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# Governing Data and AI to Protect Inner Freedoms Includes a Role for IP

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## Key Points

- Today, nearly all human activity can be captured as data and monetized — without any assurance that human rights, including the right to freedom of thought, are upheld.
- Current policies and regulations, often siloed, are inadequate to achieve comprehensive governance of the monetization process.
- Governance frameworks for governing data and artificial intelligence (AI) must also consider the role of intellectual property (IP). Enforcing IP rights can enhance, rather than hinder, transparency and facilitate algorithmic monitoring.
- Ways to address these governance deficiencies include expanding mechanisms of regulatory cooperation, exploring methods for technology testing before its deployment to assess potential impacts on fundamental rights, and emphasizing that corporations must assume greater responsibility, potentially through a duty of care framework.

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## Introduction

Generative AI has taken the world by storm — and caught regulators everywhere by surprise. In a matter of months, technology once confined to a specialized domain has now permeated the daily lives of ordinary users and become interwoven with our routines and activities. Yet there are no coherent guardrails in place, no user-friendly manuals and no standards or regulations, neither national nor global. The ungoverned and growing ubiquity of generative AI is similar to, and just as troubling as, that of the large digital platforms that play an important role in the work and personal lives of countless individuals worldwide, facilitating access to diverse information, communities, cultures and services. These platforms' business models rely on advertising revenue, which is dependent on user data fulfilling the role of "product" or "commodity," while advertisers occupy the position of the "consumers." The input provided by these billions of data "producers" is derived from numerous undisclosed sources, including covert tracking of their interactions on digital platforms, surreptitious surveillance of their conversations, pervasive monitoring of their activity across platforms, and even the acquisition of their biometric data through immersive virtual reality games, just to name a few. These practices often find "justification" through opaque consent or terms of service agreements, further complicating this intricate landscape.

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This complex milieu creates a suite of public policy challenges, but one of the most important — yet least explored — areas is the intersection of IP, data governance, AI and the platforms’ underlying business model. The global scale, the quasi-monopolistic dominance enjoyed by the large platforms, and their control over data and data analytics have explicit implications for fundamental human rights, encompassing privacy, freedom of speech, and — in the specific context of the discussion that follows — freedom of thought. This policy brief explores the contemporary governance challenges and proposes potential solutions by examining the dynamic interplay among IP, data governance and platform business models.

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## The Data Value Chain Exploits Personal Data

At the core of novel digital technologies is the innovation process, intrinsically driven by data — in particular, personal data. Within this context, first movers benefit significantly from high-cost sunk investments and minimal marginal costs, enabling them to exploit economies of scale. Moreover, the availability of a vast reservoir of data empowers companies to leverage economies of scope, network effects and information asymmetries, thereby establishing monopolistic power. In this intangibles-based economy, data serves as the foundation of a value chain — wherein personal and other forms of data are subjected to data analytics, commonly referred to as AI. These analytics generate predictive insights that can be used to target individuals. Notably, the practice of targeting individuals engenders significant concerns, as underscored by the scholarly contributions of Shoshana Zuboff (2019) and Susie Alegre (2021), both of whom aptly illuminated the potential ramifications on the cherished concept of “freedom of thought.” In the current landscape, nearly all facets of human activity can be captured and monetized. Yet, there is an inherent lack of assurance that human rights are upheld throughout this monetization process.

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## IP Has a Critical Role in the Data Value Chain

IP is an important yet underdiscussed element of this ecosystem. IP protection is an essential avenue to realize the value of data, creativity and innovations and to scale up competitive businesses. But challenges exist on how IP can be properly considered in the governance of AI:

- Because IP effectively creates often-temporary monopolies, or can reinforce existing market power, digital giants may employ IP rights as a means to impede potential competitors. Consequently, limited options remain for users, who may find themselves subject to the dictation and control of personal information usage based on opaque consent agreements inherent in the terms of service. This limited choice hampers access to alternative business models that could better align with user preferences, such as those that might afford greater privacy for their personal data.
- IP captures various facets of AI in the form of patents, copyright, trade secrets and trademarks. However, the extent to which these various forms apply is uncertain, creating global confusion. For instance, in the case of AI-generated inventions, countries differ on whether, and to what extent, these works qualify for IP protection. Patent protection, for instance, grants exclusive rights to the inventor, typically a human. For an invention that has been generated by AI, who (or what) is the inventor? Is the AI capable of being the inventor, or is it merely a *tool* used by a human to produce the invention? The primary case stirring a global debate is that of DABUS (short for “Device for Autonomous Bootstrapping of Unified Sentience”), an AI system created by Stephen Thaler (see D’Agostino 2023; Olijnyk 2022). Thaler has submitted patent applications worldwide and received differing outcomes. While Europe and the United Kingdom rejected the DABUS application, Australia found that “artificial intelligence (AI) is capable of being an ‘inventor’ for the purposes of the Australian patent regime” (Currey and Owen 2021; McDermott 2021). Thaler is currently challenging the US Copyright Office’s denial of an application he filed for copyright to a piece of visual art

