Selected Intellectual Property Aspects of the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence

By

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Abstract: U.S. President Joe Biden’s Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (the Order) is a sweeping and aggressive blueprint for advancing U.S. government awareness and control of technologies, applications, and policies that relate to Artificial Intelligence (AI). This article treats selected aspects of the Order’s treatment of, and potential impacts on, intellectual property and AI, including trade secret, copyright, patent, immigration priorities, and enforcement issues. While the Order can be viewed as a welcome, perhaps overdue, attempt to fashion a coordinated federal policy and plan of action on AI, there may also be a concern that overreach and politically-driven “perspectives” can affect the formation of government policies, subsidies, information-sharing, and enforcement actions.

Key Words: Artificial Intelligence; Executive Order; Trade Secrets; Copyright; Patents.

1. Introduction

On October 30, 2023, the Biden White House issued an Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (the Order). The Order is largely

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premised on the view that Artificial Intelligence (AI) \(^2\) urgently requires pervasive federal government inquiry, oversight and monitoring to ensure that AI is properly developed and used in conformity with approved technological, industrial and societal goals. Based on its definition of “AI,” the Order relates to machine-based systems that can make predictions, recommendations, or decisions influencing real or virtual environments and is not confined to generative AI. Some readers will welcome the Order’s broad and ambitious sweep, others will see the Order and its nuanced language as a political and policy driven overreach into issues more properly addressed by Congress, the judiciary, and in agreements between private entities.

Among the Order’s ambitious regime is a sweeping set of directives and deadlines aimed at ensuring that there are “coordinated Federal Government wide” efforts to ascertain that current state of AI development and determine how best to understand, direct and regulate it.\(^3\) A key feature of the Order is that it requires a number of federal agencies to (very) rapidly turn their attention to AI issues. For example, the Order requires that NIST, in coordination with the Department of Commerce, produce two sets of guidelines within 270 days from issuance of the Order: (1) guidelines and best practices for “developing and deploying safe, secure, and trustworthy AI systems”; and (2) standards and procedures for developers of AI (outside of national security applications) to conduct AI red-teaming tests.\(^4\)

The Order sets out eight “guiding principles and priorities” that will underlie the anticipated efforts to advance and govern the development and use of AI. These principles are: (1) AI must be safe and secure; (2) AI development and use must be “responsible” in accordance with government notions of how best to define and address “some of society’s most difficult challenges”; (3) responsible development and use of AI requires a commitment to supporting American workers; (4) AI policies must be consistent with approved notions of equity and civil rights; (5) consumers must be protected against fraud, unintended bias, discrimination, infringements on privacy, and other harms; (6) Americans’ privacy and civil liberties must be protected from improper collection and use of people’s data; (7) the Federal Government must take steps to attract, retain, and develop public service oriented AI professionals, including from underserved communities, across disciplines – including technology, policy, managerial, procurement, regulatory, ethical, governance, and legal fields; and (8) the U.S. should lead international efforts to ensure AI

\(^2\)The Order defines “artificial intelligence” or “AI” in accordance with the language of 15 U.S.C. 9401(3): a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. Artificial intelligence systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action. Order, Sec. 3(b). Title 15 includes Chapter 119 – the National Artificial Intelligence Initiative – which places a sweeping set of responsibilities and powers in the President to achieve U.S. leadership in AI research and development, as well as “integration across all sectors of the economy and society.”


\(^4\) As used in the Order, “AI red-teaming” means a structured testing effort to find flaws and vulnerabilities in an AI system, often in a controlled environment and in collaboration with developers of AI.” Order Sec. 3 (d).
benefits the whole world, rather than exacerbating inequities, threatening human rights, and causing other harms.

The language of the Order is both general and nuanced – calling for a “society wide” effort that includes government, the private sector, academia, and “civil” society. Although the Order sweeps across a vast field of areas and endeavors – from social engineering to intellectual property, immigration, and cybersecurity – the following discussion will focus on the Order’s assessment of and potential impact on intellectual property (IP) issues that are shaped or affected by developments in AI or the Federal Government’s attempts to regulate or direct it. The three basic IP rights at the forefront of the Order’s potential regulatory tsunami are trade secret, copyright and patent rights.

