respect of AI outputs. Works generated by AI should remain in the public domain.

As such, we recommend:

- Enacting a broad statutory provision confirming that use of a work or other subject matter for TDM does not infringe copyright. This specific exception should be available to all users, apply to commercial and noncommercial uses, permit the retention and sharing of copies, and be protected from contractual override.
- Amending section 29 of the *Copyright Act* to make the list of purposes an illustrative list ("for purposes *such as*") and adding TDM or data/informational analysis as an enumerated purpose therein.
- Confirming in section 2 of the *Copyright Act* that "author" means a human being/natural person; and confirming in section 5 of the *Copyright Act* that copyright shall not subsist in a work created without a human author.

Our comments and recommendations will occasionally make reference to the consultation paper "A Consultation on a Modern Copyright Framework for Artificial Intelligence and the Internet of Things" https://www.ic.gc.ca/eic/site/693.nsf/eng/00316.html [the Consultation Paper].

1. Introduction

As the Consultation Paper notes, copyright law has, from its inception, been shaped by major technological developments, from the arrival of the printing press to peer-to-peer file sharing. With the recent hype around developments in AI capabilities, it may be tempting to rush into action, assuming that copyright reforms are necessary to respond to demands for greater protection given the unprecedented capabilities arising from the new and emerging technology. The fact is that the existing body of copyright law already has answers to many, if not all, of the doctrinal questions presented by AI. The legislature and the courts have historically tried to protect the legitimate rights of copyright holders without extending protection in ways that unduly hamper follow-on innovation. But even assuming that emerging AI technology is sufficiently novel to necessitate a reevaluation of the existing copyright framework, the question of how copyright law ought to respond to technological change is not at all new. Copyright law should not create barriers to entry in the development and advancement of new innovations.[1]

(a) Technological Neutrality

A common response to the question of how the law should treat new technologies is simply that the law should be technologically neutral.[2] As the Supreme Court of Canada has repeatedly

[1] It is understood that other areas of law and policy (e.g., privacy, competition, criminal law, non-discrimination and equality rights, Indigenous Peoples' data sovereignty and self-determination rights, etc.) may inform questions of what text, data, or images can lawfully and ethically be used as AI inputs. The importance of ensuring that copyright does not become a barrier to innovation is, however, a defining feature of foundational copyright doctrines such as, e.g., the idea-expression dichotomy, the merger doctrine, and the exclusion from copyright of facts and information, stock elements, methods and systems, functional features, utilitarian articles, etc.

[2] See e.g. Carys J. Craig, "Technological Neutrality: (Pre)Serving the Purposes of Copyright Law" in Michael Geist, ed., *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (Ottawa, Ontario: University of Ottawa Press, 2103); Gregory R. Hagen, "Technological Neutrality in Canadian

confirmed, copyright law should develop independently of any specific technology and should continue to apply equally across technologies as they emerge, without favoring or discriminating between new and old.[3]

There is an obvious appeal to this approach for policy makers in the digital age. It presents the promise of sustainable laws in a time of rapid technological change, "future-proofing" the copyright system to some degree by permitting old laws to apply to new technologies. Happily, it may also excuse lawmakers from following the twists and turns of each technological development as it occurs, and likely produces more comprehensible legislation for non-experts and the public who are expected to abide by it. For this reason, it is important that any definition of AI is, in itself, as technologically neutral as possible, referring to objectives and functional effects rather than specific techniques and methods that could be impacted or developed in the future.[4]

Most importantly, however, a robust version of technological neutrality means more than simply extending copyright to protect—or to protect against—new forms of expression.[5] It requires an analysis of the function and effects of new technologies and their impact on the copyright balance, with reference to the policy objectives of the copyright system as a whole; it is a matter of substance rather than form.

(b) Inclusivity and Equality Considerations

Restricting the use of copyright-protected works in machine-learning has significant drawbacks for AI researchers and their projects. Requiring copyright clearance of AI inputs generates huge transaction costs for anything but the most well-resourced projects and actors. Given the extended reach and duration of copyright protection, reliance on public domain or other low liability-risk inputs often means training AI on data that is obsolete, incomplete, exclusionary, and

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Copyright Law" in in Michael Geist, ed., *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (Ottawa, Ontario: University of Ottawa Press, 2103); Cameron J. Hutchison, "Technological Neutrality Explained & Applied to CBC v. SODRAC" (2015) 13:1 CJLT 101; *Entertainment Software Association v. Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 34, [2012] 2 S.C.R 231.

[3] See *Entertainment Software Association v. Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 34 at paras. 5, 9. See also *Robertson v. Thomson Corp.*, 2006 SCC 43, [2006] 2 S.C.R. 363, at para. 49; Society of Composers, Authors and Music Publishers of Canada *v.* Bell Canada, 2012 SCC 36 at para. 43; Can. Broad. Corp. (CBC) v. SODRAC 2003, Inc., [2015] S.C.C. 57.

[4] See, for instance, the European Commission's proposal on AI (AI Act) which defines AI broadly (not taking into account any specific method but all or many of them):

Article 3(1)

'artificial intelligence system' (AI system) means software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with;

Annex I

(a) Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning;

(b) Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems;

(c) Statistical approaches, Bayesian estimation, search and optimization methods.

[5] See, e.g., *Entertainment Software Association v. Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 34 at paragraphs 5-6.; Abella J, in dissent, *Canadian Broadcasting Corporation v. SODRAC*, 2015 SCC 57, [2015] 3 S.C.R. 615 at paragraph 155. See also Carys Craig, Carys Craig, *Technological Neutrality: Recalibrating Copyright in the Information Age*, 17 Theoretical Inquiries L. 601 (2016).

unrepresentative, and which fails to reflect contemporary information and social values. This surely exacerbates the now well-documented built-in biases and discriminatory effects of AI systems.[6] The quality and scope of a dataset has a direct bearing on the quality and operation of the resulting AI.[7] At the same time, the kinds of copies used in AI are not consumed for their expressive content and therefore lie outside the legitimate interests of copyright holders.[8]

(c) Copyright Balance

The copyright system is typically justified as a means by which to encourage authorship and the dissemination of original works. The Supreme Court of Canada has famously described copyright as "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."[9] Most recently, a unanimous Supreme Court explained:

> "[J]ust rewards for copyright creators provide necessary incentives, ensuring that there is a steady flow of creative works injected into the public sphere.…A proper balance ensures that creators' rights are recognized, but authorial control is not privileged over the public interest.
>
> Ultimately, owners' rights and the public interest should not conflict with one another.…[C]opyright law has long been an 'integrated system that encouraged creators to generate knowledge, industry to disseminate it and users to acquire it and, hopefully, reshape it into new knowledge.'"[10]

The task before today's lawmakers, then, is to ensure that, in the age of AI, copyright law continues to provide the necessary incentives for creators, to encourage the dissemination of works, and to advance the public interest.

(d) Protecting Users' Rights and the Public Domain

A key ingredient of this copyright balance is the protection of user rights. As the Supreme Court of Canada recently reiterated, user rights play "a vital role in…promoting the public interest. The ability to access and use 'works' within the meaning of the *Copyright Act* are 'central to developing

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[6] Amanda Levendowski, "How Copyright Law Can Fix Artificial Intelligence's Implicit Bias Problem" (2018) 93:2 Wash. L. Rev. 579.