created by the system.<sup>1</sup> No final decision exists in Canada (Chalmers, Yi and Medeiros 2022).<sup>2</sup>

- Because Canadian courts have not yet considered whether an AI can be an inventor, companies with technology that is entirely AI-driven, without human involvement, would likely resort to trade secret protection rather than patent application. More generally, algorithms and training data employed by digital platforms may be covered under trade secrets, which may pose challenges to the transparency around the uses of data and how the algorithms operate. Such protections may be extended in trade agreements, adding yet another layer of complexity to this issue.
- Similar global debates to patents also revolve around copyright law: do the *outputs* of AI, or “generative AI” in the form of AI-generated works (that is, text, art, music or compilations), and the *inputs* of data feeding the AI algorithms attract copyright protection?
- Questions arise particularly about the data sets required to train and implement AI, including what is covered under “fair dealing” or “text and data mining” exceptions. For instance, in Canada, without explicit permission from the copyright holder, it is unclear to what extent, if any, copyright-protected data can be used for commercial purposes. Presently, there is no AI-specific scheme in the Canadian Copyright Act, nor is addressing copyright issues contemplated in the Artificial Intelligence and Data Act tabled before Parliament (CIPO 2023). Strict enforcement of copyright could curtail availability of the information required for algorithm training, thereby exacerbating issues such as bias. For its part, Japan has declared that using data sets in the training of generative AI will not violate copyright law. While that is a welcome intervention for platforms, the authors of the copyrighted material go uncompensated.

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1 See *Thaler v Perlmutter*, No 22-1564 (DDC 2023).

2 In Canada, Thaler filed a Canadian patent application for “Food Container and Devices and Methods for Attracting Enhanced Attention,” in which DABUS was identified as the inventor; the Canadian Intellectual Property Office (CIPO) declined the application and commented in a compliance notice that “it does not appear possible for a machine to have rights under Canadian law or to transfer those rights to a human” (Chalmers, Yi and Medeiros 2022).

→ The practice of web scraping is a means of acquiring data. Web scraping is a similar and related activity to the text and data mining that is more commonly referenced in the AI context, although web scraping is also practised for purposes outside of text and data mining. Web scraping considers data that is publicly accessible on the internet. This kind of data poses the most challenging legal issues, as data found behind paywalls is more robustly protected by both contracts and technological protection measures (Scassa 2021). Getty Images has filed a lawsuit against Stability AI, claiming the open-source AI art generator infringed its IP by copying more than 12 million images from its database, neither seeking permission nor paying compensation. The images were used to train its AI text-to-image tool Stable Diffusion (Setty 2023). While bigger players are able to file lawsuits, smaller companies that cannot afford to protect their data and IP are hindered by the continued lack of both regulatory clarity and data governance, thereby creating significant socio-economic and access-to-justice issues.

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## Governance Does Not Reflect That Data Touches All Policy Areas

The data value chain touches on all areas of policy, with fundamental cross-cutting issues related to the governance of data and AI that include privacy, cybersecurity and surveillance, competition and consumer protection, IP, platform content and online harms, and so on. IP rules cannot be viewed in isolation from these other policy areas. Yet, the largely siloed development and enforcement of policies and regulations fail to address the increasingly entangled challenges presented by data. This situation also poses significant challenges to achieving comprehensive governance at national and international levels.

Further, existing governance structures often favour entrenched state and corporate interests, creating formidable barriers to change. The geopolitical landscape surrounding data governance exemplifies these challenges. The concept of “data realms” pits the state control model of China (full state access

to personal data) against the laissez-faire model of the United States (let big tech regulate big tech) and the rights-driven approach in the European Union (strategic regulations) (Aaronson and Leblond 2018). Moreover, each region has witnessed the rise of data sovereignty out of economic and national security concerns, leading to a tech war between China and the United States, partly driven by a race to control IP and the associated economic benefits.