2. IP and Human Resources

Before addressing specific IP rights, it is notable that the Order seeks to structure and direct U.S. immigration polices and processes to encourage immigration and, in the alternative, temporary residence by individuals who have talent in AI and other critical and emerging technologies. The Order directs the Secretary of State and the Secretary of Homeland Security to take appropriate steps within 90 days from issuance of the Order to: (1) streamline processing times of visa petitions and applications, including by ensuring timely availability of visa appointments, for noncitizens who seek to travel to the United States to work on, study, or conduct research in AI or other critical and emerging technologies; and (2) facilitate continued availability of visa appointments in sufficient volume for applicants with expertise in AI or other critical and emerging technologies. The Order then goes on to enumerate a number of desired and expedited measures to facilitate the attraction, and ease the entry and residence processes, for foreign individuals who have talent in AI or other critical and emerging technologies. In essence, the Order seeks to carry on the U.S. tradition of building advanced and specialized domestic communities by providing hospitable condition in the United States. Put another way, we want more home-grown Thomas Edisons, but we also wants more foreign-born Nikola Teslas too.

3. Trade Secrets

There are several sections of the Order that require government gathering and assessment of information that will necessarily include private entities’ trade secret information. For example, the determinations of whether particular AI systems are appropriately secure and acceptably correct from a policy standpoint, through e.g., “AI red teaming,” will likely or necessarily result in disclosure of commercially valuable data, algorithms, and analyses to the Federal Government and its designated contractors. Although potentially applicable state law may use different

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5 Order, Sec. 5.1.
6 Order, Sec. 5.1(i)-(ii).
7 Along with defining “AI red teaming,” the Order states that: “Artificial Intelligence red-teaming is most often performed by dedicated “red teams” that adopt adversarial methods to identify flaws and vulnerabilities, such as harmful or discriminatory outputs from an AI system, unforeseen or undesirable system behaviors, limitations, or potential risks associated with the misuse of the system.” Id. This raises the specter that empirically correct AI output can nonetheless be deemed “misinformation” if it does not serve a particular political agenda. Depending on the
language to define what constitutes trade secret information, the definition in the federal Economic Espionage Act, as amended by the Defend Trade Secrets Act of 2016 provides that:

"[T]he term "trade secret" means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if—

(A) the owner thereof has taken reasonable measures to keep such information secret; and

(B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information."

Notwithstanding the federal concern for protecting trade secrets, including in international industrial espionage contexts, tensions can arise between protection of trade secrets disclosed to the federal government and the government’s obligations of public disclosure under the Freedom of Information Act (FOIA). Notably, Exemption 4 of FOIA recognizes and addresses the need for the government to protect from disclosure under FOIA “trade secret and commercial or financial information obtained from a person and privileged or confidential.” In 2016, Congress passed the FOIA Improvement Act of 2016 (“FIA”), which imposes an additional “foreseeable harm” requirement on an agency seeking to withhold records under a FOIA exemption.

A key point, however, is that trade secret information may be viewed, in some instances, as distinct from confidential information which would also qualify for protection under Exemption 4. For example, in BuzzFeed, Inc. v. Department of Justice, the U.S. District Court for the District of Columbia, the court considered a FOIA request for certain information regarding communications between the Los Angeles FBI field office and several DNA and genetic testing businesses. As Stated by the Court:

observer’s point-of-view, the anticipated operation and effects of the Order implicates democracy’s ever-present question: “Who regulates the regulators?”

12 Id. at Section 552(b)(4). Exemption 4 is one of the nine exemptions provided in Section 552(b): (1) “properly classified”; (2) “related solely to the internal personnel rules and practices of an agency”; (3) “specifically exempted from disclosure by statute”(subject to certain conditions); (4) “trade secrets and commercial or financial information obtained from a person and privileged or confidential”; (5) records that would be privileged in court, including records less than 25 years old that describe the internal “deliberative process” of the Government; (6) “personnel and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy”; (7) records “compiled for law enforcement purposes”(subject to certain conditions); (8) compliance records of regulated financial institutions; or (9) survey data regarding the location of wells.
FOIA Exemption 4 shields from disclosure “trade secrets’ and commercial or financial information obtained from a person [that is] privileged or confidential.” 5 U.S.C. § 552(b)(4). Thus, to claim this Exemption for information other than trade secrets, the information must be “(1) commercial or financial, (2) obtained from a person, and (3) privileged or confidential.” Pub. Citizen Health Rsch. Grp. v. FDA, 704 F.2d 1280, 1290 (D.C. Cir. 1983). Furthermore, the 2016 FOIA Improvement Act, Pub. L. No. 114-185, 130 Stat. 538, imposes an additional requirement for all exemptions that agencies “shall ... withhold information ... only if ... the agency reasonably foresees that disclosure would harm an interest protected by an exemption” or if “disclosure is prohibited by law.” 5 U.S.C. § 552(a)(8)(A)(i).