[7] See e.g. Bita Amani, "AI and 'Equality by Design'*"* in Florian Martin-Bariteau and Teresa Scassa eds), *Artificial Intelligence and the Law in Canada* (Toronto: LexisNexis Canada 2021).

[8] Cameron Hutchison Digital Copyright Law (Irwin: Toronto, 2016) at 34 ff. See also Cameron J. Hutchison "Understanding Copy Right" (February 19, 2016). Available at SSRN: https://ssrn.com/abstract=2735089 or http://dx.doi.org/10.2139/ssrn.2735089; Carys Craig, Copyright, Communication and Culture: Towards a Relational Theory of Copyright Law (Massachusetts: Edward Elgar, 2011); See Abraham Drassinower, What's Wrong with Copying? (Massachusetts: Harvard University Press, 2015) for development of the concept of "non-use" - affordances that do not constitute copyright infringement and Bita Amani, "Disabused of Copyright's Use? Not Quite but you Had Me at Non-Use" (December 2016) 29 IPJ 141-154 positing that copies that are non-expressive and non-consumptive cannot be rationalized as within the scope of authorial rights on either rights rationales or utilitarian/instrumentalist accounts.

[9] *Théberge v Galerie d'Art du Petit Champlain Inc*, 2002 SCC 34 at paras 11–12, 30.

[10] *York University v. Canadian Copyright Licensing Agency (Access Copyright)*, 2021 SCC 32 at paras. 93-94, citing Mya Tawfik, "History in the Balance: Copyright and Access to Knowledge", in Michael Geist, ed., *From "Radical Extremism" to "Balanced Copyright": Canadian Copyright and the Digital Agenda* (Toronto: Irwin Law, 2010) at 69.

a robustly cultured and intellectual public domain.'"[11] As such, user rights and copyright limits are understood in Canada to be a core component of the copyright system and essential to its purpose. The unanimous Supreme Court recently confirmed this view, noting: "[t]he limits to these private [copy]rights, defined by fair dealing and other exceptions — and circumscribed by the boundaries of the public domain — are therefore essential to ensure that the copyright system does not defeat its own ends."[12]

It is therefore essential to ensure that user rights continue to be protected as novel technologies emerge. This means that any reforms aimed at responding to developments in AI should seek to ensure that they are equally available in new technological contexts. By the same token, they should approach with caution any effort to expand copyright's reach beyond its current boundaries and into what is presently the public domain.

To summarize: Copyright law should indeed keep pace with technological developments in AI. In many respects, however, existing legal doctrine and the principles that inform it will be sufficient to ensure that copyright continues to respond and adapt in a manner consistent with its history and objectives. Where legislative changes are required, these should be aimed at clarifying the law to provide certainty in preserving the traditional balance between authors and users in the new technological environment to ensure that copyright continues to serve the public interest.

It is with these concerns in mind that we turn to the questions presented by the consultation paper.

2. Text and Data Mining

It is important at this stage to define the key concepts discussed in this document. Text and data mining (TDM) involves the processing of large amounts of information in digital form, such as text, sounds, images or data, with a view to gaining new knowledge and discovering new trends. Text mining identifies facts, relationships and assertions that would otherwise remain buried in the mass of textual big data. Once extracted, this information is converted into a structured form that can be further analyzed, or presented in tables, mind maps, charts or other visualisation tools. Machine learning (ML) is a subset of artificial intelligence (AI) which provides systems with the ability to learn from experience "by extracting patterns from raw data" using machine learning algorithms.[13] Hence, TDM is used on an existing dataset to find patterns, while ML is trained on a 'training' data set, which teaches the computer how to make sense of data, and then to make predictions about new data sets.

(a) TDM and the Public Interest

[11] *Keatley Surveying Ltd. v. Teranet Inc*., 2019 SCC 43, citing *Society of Composers, Authors and Music Publishers of Canada v. Bell Canada*, 2012 SCC 36, [2012] 2 S.C.R. 326 (*SOCAN*).

[12] *York University v. Canadian Copyright Licensing Agency (Access Copyright)*, 2021 SCC 32 at paras. 93-94, citing Carys Craig, "Locking Out Lawful Users: Fair Dealing and Anti-Circumvention in Bill C-32", in Geist, *From "Radical Extremism" to "Balanced Copyright"*, 177, at p. 179).

[13] Ian Goodfellow, Yoshua Bengo & Aaron Courivlle, *Deep Learning* (Cambridge: MIT Press, 2016) at pp. 2-3.

The importance of text mining cannot be overstated, particularly as it is applied to and invoked in the context of machine learning and data analytics. The Canadian government has made significant investments of public funds to help ensure that Canada remains a leader in Artificial Intelligence.[14] The growth and support of AI research and development has clearly been recognized as an important policy goal for Canada and an important ingredient of a strong innovative sector in the 21st century. An arising concern is whether any copyright that subsists in what may be characterized as "AI inputs" is infringed when used in the training of AI systems. Given the vast volume of inputs required as training data for machine learning, restricting the use of copyright-protected works places an enormous burden on AI research and development.[15] It is important to ensure that copyright does not serve as a drag on AI innovation in Canada by increasing the transaction costs and liability risks of doing research and development in AI and machine learning.

TDM also represents an increasingly important research method across a range of scholarly disciplines, as well as in journalism, education, civil society, and a range of commercial research. Text analysis is used in the humanities and social sciences to examine corpi of books, newspapers, social media, transcripts, web sites, historical and government documents, and other data to analyze and document historical events, places, media coverage, topics or themes, and language.[16] Data journalism has become a new field of journalism, in which text mining is used to bring data sources together for reporting, such as on crime, healthcare, or Airbnb.[17] Civil society groups have used text mining to examine housing affordability.[18] Copyright can be a barrier to such initiatives and can have a chilling effect on research, journalism, and civil society projects; at least one of us (Bannerman) has abandoned a research project due to copyright concerns about text mining, having been denied permission by the web site owner to scrape a website. The reasons for ensuring

[14] See Ana Brandusescu, "Artificial Intelligence policy and funding in Canada: Public Investments, Private Interests" Centre for Interdisciplinary Research on Montreal, McGill University, March 2021, https://www.mcgill.ca/centre-montreal/files/centre-montreal/aipolicyandfunding_report_updated_mar5.pdf, noting that "[a]s of August 2020, $1 billion in government contributions have been awarded across Canada. An Additional $1.2 billion of planned government investments have been publicly announced for the province of Quebec. In Montreal, over $2 billion in private investments have been reported." An additional $1.2 billion of planned government investments have been publicly announced for the province of Quebec. See also CIFAR, "CIFAR Pan-Canadian Artificial Intelligence Strategy", online: <https://www.cifar.ca/ai/pan-canadian-artificial-intelligence-strategy>.