These developments have significant implications for countries outside these realms, because although they often lack input or influence over the regulations created within these realms, they can be powerfully affected by them. The strategic value attributed to data and AI amplifies the power of vested interests that are bolstered by the economic concentration inherent in the data-driven economy. This trajectory could result in a scenario where a handful of companies or states not only control vital information sources for citizens, and the algorithms derived from them, but also then possess the capacity to exert global influence over these sources and citizens.

It is worth acknowledging ongoing efforts to address these challenges, albeit they can sometimes be driven by self-interest. As noted by Robert Fay (2021a), a plethora of initiatives aim to improve the situation, yet they lack a coherent overarching global framework. Despite emerging efforts for international collaboration, fundamental cross-cutting issues concerning data and AI governance remain unaddressed. There is also no multi-stakeholder representative body that brings together civil society, government and the public sector at the national and international levels to facilitate effective and inclusive regulation.

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## Freedom of Thought’s Relevance to Data and AI Regulation

As noted by Alegre (2021), in the realm of digital regulation, the predominant focus has been on safeguarding privacy rights, data protection and freedom of expression. But the increased impact of digital technology and AI on the way human beings think, feel and behave calls for a new perspective on regulation, one that

explicitly safeguards individuals' rights to freedom of thought and opinion in the *forum internum* — the inner space of the mind.

New applications of technology are making insidious encroachments into the deeply personal dimensions of human beings' lives. Augmented reality technology intrusively captures sensitive biometrics and targeted ads on digital platforms assess our reactions. In such instances, and others, algorithms can be employed to subtly influence individuals and generate social tensions, such as through disinformation campaigns. Importantly, our personal data can be weaponized against us, both as individuals and as members of society. This weaponization is very evident in so-called "dark patterns" that trick users into doing things that they might not otherwise do. More generally, the capture of personal information that is used to train algorithms can then be used to influence both individual and collective behaviour, including the ability to exercise one's right to freedom of thought. Further, generative AI is subject to hallucinations, inaccuracies that can extend to misrepresenting the identities or characters of individuals.

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## Addressing Algorithmic Regulation and Comprehensive Data Governance

To address the profound implications of these developments, comprehensive regulation is imperative. Regulation is required that encompasses the protection of freedom of thought, recognizing its vital role in preserving the sanctity of the individual's inner world amid the omnipresence of digital technologies.

In order to effectively regulate algorithms, and mitigate their impacts, we need to start with addressing data governance (Aaronson 2023). At the same time, given the linkages along the data value chain, it also requires comprehensive governance that tackles many policy areas. Indeed, as Alegre (2021, 5) notes, "Regulating to protect freedom of thought may require a more radical approach to what is permissible in technological innovation and development than the more familiar

regulatory territory of privacy and freedom of expression. Regulators and law makers need to take decisions on what the risks are and what will never be acceptable. Doing so will require new regulatory frameworks that recognize and respond to the wider societal impacts of the use of data rather than focus on control of personal data."

Within this context, three overarching areas warrant attention, outlined with the caveat that these points are not meant to be exhaustive.

### Data and AI Governance

As revealed by the Digital Trade and Data Governance Hub at George Washington University and records of Digital Policy Alert,<sup>3</sup> there are substantive differences in data and AI governance regulations and initiatives across countries. Yet, as Susan Ariel Aaronson (2023) notes, one of the most important things that can be done is to pass a national personal data protection law that clarifies the rights and responsibilities of data subjects and entities that collect, use and sell data (data controllers) and grants explicit responsibility to a data protection body. Standards are expected to play a major role in data and AI governance and can be used to create consent agreements that are easy to understand and clarify terms around data collection, access, sharing, analytics and interoperability, and so on (Girard 2020); data stewards can ensure that the rules around data use and reuse are followed; different types of data structures can be implemented to ensure that the types of data use are consistent with the values of the members. And importantly, as noted for some time, critical issues of ownership, access to and control of the data, from an IP perspective, need to be tackled to ensure transparent and comprehensive data governance (D'Agostino et al. 2008).

Greater transparency about the data feeding into the algorithms is also required. This transparency should be tailored to the needs of different communities — for example, users, auditors, researchers and regulators (MacCarthy 2022). Mechanisms to ensure transparency may include audits and conformity assessments,

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<sup>3</sup> See the Digital Trade & Data Governance Hub website ([datagovhub.elliott.gwu.edu](https://datagovhub.elliott.gwu.edu)) and "Data governance" on the Digital Policy Alert website (<https://digitalpolicyalert.org/policy-area/data-governance?period=2020-01-01,2023-06-20>).

such as those mandated in the recently agreed EU AI Act for high-risk applications (Madiega 2023), and risk management frameworks more generally are required, such as those recently developed by the National Institute of Standards and Technology (NIST) that document critical areas that need to be addressed (NIST 2023).