Similarly, in First Look Institute, Inc. v. U.S. Marine Corp., the court refused to order disclosure of agency records that would reveal information about Lattice, an artificial intelligence defense system developed by defense start-up Anduril and deployed at multiple U.S. Marine Corps bases and along the U.S.–Mexico border. In reaching its conclusion with regard to a technical guide to Lattice, the court noted that the guide contained both trade secret and nonpublic commercial information. As to the requisite harm, the court explained:

Defendant also establishes that it complied with the FOIA Improvement Act under either the substantial competitive harm or the specific explanation of harm test. Defendant has provided a declaration from Anduril that discloses the competitive harm Anduril would face should this information be disclosed. Johnson Decl. ¶¶ 32–36 Specifically, disclosure of this user guide would undermine the confidentiality of Anduril's trade secrets and place it at a high risk of competitive harm with entities like Lockheed Martin, Boeing, Raytheon, BAE Systems, and Northrop Grumman, all giants in the defense contracting space. Id. ¶ 34. Anduril would lose its competitive advantage from the ease of use of its systems, which the user training guide details by showing users how to use Anduril's Lattice system. Id. ¶ 35. Disclosure of the user interface would allow other companies to copy the Lattice capabilities and erode Anduril's competitive advantage. Id. ¶ 36. This unrebutted evidence demonstrates there would be substantial competitive harm and provides a specific explanation of the harm to confidentiality interests that would result from disclosure of the user guide.

In its 2019 Food Marketing Institute v. Argus Leader Media opinion, the Supreme Court considered a number of issues regarding the criteria for determining whether information should be treated as “confidential information” under Exemption 4 in FOIA. In short, the Court held that, as applicable to the facts of the case, “[w]here commercial or financial information is both customarily and actually treated as private by its owner and provided to the government under an assurance of privacy, the information is “confidential” within Exemption 4's meaning.” The

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15 Id. at p. 4.
17 Id. at p. 3 (emphasis supplied).
18 Id. at p. 4.
19 588 U.S.___ , 139 L.Ed 2d 742 (2019). Notably, the Court declined to consider whether one of the two conditions would suffice because both conditions were present in the case.
confidential information at issue comprised the names and addresses of all retail stores that participate in the national food-stamp program—known as the Supplemental Nutrition Assistance Program (SNAP)—and each store's annual SNAP redemption data from fiscal years 2005 to 2010. Uncontested testimony established that the Institute's retailers customarily do not disclose store-level SNAP data or make it publicly available. Moreover, to induce retailers to participate in SNAP and provide store-level information, the government has long promised retailers that it will keep their information private. A feature that arguably distinguishes confidential information under Exemption 4, as opposed to trade secret information under the Exemption is that the Supreme Court rejected in *Argus* the notion that Exemption 4's sheltering of confidential information from disclosure only applies where disclosure of the alleged confidential information “would lead to substantial competitive harm.”

Notably, however, it appears that *Argus* did not address the FIA because the Act only applied to FOIA requests made after its enactment. Therefore, in any analysis of the potential application of Exemption 4, *Argus* is critical to the consideration, but is not the “first and last stop” in the analysis.

Even after *Argus*, the requirement that the alleged confidential information “must be commercial or financial in nature or use” is a hurdle that must be overcome to qualify for Exemption 4 status. Some courts interpret the requirement very strictly (or, arguably, creatively) so as to narrow the scope of the exemption from public disclosure. For example, in *New York Times Co. v. U.S. Food and Drug Administration*, the court considered the records of JUUL Labs, Inc. (“Juul”) phrased to requirement as follows: “As a general rule, courts typically find records to be commercial if they “reveal basic commercial operations, such as sales statistics, profits and losses, and inventories, or relate to the income-producing aspects of a business.”

The court then went on to reject the argument that customer and non-customer complaints received by Juul should be considered to be sheltered commercial information. As the court put it: “In short, customer complaints about the physical characteristics or effects of Juul's products, Juul product distribution, and retailers of Juul products are not exempt from disclosure under FOIA Exemption 4.”