[15] Carys J. Craig, "AI and Copyright" in Florian Martin-Bariteau & Teresa Scassa (eds) Artificial Intelligence and the Law in Canada (Toronto: LexisNexis Canada, 2021), at Part 2.1. See, e.g., Sean Flynn & Mike Palmedo, *The User Rights Database: Measuring the Impact of Copyright Balance* (Joint PIJIP/TLS Research Paper Series no. 2018-01); Mike Palmedo, *The Impact of Copyright Exceptions for Researchers on Scholarly Output*, Efil Journal of Economic Research, 2(6), 114-39 (2019); Christian Handke et al., *Is Europe Falling Behind in Data Mining? Copyright's Impact on Data Mining in Academic Research*, *in* New Avenues for Electronic Publishing in the Age of Infinite Collections and Citizen Science: FfScale, Openness and Trust 120–130 (Brigit Schmidt & Milena Dobreva eds., 2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2608513.

[16] Laura K. Nelson, "Knowledge Discovery in the Social Sciences: A Data Mining Approach." Contemporary Sociology: A Journal of Reviews (2021): 346-348.

[17] Paul Bradshaw, *Scraping for journalists*. Leanpub, 2017; Teresa Scassa, "Ownership and control over publicly accessible platform data."(2019) 43:6 Online Information Review (2019).Vol. 43 No. 6, pp. 986-1002. https://doi.org/10.1108/OIR-02-2018-0053.

[18] Teresa Scassa, "Ownership and control over publicly accessible platform data." (2019) 43:6 *Online Information Review* 986-1002. https://doi.org/10.1108/OIR-02-2018-0053.

the lawfulness of text and data mining processes are many and drawing increasing support for the public interest they serve.[19]

The consultation paper asks whether amendments should be introduced to clarify how the copyright framework applies to TDM activity, and if so, what those amendments should be. In our view, copies made for the purpose, and during the course of text and data mining do not implicate the rights of copyright owners and so do not infringe copyright. Even if TDM is considered *prima facie* infringement, it will typically be fair dealing for the purpose of research or private study. While amendments to the *Copyright Act* may not, therefore, be necessary to bring TDM within the scope of user rights, amendments to the fair dealing provisions and the addition of a specific exception are recommended for the sake of clarity and certainty. Confirming the availability of fair dealing and the lawfulness of TDM (notwithstanding commercial purposes)[20] will serve Canada's strategic interests in innovation—and the public interest more generally—in the responsible development of new AI and machine learning applications.

(b) Current legal barriers to TDM

i. The Uncertain Reach of Section 3 Rights

Generally, the TDM process involves four stages: the crawling and scraping of information, the creation of a target dataset, the analysis of the content, and the publication.[21] In the first stage of TDM, identified sources such as books, newspaper or scientific articles, photos, images, music, or cinematographic works are often copied onto the miner's own storage facilities. Subsequently, selection is made from the collected subject-matter to copy into a new dataset. For the actual analysis to occur, the content analysis software will make a copy in a computer's RAM. In the last stage of TDM, the publication of the results will often take place in the form of an article or report that is either made available electronically or on paper. Whether any of these acts do or even should qualify as copyright-relevant acts pursuant to s.3(1) of the *Copyright Act* is unclear and subject to debate. It is clear, however, that the law does not treat all copies the same; nor are all copies infringing copies under the *Copyright Ac*t and related jurisprudence.[22]

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[19] See Sean Flynn, Christophe Geiger, João Pedro Quintais, Thomas Margoni, Matthew Sag, Lucie Guibault and Michael Carroll, "Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action" (2020) at 4, online: https://digitalcommons.wcl.american.edu/research/48.

[20] Indeed, fair dealing may successfully be invoked in commercial contexts. See *CCH Canadian Ltd. v. Law Society of Upper Canada*, [2004] 1 S.C.R. 339, 2004 SCC 13. See also Cameron Hutchison, *Digital Copyright Law* (Irwin: Toronto, 2016) at 154-7 (fair dealing in the digital context). Such fair commercial uses are qualitatively different and may be distinguished from *Trader v CarGurus*, 2017 ONSC 1841 (CanLII), <https://canlii.ca/t/h32jb>, retrieved on 2021-09-13 [Trader] cited in the consultation paper. CarGurus was a direct competitor of Trader and in offering a digital marketplace for new and used vehicles, "scraped" Trader's publicly available copyrighted photos from the internet to populate their own website. The Court was willing to accept the research purpose of the respondent's dealing but not that it was fair, finding infringement of Trader's 152,532 photos and statutory damages of $305,064 ($2 per photo).

[21] M. Caspers and L. Guibault, *Baseline report of policies and barriers of TDM in Europe*, 2016 FutureTDM, Horizon 2020, p. 8.

[22] See e.g. sections 30.71 and 30.8 of the *Copyright Act*.

In *Society of Composers, Authors and Music Publishers of Canada v. Canadian Assn of Internet Providers* (SOCAN v. CAIP),[23] the Supreme Court of Canada found, for example, at paragraph 115: "The creation of a "cache" copy, after all, is a serendipitous consequence of improvements in Internet technology, is content neutral, and in light of s. 2.4(1)(b) of the Act ought not to have any legal bearing on the communication between the content provider and the end user." And, at paragraph 116: ""Caching" is dictated by the need to deliver faster and more economic service, and should not, when undertaken only for such technical reasons, attract copyright liability." Without reference to any specific exception, then, it was understood that such copies did not implicate the legitimate interests of the copyright owner.

There are compelling arguments to be made that the reproduction right should not be implicated by "non-expressive" or "non-consumptive" copies, including the kind of digital copies involved in machine learning. If copyright is ordinarily concerned with copying that "relates to human appreciation of the expressive qualities of that work," then it need not apply to "any act of reproduction that is not intended to enable human enjoyment, appreciation, or comprehension of the copied expression as expression."[24] In other words, copies made purely for machine-learning processes, text, or data mining are not "material" to the copyright scheme, and should be beyond the scope of the copyright interest. This conclusion would be "entirely consistent with the fundamental structure of copyright law because, at its heart, copyright law is concerned with the communication of an author's original expression to the public."[25] It is not yet clear, however, whether copies made for TDM will be regarded by copyright owners or courts in Canada as *prima facie* non-infringing. The Supreme Court's majority ruling in *Canadian Broadcasting Corp. v. SODRAC 2003 Inc.*, holding that "broadcast incidental copies" are relevant reproductions for copyright licensing purposes, presents some cause for concern. [26]

It should be noted that copyright law does not protect data as such. The Supreme Court has confirmed that "in Canada, as in the United States, copyright protection does not extend to facts or ideas but is limited to the expression of ideas." [27] This limit is vital to the copyright balance and a robust public domain. It is suggested that TDM makes use of copyright protected texts not as original expressive works to communicate ideas but rather as information or data. Arguably, the copyright work is not used *as such*, in the sense that it is not experienced or enjoyed by an audience or addressee other that the machine.[28] Again, however, it is unclear whether Canadian courts and copyright owners will understand the limits of copyright protection in this way.

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[23] Socan v. CAIP, 2004 SCC 45, [2004] 2 SCR 427.

[24] Matthew Sag, "The New Legal Landscape for Text Mining and Machine Learning" (2019) 66 J. Copyr. Soc. U.S.A. 291 at 301. See generally Carys Craig, *Copyright, Communication and Culture: Towards a Relational Theory of Copyright Law* (Edward Elgar, 2011).

[25] Craig, "AI and Copyright", *supra* note 15 at 31, citing Matthew Sag, "The New Legal Landscape for Text Mining and Machine Learning" (2019) 66 J. Copyr. Soc. U.S.A. 291 at 302.