## Regulatory Coordination along the Data Value Chain

Competition policy is an essential element of regulating the data value chain. It includes tackling issues of interoperability, *ex ante* regulation and *ex post* antitrust and enforcement of digital platforms. Competition will also allow new platforms to arise that can meet the preferences of users, while consumer protection regulations can be used to protect from some harms, for example, dark patterns.

Nevertheless, Fay (2021b) argues that given the intersection of several policy areas, competition is a necessary but not sufficient condition to deal with other linkages, including privacy and IP. Regulators have, however, begun to realize the need for greater cooperation. For example, Australia's Digital Platform Regulators Forum brings together the agencies responsible for competition, privacy, telecoms and online safety to "focus on the impact of algorithms, seeking to increase transparency of digital platforms' activities and how they are protecting users from potential harm, and increased collaboration and capacity building between the four members" (Australian Competition & Consumer Commission 2022).

New tools and structures such as regulatory sandboxes can be used to test technical and governance aspects of AI technologies and ensure that a duty of care is followed before new AI applications are released.

At the same time, companies themselves need to take responsibility for the algorithms that they create. Recommendations from the Organisation for Economic Co-operation and Development (OECD) on its "Due Diligence Guidance for Responsible Business Conduct" are a place to start, in particular, recommendation II on due diligence frameworks.<sup>4</sup>

Incorporating standards referring to them in regulations can also be a way to keep regulations agile and up to date in the fast-paced world of technological change; however, standard setting will need to be conducted in a multi-stakeholder, open format.

## Multi-stakeholder International Cooperation

Although national frameworks are essential, it is increasingly recognized that a global regulatory framework is required as well. Even with national frameworks in place, the uses of the technology and potential benefits and harms span national borders. The "G7 Hiroshima Leaders' Communiqué" of May 2023 points to the need for international discussions on AI frameworks that are interoperable and multi-stakeholder in design, and which should embed democratic values, including fairness; accountability; transparency; safety; protection from online harassment, hate and abuse; and respect for privacy and human rights (G7 Leaders 2023). The Group of Seven (G7) leaders acknowledge in their communiqué that standard setting will be an important part of the process. In particular, they call for the creation of a Hiroshima AI process for discussions on generative AI and propose these discussions include topics such as governance; safeguarding of IP rights, including copyright; promotion of transparency; response to foreign information manipulation, including disinformation; and responsible uses of these technologies.

Although the G7 could play an initial leading role, it is important that a broader range of countries be part of this process. The G7 notes that it would work with the OECD and the Global Partnership on Artificial Intelligence, but that it should include the Group of Twenty and beyond. However, even that range may not be sufficient. The Centre for International Governance Innovation has also proposed a framework for international discussion on the digital economy to take place under a Digital Stability Board (DSB), modelled on the Financial Stability Board (Fay 2019, 2021a). Further, it will be important to build in systematic consultation with civil society groups globally, as envisaged under the DSB. One current example of why this cooperation is necessary is the recent decision, as noted above, by Japan to not enforce copyright on data used to train AI, so as to allow its own developers access to greater training data.

<sup>4</sup> OECD, Investment Committee, *Recommendation of the Council on the OECD Due Diligence Guidance for Responsible Business Conduct*, Doc No OECD/LEGAL/0443 (2018).

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# Enhancing Data and AI Governance with IP Rules

Given the fundamental significance of IP rights in the intangibles-based economy, and their intricate interactions with diverse policy realms, the integration of IP law within the framework of data and AI governance requires finding a nuanced equilibrium. The assertion of IP rights can contribute to enhancing AI governance frameworks, but the differential patent outcomes with respect to AI-generated inventions that are taking place internationally need to be resolved as we move toward a global AI governance approach. Moreover, although carving out exceptions to copyright in the interests of innovation may deny rights holders the value of their creation, a loosening of IP enforcement may reduce IP holders' incentive to monitor how their "works" are being used, and this monitoring can assist in explainability of AI systems, including the data and information used to train, validate and test AI models. Inadequate protection for rights holders may also result in their reluctance to share information, potentially leading to biased data and algorithms. Standard contract AI terms can bring clarity around IP rights (Tiedrich 2023). Additionally, recent developments promoting algorithmic identification of copyrighted content can facilitate the assessment of information used in algorithms. And finally, as Giuseppina D'Agostino (2023) argues, what matters is not so much who (human or machine or both) invents or even creates in the case of copyright, but who owns the IP and the data, and who has the power to commercialize those assets. Tackling the AI ownership challenge will more effectively ensure the public benefits from the IP rights that are granted.