Similarly, in *New York Times Co.*, the court discussed the “foreseeable harm” requirement that the FIA imposed. In a broad reading of the requirement, the court stated:

> In 2016, Congress passed the FOIA Improvement Act of 2016 (“FIA”), which imposes an additional “foreseeable harm” requirement on an agency seeking to withhold records under a FOIA exemption. “The foreseeable harm standard prohibits agencies from withholding information unless (i) ‘the agency reasonably foresees that disclosure of the record would harm an interest protected by an exemption,’ or (ii) ‘disclosure is prohibited by law.’ ” Pursuant to this new requirement, agencies must release a record — even if it falls within a FOIA exemption — if releasing the record would not reasonably harm an exemption-protected

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20 *Id.* at 2364-2366.
22 Juul is a provider of electronic nicotine delivery systems (ENDS).
24 *Id.* at 278.
interest and if its disclosure is not prohibited by law. As a court within this district has described it, the FIA imposes an independent and meaningful requirement on agencies before they may withhold a record under one of FOIA's exemptions.”

On November 18, 2022 the Office of Information Policy (OIP) of the Department of Justice released its updated Step-by-Step Guide for Determining if Commercial or Financial Information Obtained from a Person is Confidential Under Exemption 4 of the FOIA (updated Nov. 18, 2022). Interpreting the (relatively) recent Supreme Court opinion in Argus Leader, the OIP supplied the following step-by-step analysis that can have monumental impacts on whether the government will find it appropriate to publicly disclose information.

1. Does the submitter customarily keep the information private or closely-held? (This inquiry may in appropriate contexts be determined from industry practices concerning the information.)
   - If no, the information is not confidential under Exemption 4.
   - If yes, answer question 2.

2. Did the government provide an express or implied assurance of confidentiality when the information was shared with the government?
   - If no, answer question 3.
   - If yes, the information is confidential under Exemption 4 (this is the situation that was present in Argus Leader).

3. Were there express or implied indications at the time the information was submitted that the government would publicly disclose the information?
   - If no, the information is "confidential" under Exemption 4 (the government has effectively been silent – it hasn’t indicated the information would be protected or disclosed – so a submitter’s practice of keeping the information private will be sufficient to warrant confidential status).
   - If yes, and no other sufficient countervailing factors exist, the submitter could not reasonably expect confidentiality upon submission and so the information is not confidential under Exemption 4.

Notably, the closing text of the Order provides that, “[t]his order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party

25 Id. at 287-88 (quotation marks and citations omitted).
against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.”

4. Copyright

The Order directs the U.S. Copyright Office to issue recommendations to the President on potential executive actions relating to copyright and AI. As stated in the Order:

[W]ithin 270 days of the date of this order or 180 days after the United States Copyright Office of the Library of Congress publishes its forthcoming AI study that will address copyright issues raised by AI, whichever comes later, consult with the Director of the United States Copyright Office and issue recommendations to the President on potential executive actions relating to copyright and AI. The recommendations shall address any copyright and related issues discussed in the United States Copyright Office’s study, including the scope of protection for works produced using AI and the treatment of copyrighted works in AI training.

Such recommendations will likely need to tread the sometimes fine line between the domains of the Executive Branch, Congress, and the Judiciary. For example, the Order provides that the recommendations should include, e.g., “the scope of protection for works produced using AI and the treatment of copyrighted works in AI training.” These issues are already percolating through decisions by the Copyright Office and the Judiciary as well as in the guild and union actions by, e.g., SAG-AFTRA. On March 16, 2023 the Copyright Office announced an initiative to “examine the copyright law and policy issues raised by AI technology, including the scope of copyright in works generated using AI tools and the use of copyrighted materials in AI training.” The Copyright Office also issued its Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence. The Guidance statement contains, e.g., instructions on how applicants for copyright registration (or owners of already-issued registrations) should comply with the requirement that the presence of AI-generated content be properly described and, potentially, disclaimed, in the original or corrected application. In its new agreement, arrived at after a 118-day strike, SAG-AFTRA reached a number of AI-related terms with the Alliance of Motion Picture and Television Producers (“AMPTP”), including basic restrictions on the use of

27 Order Sec. 13.(c).
28 Order Sec. 5.2(c) (iii).
29 Id.
30 Id.
34 Id. at 16193-94.
digital replications of an actor’s voice or likeness.\textsuperscript{35} After its 146-day strike (the longest in Hollywood history), the Writers Guild of America (“WGA”) entered into an agreement AMPTP that provides a number of regulations for the use of AI.\textsuperscript{36}

At present, the Copyright Office does not recognize items created solely through AI (\textit{i.e.}, without sufficient human authorship) as qualifying for copyright protection.\textsuperscript{37} Moreover, there are, at present, requirements in the copyright registration process that force applicants to identify with a degree of specificity which elements of the work were created solely by application of AI – with such elements being outside the scope of copyright protection. Nonetheless, it remains to be seen whether and how the Executive Office will feel empowered to step directly into these controversies through Executive Orders. In other words, the Executive initiative to identify and address AI-related copyright issues can be either a welcome impetus to rapid consideration and development or an unwelcome overstep into matters more properly addressed by Congress, the Judiciary or in contractual arrangements among private entities.