[26] *Canadian Broadcasting Corp. v. SODRAC 2003 Inc.*, 2015 SCC 57 at para. 55. See also Bita Amani, "Disabused of Copyright's Use? Not Quite but you Had Me at Non-Use" (December 2016) 29 IPJ at 149-153 (critiquing the majority decision).

[27] CCH Canadian Ltd. v. Law Society of Upper Canada, [2004] 1 S.C.R. 339, 2004 SCC 13 at para 22.

[28] Cp. Act No. 48 (amended 2018) [Copyright Act], art.30-4(ii) (Japan) (Japan's exception for any use "where such exploitation is not for enjoying or causing another person to enjoy the ideas or emotions expressed in such work.")

Finally, to regard TDM copies as non-infringing is also consistent with the principle *de minimis non curat lex*. The law does not concern itself with trifles; and the mere inclusion of a protected work amongst a vast collection of works only for the purpose of machine learning and data analysis is readily viewed as an insubstantial or immaterial use thereof. It is not clear, however, that this interpretation of the de minimis rule will be accepted by Canadian courts or copyright owners.

Recent empirical research shows that strict or unclear copyright rules have a negative impact on the use of TDM techniques for research purposes.[29] As a result it has become common practice to deliberately locate TDM activities in territories with weaker de facto copyright protection and to seek out suitable partners from such territories in international DM collaborations. Uncertainties around the reach of copyright owners' rights in Canada will inevitably have a negative impact on TDM activities. In countries like Canada, where no express exception applies, researchers risk becoming less competitive because of greater copyright restrictions for this novel type of research.

ii. The Limits of Licensing Solutions

A system resting primarily on licensing agreements would be insufficient to enable TDM to take place in all instances where it would be socially desirable. First, only a portion of the databases that are interesting for TDM research would be offered as part of publishers' subscription agreements and an even smaller portion would be available under a Creative Commons licence. Without a statutory exception permitting TDM to take place, transaction costs would be too high for parties to negotiate a licence. Second, without a statutory exception recognizing the possibility of TDM, publishers might have little incentive to offer licenses under reasonable conditions. In both cases, too many databases would remain out of reach of researchers. And third, transaction costs would rise if researchers had to reconcile the terms and conditions of non-standard or non-interoperable licences. Requiring researchers to obtain licences from owners of copyrighted works may create burdensome thickets to navigate and contribute to inferior data sets with the potential of copyright owner holdout and underutilization of works functioning as data.

In practice, publishers' licenses vary dramatically from one another, ranging from an outright prohibition on all forms of TDM, to allowing TDM for non-commercial purposes, permitting TDM only through the use of an API, or allowing TDM without any conditions. Some databases are made available only via an API or other (graphical) interface. Consequently, the user may be restricted to the available functionalities in the API as regards the TDM possibilities, but the actual restrictions depend on the available interfaces in the specific case.[30]

Even more problematic are the licensing and conditions of use that some Canadian university libraries put forward.[31] Some of them take an even stricter position towards TDM than the

[29] C. Handke, L. Guibault and J. Vallbé, "Copyright's impact on data mining in academic research", *Managerial and Decision Economics* 2021;1–18. https://onlinelibrary.wiley.com/doi/epdf/10.1002/mde.3354

[30] M. Caspers and L. Guibault, *Baseline report of policies and barriers of TDM in Europe*, 2016 FutureTDM, Horizon 2020, p. 87; https://project.futuretdm.eu/wp-content/uploads/2016/07/FutureTDM_D3.3-Baseline-Report-of-Policies-and-Barriers-of-TDM-in-Europe.pdf

[31] McGill Library, "Licensing and conditions of use of electronic resources", https://www.mcgill.ca/library/services/connect/licensing

publishers to whose databases they give access. McGill University's licensing conditions state, for example, that "[d]ownloading text to create a corpus of text for analysis, also known as Text and Data Mining (TDM) is not permitted. Platforms that allow Text and Data Mining are listed here". The list is very limited.

Finally, against this background, any collective licensing model that may be proposed is likely to reproduce and potentially exacerbate problems already associated with a licensing approach: restricting available TDM resources to a confined repertoire of works; limiting TDM uses to specific, now-known, and pre-approved TDM techniques; placing onerous administrative conditions on licensed TDM activities; and imposing costs that inevitably disadvantage smaller and non-commercial actors while disincentivizing TDM in Canada. Given the scale of works, text, and data used in TDM, a fair and accurate means of identifying copyright-protected inputs and their rights-holders and distributing payments would be all but impossible to operationalize, even if Canada's collective societies and Copyright Board were better equipped for such a task. Most importantly, however, establishing new collective licensing arrangements is not an appropriate means by which to bring non-infringing activities within the scope of the copyright framework, effectively monetizing user rights. To require a license for fair and non-infringing uses "would extend the scope of the owner's monopoly over the use of his or her work in a manner that would not be consistent with the Copyright Act's balance between owner's rights and user's interests."[32] The consultation paper expresses concern that a broad TDM exception "could decrease economic returns on copyright assets by discouraging licensing activity"; but licensing activities to maximize economic returns should not be encouraged in respect of uses outside the proper scope of the copyright owners' rights.

iii. The Limits of Fair Dealing and Existing Statutory Exceptions

The consultation paper notes two exceptions that have been raised in relation to TDM activity: s. 29 fair dealing exception for research and the exception for temporary reproductions for technological processes in s. 30.71.[33] Turning first to s. 29, research and private study are central components of a balanced copyright regime and key user rights in Canada.[34] Unlike the provision of fair use in the United States, fair dealing in Canada must first be identified as for an allowable purpose under s. 29 of the Act before further determination is made as to whether the dealing is in fact fair. The framework for conducting a fair dealing analysis under s. 29 was provided for by the Supreme Court of Canada in *Law Society of Upper Canada v. CCH Canadian Limited* wherein the court identified 6 non-exhaustive factors for conducting a fairness analysis.[35]

Fair dealing in Canada is a *user right*, which, the Supreme Court has repeatedly explained, "must not be interpreted restrictively."[36] Given the large and liberal interpretation to be accorded to fair

[32] *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at para 70.
[33] "There are other exceptions in the Act that could apply to TDM, but they would likely apply in more limited situations and to a smaller subset of users. The limitation on damages in the case of infringement by providers of information location tools in ss. 41(27) of the *Copyright Act* might also apply to certain activities that might be considered TDM." Government of Canada, A Consultation on a Modern Copyright Framework for Artificial Intelligence and the Internet of Things. 16 July 2021, https://www.ic.gc.ca/eic/site/693.nsf/eng/00316.html#s21.
[34] See, e.g.: *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at para 51.
[35] *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at paras 54-60.
[36] *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at para. 48.

dealing purposes, most TDM is likely to qualify as research, private study, or review, thereby meeting the first step in the fair dealing analysis.[37] Many uses made for machine-learning purposes are likely to be "fair" under the second step, not least because such copies do not compromise the core interests of the copyright owner or substitute for the work of the author in the market.[38] But the need for such a context-specific assessment in relation to each work fed into the AI dataset in order to determine the lawfulness of its use is clearly unmanageable at the scale required by AI. While most TDM could likely qualify as fair dealing upon careful, contextual examination, the context-specific nature of the fair dealing inquiry and the common assumption that the list of enumerated purposes is exhaustive leave room for doubt.[39] Such uncertainty is an obstacle to TDM in Canada.