Trade agreements also recognize that in some circumstances there may be a need to examine source code. For example, in the Canada-United States-Mexico Agreement, article 19.16 recognizes that while access to source code should not be a provision for import, distribution or sale of software, "This Article does not preclude a regulatory body or judicial authority of a Party from requiring a person of another Party to preserve and make available the source code of software, or an algorithm expressed in that source code, to the regulatory body for a specific investigation, inspection, examination, enforcement action, or judicial proceeding, subject

to safeguards against unauthorized disclosure."<sup>5</sup> The article suggests that trade secrets should not be a hindrance to data governance if suitable safeguards to protect IP rights are in place.

Further, even without looming regulation around algorithmic disclosure, such as the recent draft EU AI Act (Madiega 2023) that mandates conformity assessments for high-risk applications, there is a burgeoning industry to do AI audits.<sup>6</sup> There is also a focus on frameworks for these systems, including the NIST (2023) risk management framework for AI, as well as a set of principles from the OECD to foster trustworthy AI that can be leveraged.<sup>7</sup>

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## Conclusion

The current state of AI governance is inadequate to address the intricate interdependencies among data, AI and their outcomes. To effectively safeguard freedom of thought, governance frameworks must encompass these interdependencies and consider the role of IP within this context. Contrary to the notion that IP hinders AI regulation and transparency, the enforcement of IP rights can actually enhance transparency and facilitate algorithmic monitoring, including examinations of how algorithms may be used to influence freedom of thought. Monitoring can be achieved by granting authorized public or certified private regulators access to training data and source code, subject to appropriate safeguards to protect IP, to assess the potential impact on fundamental rights.

Besides the consideration of IP within the governance of data and AI, existing regulatory frameworks exhibit deficiencies in effectively safeguarding the cherished principle of freedom of thought. To address these deficiencies, there is a need to expand mechanisms of regulatory cooperation, explore new methodologies for technology testing prior to its deployment, and

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5 Canada-United States-Mexico Agreement as amended by Protocol of Amendment to the Agreement between Canada, the United States of America, and the United Mexican States, 10 December 2019, Can TS 2020 No 6, art 19.16 (entered into force 1 July 2020).

6 See <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>.

7 See <https://oecd.ai/en/ai-principles>.

emphasize the role of corporations in assuming greater responsibility, potentially through the adoption of a duty-of-care framework. Ultimately, it is imperative to establish a foundation of trust that ensures data is utilized in accordance with the values and principles that govern its use. Currently, such trust is lacking. Moreover, given that values and priorities may vary across countries and communities, the establishment of global mechanisms becomes crucial in bringing together diverse multi-stakeholder groups that can provide invaluable insights into the impact of data and AI on individuals and society.

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## Acronyms and Abbreviations

AI	artificial intelligence
CIPO	Canadian Intellectual Property Office
DABUS	Device for Autonomous Bootstrapping of Unified Sentience
DSB	Digital Stability Board
FSB	Financial Stability Board
G7	Group of Seven
IP	intellectual property
NIST	National Institute of Standards and Technology
OECD	Organisation for Economic Co-operation and Development



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## About CIGI

The Centre for International Governance Innovation (CIGI) is an independent, non-partisan think tank whose peer-reviewed research and trusted analysis influence policy makers to innovate. Our global network of multidisciplinary researchers and strategic partnerships provide policy solutions for the digital era with one goal: to improve people's lives everywhere. Headquartered in Waterloo, Canada, CIGI has received support from the Government of Canada, the Government of Ontario and founder Jim Balsillie.

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## À propos du CIGI

Le Centre pour l'innovation dans la gouvernance internationale (CIGI) est un groupe de réflexion indépendant et non partisan dont les recherches évaluées par des pairs et les analyses fiables incitent les décideurs à innover. Grâce à son réseau mondial de chercheurs pluridisciplinaires et de partenariats stratégiques, le CIGI offre des solutions politiques adaptées à l'ère numérique dans le seul but d'améliorer la vie des gens du monde entier. Le CIGI, dont le siège se trouve à Waterloo, au Canada, bénéficie du soutien du gouvernement du Canada, du gouvernement de l'Ontario et de son fondateur, Jim Balsillie.

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