As the consultation paper notes, the *Copyright Act* does contain a limited and specific exception for technological processes. This exception is insufficient to meet TDM needs given its limited application only to ephemeral or transitory copies, and so would have to be amended to respond effectively to the concerns raised here. Some "incidental uses: and other miscellaneous uses are expressly permitted under the Act,[40] but these exceptions are insufficient to address TDM in their current form.

It should be noted as well that technological protection measures (TPMs), which are the subject of a separate submission by the undersigned, can also pose a barrier to the exercise of any fair dealing or specific statutory exception that might be created for TDM activities.[41] By creating a technological barrier to accessing the underlying work and providing that circumvention of that barrier is an infringing act regardless of any underlying users' rights, anti-circumvention provisions can effectively preempt reliance on such exceptions.

The current Canadian statutory landscape cannot but have a chilling effect on anyone who would like to engage in TDM activities in Canada. This is compounded by the existence of statutory damages provisions that create an additional significant barrier when TDM consumes a very large volume of works, since the potential liability could be staggering.[42]

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[37] See *Society of Composers, Authors and Music Publishers of Canada v. Bell Canada*, [2012] S.C.C 36 (holding that short previews of music provided by music stores are considered fair dealing for the purpose of research).

[38] Sean Flynn, Christophe Geiger, João Pedro Quintais, Thomas Margoni & Matthew Sag, "Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action" (2020) at 4, online: https://digitalcommons.wcl.american.edu/research/48.

[39] But see Ariel Katz, "Debunking the Fair Use vs. Fair Dealing Myth: Have We Had Fair Use All Along?" in *The Cambridge Handbook of Copyright Limitations and Exception*, Shyamkrishna Balganesh, Ng-Loy Wee Loon and Haochen Sun (eds.), Cambridge University Press, 2021 CanLIIDocs 94, <https://canlii.ca/t/t11z>, retrieved on 2021-09-26.

[40] See, e.g. *Copyright Act*, R.S.C. 1985, c. C-42, s. 30.7.

[41] See, e.g., Teresa Scassa, "Legal Issues around Data Scraping as a Source of Data for AI Innovation", in G. D'Agostino, A. Gaon, and C. Piovesan, *Leading Legal Disruption: Artificial Intelligence and a Toolkit for Lawyers and the Law*, Thomson Reuters, 2021, 129-146.

[42] *Copyright Act*, R.S.C. 1985, c. C-42, s 38.1. See Craig, "AI & Copyright, *supra* note 15 at 32; Teresa Scassa, "Artist Sued in Canada for Copyright Infringement for AI-Related Art Project" (4 October 2018), online: *Teresa Scassa* https://www.teresascassa.ca/index.php?option=com_k2&view=item&id=286.

This situation runs contrary to both Canadian innovation policy and the public interest for copyright law to unduly restrict or distort the progress of AI research and development by obstructing TDM for machine learning and AI.

b. Looking abroad

Several countries have introduced a specific exception in their copyright legislation with a view to promoting lawful TDM activities. Those exceptions vary in their scope and conditions of application. Most of them have only been recently adopted; their practical impact can therefore hardly be measured. Among these, some provisions are also the result of great legislative compromise; they should therefore not all necessarily be taken as models to follow for Canada. A TDM exception must correspond to the Canadian values of technological neutrality, copyright balance and protection of users' rights expressed above.

Japan was the first country in the world to introduce, in 2009, an exception in Article 47*septies* of the Japanese Copyright Act to specifically permit TDM activities. The rather obscure wording of this provision left such ambiguity that the Japanese Copyright Act was amended in 2018[43]. Two provisions, to be read jointly, now state:

> ***Article 30-4*** *It is permissible to exploit a work, in any way and to the extent considered necessary, in any of the following cases, or in any other case in which it is not a person's purpose to personally enjoy or cause another person to enjoy the thoughts or sentiments expressed in that work; provided, however, that this does not apply if the action would unreasonably prejudice the interests of the copyright owner in light of the nature or purpose of the work or the circumstances of its exploitation:*
>
> *(ii) if it is done for use in data analysis (meaning the extraction, comparison, classification, or other statistical analysis of the constituent language, sounds, im-ages, or other elemental data from a large number of works or a large volume of other such data; the same applies in Article 47-5, paragraph (1), item (ii));*
>
> ***47-5 (1)*** *(ii) undertaking computerized data analysis and furnishing the results of that analysis;*[44]

It is worth noting that this provision applies to any act of data analysis, e.g. whether commercial or non-commercial, and it allows the publication of results. According to Ueno,

> *The underlying theory behind this relates to the nature of copyright, or the justification for copyright protection that an exploitation not for 'enjoyment' purposes is beyond the inherent scope of copyright because it does not prejudice the opportunities of the copyright holders to receive compensation.*[45]

[43] European Alliance for Research Excellence, "Japan Amends its Copyright Legislation to Meet Future Demands in AI and Big Data", 3 September 2018, https://eare.eu/japan-amends-tdm-exception-copyright/

[44] Japan Copyright Act: http://www.cric.or.jp/english/clj/cl2.html

[45] T. Ueno, The Flexible Copyright Exception for 'Non-Enjoyment' Purposes – Recent Amendment in Japan and Its Implication, *GRUR International*, Volume 70, Issue 2, February 2021, Pages 145–152.

In Europe, the UK was the first country to adopt an explicit TDM exception.[46] Whereas s. 29 of the Copyright Designs and Patents Act (CDPA) already provided for a fair dealing defence allowing limited copying for the purpose of non-commercial research, s. 29A was introduced in the Act in 2013 to expressly allow TDM activities for non-commercial research purposes. The specific exception permits researchers to make copies of any copyright material for the purpose of computational analysis, but it is limited to non-commercial research and to lawfully accessed works.[47] While the scope of both provisions is rather narrow in terms of the non-commercial nature of the research activities allowed, they do declare that a contractual term that purports to prevent or restrict the exercise of the fair dealing or TDM exception is deemed unenforceable. In 2016 France followed the UK example. Without waiting for the outcome of the then ongoing negotiations around the *EU Directive 2019/790 on Copyright in the Digital Single Market* (DSM Directive), [48] the French legislature enacted the *LOI n° 2016-1321 du 7 octobre 2016 pour une République numérique*.[49] Article 38, incorporated as Article L. 122-5, 10° of the *Code de propriété intellectuelle*, aimed at non-commercial public research, is narrower than the subsequently adopted EU exception in that its application is limited only to data 'included in or associated with scientific publications', rather than to any type of work.[50]

Article 3 of the EU DSM Directive expressly permits 'reproductions made by research organisations and cultural heritage institutions in order to carry out, for the purposes of scientific research, text and data mining of works or other subject matter to which they have lawful access'. Copies of works may be retained for the purposes of scientific research, including for the verification of research results. Any contractual provision contrary to the TDM exception is deemed unenforceable. As a result of intense lobbying from potential TDM users that do not qualify as 'research organisations', the members of the European Parliament and the Council agreed to establish a separate regime for TDM activities that are conducted outside of the scientific research context. Article 4 of the DSM Directive permits reproductions of 'lawfully accessible works' for TDM for any purpose on condition that this activity has not been 'expressly reserved by rightsholders in an appropriate manner'. Reproductions made pursuant to paragraph 1 of Article 4 may be retained for as long as is necessary for the purposes of text and data mining.

On July 6, 2021, the government of the Republic of Singapore presented a new Copyright Bill in first reading. the proposed amendments were passed by Parliament on 13 September 2021 and are expected to be enacted into law in November 2021. If passed in their current state, ss. 243 and 244 would create an exception to allow for "*computational data analysis*", which includes text and data mining and machine learning. The Bill defines '*computational data analysis*' on a work as "*using a computer program to identify, extract and analyse information or data from the work*" or

[46] United Kingdom, Copyright, Designs and Patents Act 1988, c.48, article 29A (UK), https://www.legislation.gov.uk/ukpga/1988/48/section/29A/2014-06-01.

[47] United Kingdom, Intellectual Property Office, *Exceptions to Copyright: Research*, October 2014, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/375954/Research.pdf.

[48] Directive (EU) 2019/790 of the European Parliament and of the Council Of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directive 96/9 and 2001/29 – https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L0790&from=EN.

[49] France, *Act No. 2016-1321 of 7 October 2016 for a digital Republic*, s. 38, https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000033202746/

[50] Clarin, *Text and Data Mining (TDM) exceptions in the UK and France*, https://www.clarin.eu/content/clic-text-and-data-mining-tdm-exceptions-uk-and-france

"*using the work as an example of a type of information or data to improve the functioning of a computer program*", such as training algorithms. The reproduction and communication to the public of lawfully accessible works for purposes of computational data analysis would be permitted, irrespective of the commercial nature of the activity, if the reproductions of the works are not shared other than to verify the results or for the purposes of collaborative research.[51] Making a copy includes a reference to storing or retaining the copy. Moreover, section 187 of the Bill states that 'any contract term is void to the extent that it purports, directly or indirectly, to exclude or restrict any permitted use under any provision in Division 8 (computational data analysis)'. Note that this new exception would co-exist with a new 'fair use' defence, redesigned in the Bill from the current 'fair dealing' defence.

By contrast, the lawfulness of TDM activities in the United States rests only the possibility that they qualify as fair use pursuant to s. 107 of the US Copyright Act. The Act contains no express exception pertaining to TDM. Several court rulings have confirmed that text and data mining meets the four fair use factors of s. 107 and does not, therefore, amount to copyright infringement.[52]

As the consultation paper notes, such explicit exceptions are increasingly common. The absence of such an exception currently puts Canada at a disadvantage, and it runs counter to Canada's copyright framework and its policy objectives.

Recommendations

The consultation paper notes that there are four possible avenues to permitting TDM under the Copyright Act. These include:
1) "expand the purposes allowed under the fair dealing exception to include TDM;"
2) "amend the fair dealing exception to make it open-ended, like the fair use provision in the United States;"
3) "amend the exception for temporary reproductions for technological processes;" and
4) "create a new dedicated exception specifically for TDM."[53]

We support each of the above separately and in combination.

We agree that there is a pressing need to encourage and facilitate research and development in the field of AI and machine learning in order to advance Canada's innovation policy objectives and the public interest more generally.

It is our view that most TDM activities are already non-infringing in Canada's copyright framework. However, for greater certainty, we agree that explicit treatment under the Act as part

[51] https://sso.agc.gov.sg/Bills-Supp/17-2021/Published/20210706?DocDate=20210706 ; see also: European Alliance for Research Excellence, *Singapore's New Text And Data Mining Exception Will Support Innovation In The Digital Economy*, 20 July 2021, https://eare.eu/singapores-new-text-and-data-mining-exception-will-support-innovation-in-the-digital-economy/

[52] *Authors Guild v. Google, Inc.*, 804 F.3d 202 (2d Cir. 2015); Authors Guild v. HathiTrust, 755 F.3d 87 (2d Cir. 2014); *A.V. v. iParadigms, LLC* (4th Cir. 2009); see also: Courtney, Kyle K., Samberg, R., & Vollmer, T. (2020). Big data gets big help: Law and policy literacies for text data mining. *College & Research Libraries News, 81*(4).

[53] Government of Canada, A Consultation on a Modern Copyright Framework for Artificial Intelligence and the Internet of Things. 16 July 2021, https://www.ic.gc.ca/eic/site/693.nsf/eng/00316.html#s21, at 9.

of law reform efforts may more clearly and decisively address this issue, thereby encouraging and facilitating TDM and protecting user rights.

We recommend making the fair dealing exception open-ended by adding the words "such as" prior to the list of enumerated purposes, thereby making the list illustrative and not exhaustive. The benefit of a general exception is that it can accommodate unforeseen uses that are fair to the right holder, avoiding the need to add new purposes as new technological capabilities emerge. For further certainly, however, *we would recommend specifying that TDM is an allowable purpose under fair dealing by adding "text and data mining", "data analysis", or "informational analysis" to the non-exhaustive list*.

We, and the consultation paper, have noted that the exception for temporary reproduction is of limited utility for some forms of TDM due to uncertainty about the applicability of this provision and the need, at times, to store copies of works indefinitely for the purposes of TDM.[54] *We therefore support the creation of a specific exception for TDM*, much as many of Canada's key trading partners (Japan, the United Kingdom, France, Germany, and the EU), as the consultation paper notes, have done.[55] This could be a stand-alone provision or an addition to current exceptions for technological process or incidental uses.

We strongly recommend that such an exception is broad in scope, available to all users, and applicable without regard to the commercial or noncommercial nature of the TDM activity. *Such an exception should permit the retention and sharing of the copies for verifying the results or for the purposes of collaborative research.*

It is understood that, in the Canadian context, the explicit exception would complement the general fair dealing provision, providing added certainty by confirming that qualifying TDM uses do not infringe copyright.[56] *We strongly recommend that to the extent that a term of a contract purports to prevent or restrict the exercise of the new exception, it be deemed unenforceable.*

To ensure that such amendments do in fact facilitate TDM, *we further recommend amending the existing anti-circumvention provisions to confirm the lawfulness of TPM circumvention when undertaken for the purpose of fair dealing and other permitted acts in respect of underlying works*.

3. Authorship and Ownership of Works Generated by AI

The consultation paper asks whether and how to change Canada's copyright framework to address uncertainties surrounding the authorship and ownership of works generated by AI or created with the assistance of AI.

In our opinion, the copyright status of AI-generated works in Canada is clear: They are not copyrightable works of original expression and so they belong in the public domain. In the absence

[54] *Ibid.* at 8.
[55] *Ibid.* at 9.
[56] *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at para. 49.

of a human author who exercises more than trivial or mechanical skill and judgment in the expression of an original work, there is no existing basis on which to claim copyright.

(a) A Human Author

Section 5(1) of the *Copyright Act* provides in part that copyright shall subsist if "the author was, at the date of the making of the work, a citizen or subject of, or a person ordinarily resident in, a treaty country". The clear implication is that an "author" of a "work" is a natural person.[57] This conclusion is further supported by Section 6, which establishes the statutory term of copyright in Canada: "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." The author of a copyright work is thus expected to have a natural human lifespan (in contrast to the potentially infinite existence of AI), permitting the duration of rights to be determined by the date of their death. In addition to the economic rights that copyright protects, the author is also vested with moral rights—these unassignable personal rights would "make no sense other than in relation to human authors," reinforcing the conclusion that works of authorship in Canada's copyright system are the products of human authors.[58]

(b) Originality

Originality is the threshold requirement of copyright protection. In much of the commentary around the current capabilities of AI, it is assumed that AI-generated works are "original," but this tends to be based on a misconception: originality is not determined objectively by assessing the work as an output/product; rather, originality is subjective and a matter of process. To be protected by copyright, an author's expression must not be copied and must involve the exercise of their "skill and judgment."[59] Canada's Supreme Court has defined "skill" as "the use of one's knowledge, developed aptitude or practised ability in producing the work", while "judgment" involves "the use of one's capacity for discernment or ability to form an opinion or evaluation by comparing different possible options in producing the work."[60] The amount of skill and judgment involved "must not be so trivial that it could be characterized as a purely mechanical exercise."[61] This Canadian *CCH* test (much like the US *Feist* test, which requires a minimum of creativity, and the Anglo-Australian "skill and labour" test) has rightly been taken to mean that "a human author is required to create an original work for copyright purposes."[62] The originality standard attempts to define the exercise of "intellectual effort" involved in the "expression of ideas"—of course, this is not what is involved in the technological processes by which AI generates outputs.[63]

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[57] See Craig, "AI & Copyright", *supra* note 15 at Part 1.1.

[58] Sam Ricketson, "People or Machines: The Berne Convention and the Changing Concept of Authorship" (1991) 16:1 Colum. VLA J.L. & Arts 1 at 11. Authors' moral rights are recognized and protected in Canada under s. 14.1 of the *Copyright Act*.

[59] *CCH Canadian Ltd. v. Law Society of Upper Canada*, 2004 SCC 13 at para. 16.

[60] *Ibid.*

[61] *Ibid*.

[62] *Geophysical Service Incorporated v Encana Corporation*, 2016 ABQB 230 at para 88.

[63] *Cf. Geophysical Service Incorporated v Encana Corporation*, 2016 ABQB 230 at para. 91 (finding sufficient originality in seismic data because "[e]ven though many technical instruments are used in the production of seismic data, they require human intervention, in the form of expert scientific skill and judgment to make them work"). It is important, however, to distinguish "expert scientific skill" from the kind of authorial skill and judgment in the expression of ideas that copyright requires.

While AI-generated outputs may come to facially resemble original works of authorship, they are categorically different things. Where a human programmer or user has intervened in technological processes such that the final work constitutes their original expression, copyright will attach as a matter of course. Copyright will also protect the original software code on which an AI system runs. But when AI generates outputs, however objectively novel or interesting these may be, they are not original works of expression within the meaning of copyright law.[64] "Although AI has, and will continue to advance rapidly…genuinely autonomous machines are at best decades away…. The current generation of AI machines are tools that assist and enhance human endeavors."[65]

(c) Maintaining the Copyright Balance

The copyright balance is appropriately struck when AI-generated outputs remain in the public domain and outside of private control. Giving copyright to AI-generated outputs serves none of the purposes of copyright protection.

Original AI software will be eligible for source code protection under the *Copyright Act* while the inventor of a computer implementation of the AI software could be issued a patent if the requirements of the Patent Act are met. To extend an additional layer of protection to the software's creations would therefore over-reward software developers while posing real threats to legitimate uses of their products, as well as future innovations.

The creative user of the AI can claim copyright in any outputs that sufficiently involve their skill and judgment in the expression of ideas within the work. Where the work is truly AI-generated (*i.e.* in the absence of significant original expression by the programmer or user in the final work), no author is denied their "just reward" when that output is unprotected by copyright.

As for the public interest in encouraging and disseminating works of the arts and intellect, even if AI works qualify as such, there is no compelling reason to assume (far less evidence to prove) that they will be under-produced in the absence of copyright protection. The AI itself does not require a copyright incentive, of course, while AI developers are already incentivized by copyright in the software code. As such, no statutory intervention is required or justified. Rather, extending copyright law to protect a new category of unauthored AI-generated outputs would upset the essential balance between protection and access within the copyright scheme[66] and unduly limit the ability of the public domain to incorporate and embellish creative innovation in the long-term interests of society as a whole, or create practical obstacles to proper utilization.[67]

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[64] See generally, Carys Craig and Ian Kerr, "The Death of the AI Author" (2020) 52 Ottawa L. Rev. 31, online at: https://rdo-olr.org/2021/the-death-of-the-ai-author/.

[65] Manny W. Schecter & Jennifer M. Anda, "IBM Corporation Comments in Response to 'Request for Comments on Patenting Artificial Intelligence Inventions', 84 Fed. Reg. 44889 (August 27, 2019)" (8 November 2019) at 3, online: United States Patent and Trademark Office https://www.uspto.gov/sites/default/files/documents/IBM_RFC-84-FR-44889.pdf (emphasis added).

[66] *Society of Composers, Authors and Music Publishers of Canada v. Bell Canada*, 2012 SCC 36, [2012] 2 S.C.R. 326, at para 11.

[67] *Théberge v. Galerie d'Art du Petit Champlain inc*., [2002] 2 S.C.R. 336, 2002 SCC 34, at para 32.

In the absence of a demonstrable need to extend protection to a new category of works, the government should resist pleas to grant private rights over that which is currently public domain. Indeed, this is an area in which maintaining the current boundaries of the public domain is "essential to ensure that the copyright system does not defeat its own ends."[68] The rapid production and proliferation of AI-generated outputs, if protected by copyright, could quickly throw up a thicket of privately-owned obstacles that human authors would be required to create around. Mass-produced AI-generated works, if protected by copyright, would effectively become "copyright landmines,"[69] creating liability risks, depleting the public domain, and impeding the creative activities of Canadians, all while burdening the Canadian taxpayer with funding the judicial process necessary to resolve private claims of this sort.

The consultation paper expresses concern that "the difficulty in differentiating human from non-human contributions to AI-assisted works would remain a challenge." While this may indeed be a challenge, it is, in our view, something of a red herring in this context. Under our copyright framework, there is always some challenge involved in distinguishing between protected and unprotected works—and indeed between protected and unprotected elements of works—and in identifying when and whether works (or elements of them) are public domain (and if not, to whom they belong). The challenge that this may continue to present when distinguishing AI-generated works from human-authored works is simply not a sound basis for sweeping more works into copyright and out of the public domain.

(d) Freedom of Expression

It should be recalled that copyright protection places significant limits on non-owners' expressive activities.[70] The *Canadian Charter of Rights and Freedoms* therefore requires that any new statutorily created copyright-like right is reasonable and demonstrably justified within the meaning of section 1. It would be practically untenable, on the basis of current evidence, to hold that maximizing the production of AI-generated works is a sufficiently pressing and important goal to justify limiting freedom of expression. If the objective is to advance the established purposes of copyright, then we doubt whether protecting AI-generated outputs is rationally connected to that goal at all. Either way, there are many less rights-impairing means[71] by which the government could encourage investment in generative AI without extending exclusive copyright control over a new category of unauthored AI outputs.

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[68] *York University v. Canadian Copyright Licensing Agency (Access Copyright)*, 2021 SCC 32 at para. 95 (citing Carys Craig, ""Locking Out Lawful Users: Fair Dealing and Anti-Circumvention in Bill C-32", in Michael Geist, *From "Radical Extremism" to "Balanced Copyright"*, 177, at p. 179).

[69] See Clark D. Asay, "Independent Creation in a World of AI" (2020) 14 Fla. Intl. U. L. Rev. 201 (describing how the rapid proliferation of protected AI-generated works would make it ever more difficult for human creators to create without legal risk).

[70] David Fewer, "Constitutionalizing Copyright: Freedom of Expression and the Limits of Copyright in Canada" (1997) 55:2 U Toronto Fac L Rev 175; Jane Bailey, "Deflating the Michelin Man" in Michael Geist, ed., In the Public Interest (Toronto: Irwin Law, 2005); Carys J Craig,. "Putting the Community in Communication: Dissolving the Conflict between Freedom of Express and Copyright" University of Toronto L J 56.1 (2006), 75-114; Bita Amani, "Copyright and Freedom of Expression: Fair Dealing Between Work and Play" in Coombe et al Dynamic Fair Dealing: Creating Canadian Culture Online (Toronto: University of Toronto Press, 2014); Graham Reynolds, "Reconsidering Copyright's Constitutionality." Osgoode Hall Law Journal 53.3 (2016), 898-947.

[71] *Carter v. Canada (Attorney General)*, [2015] 1 S.C.R. 331, at para 102; citing *Hutterian Brethren*, [2009] 2 S.C.R. 567, at para 55

(e) A Caution Against Sui Generis or Neighbouring Rights

In the absence of any traditional copyright interest, and without grounds to justify extending copyright, some might argue in favour of a *sui generis* right or a new "neighbouring right" in respect of computer- or AI-generated works. We caution against this approach. The proliferation of new rights in respect of new subject matters upsets the balance between owners' and users' rights in the copyright system, restricting access and use, increasing transaction costs, and limiting the benefits that might otherwise flow from new technologies. Fundamentally, the creation and layering of new rights in response to each new technological innovation is contrary to the principle of technological neutrality.[72] Moreover, as we have seen with respect to, *e.g.*, *sui generis* database rights, once they are granted such rights will persist even if the evidence subsequently shows that they fail to achieve their intended purpose or have harmful unintended consequences.[73]

Nothing in the above should be taken to mean that AI-generated works have no value or ought not to be encouraged. The public domain is a tremendously valuable resource for future creativity and innovation. It is simply not the case that every intangible thing of value must be protected by intellectual property; nor must everything that involves a substantial investment of labour or expertise be rewarded with the grant of an exclusive right. Private exclusive rights impose social costs—they should be granted only when the benefits outweigh the costs. There is presently no compelling evidence to suggest that new rights in respect of AI-generated works are necessary to advance the public interest, incentivize new innovations, or expand the expressive universe.

(f) Looking Abroad

In the United Kingdom, a legislative amendment appears to bring computer-generated works into the ambit of copyright by deeming the author to be "the person by whom the arrangements necessary for the creation of the work are undertaken"[74] (but limiting protection to a flat 50 years and withholding any moral rights' protections).[75] It remains unclear, however, what standard of originality (if any) is to determine the subsistence of copyright in such works. If copyright does not subsist in such works, of course, the deeming of an author is of limited legal significance. Meanwhile, in Europe, where copyright is philosophically regarded as a matter of *le droit d'auteur*, it is widely agreed that machine-generated works fail to satisfy the threshold requirement that the work expresses "the author's own intellectual creation"[76] (by which it is meant that "it reflects the author's personality" in the sense that "the author was able to express his creative abilities in the

[72] See, for example, *Entertainment Software Association v. Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 34 at para. 9 in relation to downloading digitized works from the internet.

[73] The EU Database Directive 96/9/EC has been the subject of evaluations reports (EU Commission, 2005) and public consultations in 2017, the results of which clearly cast doubt on its success. Despite having been widely recognized as a failed economic policy instrument, it remains in force and effect. See, e.g., Communia, Policy Paper on the EU Database Directive, online at: https://www.communia-association.org/policy-papers/policy-paper-12-reaction-public-consultation-database-directive/.

[74] *Copyright, Designs and Patents Act* 1988 (U.K.), c. I, s. 9(3). As noted in the consultation paper, similar provisions are now found in the copyright laws of Ireland and New Zealand.

[75] *Copyright, Designs and Patents Act* 1988 (U.K.), c. I, s. 12(7); c. IV, ss. 79(2)(c), 81(2)

[76] *Infopaq International A/S v. Danske Dagblades Forening*, C-5/08, [2012] ECR I-6624 at I-6644.

production of the work by making free and creative choices").[77] In the US, with its more utilitarian conception of copyright's purpose, originality also requires at least a minimal degree of creativity and entails a human authorship requirement.[78] Even in Australia, which employs a "skill and labour" standard closer to the traditional UK approach, courts have repeatedly insisted that an original work must demonstrably be "the product of human authorship."[79]

Recommendations

The consultation paper notes that one possible response to the emerging capacities of generative AI would be to "clarify that copyright and authorship apply only to works generated by humans or that no copyright may subsist in a work created without a human participating in some shape or form in the creation of the work."

We support this approach.

It is our view that AI-generated works are not original works within Canada's copyright framework and do not currently attract copyright protection. However, for greater certainty, we agree that explicit treatment under the Act as part of law reform efforts may more clearly and decisively address this issue, thereby confirming that AI-generated works without human authors are not protected and belong in public domain.

As such, we recommend confirming, in section 2 of the Copyright Act*, that "author" means a human being/natural person.*

We further recommend confirming, through an addition to section 5 of the Copyright Act*, that copyright shall not subsist in a work created without a human author.*

We thank the Ministers once again for the opportunity to submit this brief in the context of this important consultation on the modernization of the *Copyright Act*. Nous vous remercions à l'avance pour l'attention que vous porterez à ce mémoire.

Respectfully / Respectueusement,

[77] *Eva-Maria Painer v. Standard Verlags GmbH and Others*, C-145/10, [2012] ECR I-12594 at I-12622. See Daniel J. Gervais, "The Machine As Author" (2020) 105:5 Iowa L. Rev. 2053.
[78] *Feist Publications Inc. v. Rural Telephone Service Co.*, 499 US 340 (1991); U.S. Copyright Office, Compendium of U.S. Copyright Office Practices, 3rd ed. (Washington, D.C.: United States Copyright Office, 2017) at § 306: "Because copyright law is limited to 'original intellectual conceptions of the author,' the [Copyright] Office will refuse to register a claim if it determines that a human being did not create the work."
[79] *IceTV Pty. Ltd. v. Nine Network Australia Pty. Ltd.*, [2009] HCA 14; *Telstra Corporation Ltd. v. Phone Directories Co. Pty Ltd*., [2010] FCA 44, aff'd [2010] FCAFC 149; *Acohs Pty. Ltd. v. Ucorp Pty. Ltd*. [2010] FCA 577, aff'd [2012] FCAFC 16.

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