The Executive Order notes a particular concern about how third party copyrighted works should be used, if used at all, to train AI systems. The process of “training” an AI system to produce artistic, literary or musical works typically includes loading reference images, text, or audio content into the system. This inputting has been referred to as “ingestion.” The AI system then begins to use the input to create new output. If the input includes a work copyrighted by a third party, the issue arises as to whether the act of loading that work into the system infringes third-party copyright at the point of ingestion. If the output produces mere copies or recognizably derivative works (as the term is used in copyright law), there is also a question of infringement on the “backend” of the process. Of course, there are intermediary stages where intervention in the process – such as purposely shaping the data – can cause potential infringements to occur. It is difficult, even with the most ardent efforts, to fully erase all traces of the human touch in an AI

\textsuperscript{35} Notably, with regard to the new agreement, SAG-AFTRA stated: Although there are members who took the concept of banning AI to the picket lines, it was our goal to put guardrails around AI, not wholly ban it.” See https://www.sagaftra.org/contracts-industry-resources/contracts/2023-tvtheatrical-contracts/artificial-intelligence-resources.

\textsuperscript{36} According to the WGA, the following list is a summary of AI-related regulations in the more comprehensive, and controlling, Memorandum of Agreement: (1) AI can’t write or rewrite literary material, and AI-generated material will not be considered source material under the Minimum Basic Agreement (“MBA”), meaning that AI-generated material can’t be used to undermine a writer’s credit or separated rights; (2) A writer can choose to use AI when performing writing services, if the company consents and provided that the writer follows applicable company policies, but the company can’t require the writer to use AI software (\textit{e.g.}, ChatGPT) when performing writing services; (3) The Company must disclose to the writer if any materials given to the writer have been generated by AI or incorporate AI-generated material; and (4) The WGA reserves the right to assert that exploitation of writers’ material to train AI is prohibited by MBA or other law. See https://www.wga.org/contracts/contracts/mba/summary-of-the-2023-wga-mba.

process that is directed to producing output that might be recognized as art or cognizable expression.

Regarding potential infringement at ingestion, an Authors Guild representative proposed a compulsory licensing system for AI training references.\(^{38}\) Perhaps we could look to approaches used in the music industry – chiefly in compulsory performance and recording licenses – for models to ensure that a fee is imposed when third parties’ copyrighted images, texts or other materials are fed into an AI engine as training materials.\(^{39}\) Notably, however, most compulsory licensing systems anticipate that the resulting output will bear a recognizable relationship to the licensed subject matter. In AI training, however, that is not necessarily the case. Unless we are willing to subscribe to a \textit{per se} rule under which input equals infringement, the analysis becomes more complex. For example, while Jean Michel Basquiat’s painting \textit{Crown Hotel (Mona Lisa Black Background)} contains visual cites to or evocations of prior works, especially Leonardo da Vinci’s \textit{Mona Lisa} and Edouard Manet’s \textit{Olympia}, the resulting Basquiat painting is very substantially different from the inspiration or “input” pieces. Cast in the AI context, the question would then become whether the training set is best viewed as the socially-beneficial machine equivalent of an artist’s memory of sources and inspirations or (in the case of third party copyrighted works) an unauthorized “pirated” library of third party works – the product being output that may, to some degree, compete with the copyrighted works that were ingested by the system. There are alternative views that may turn on the specific facts of a particular case, but the fundamental issue of whether ingestion can, by itself, constitute infringement is critical.

In the publishing industry (at least in its well-established components) AI is disruptive in both a positive and negative sense. For example, AI is now used to generate news reports that simply aggregate and repurpose verbiage on similar situations to generate new reports. Other writers, including novelists and poets are using AI in the manner reminiscent of William Burroughs’ “cut up” techniques or Brian Eno’s generative techniques to create interesting and inspiring insights into possible textual or image formations that would not have otherwise occurred to the “author.”\(^{40}\) Also, now that individual authors have heightened independent access to Internet publishing and marketing channels, the opportunity for unauthorized literary text collaging arises. An extreme example of this is the practice of stitching together passages from a number of successful novels – with or without substantial new content – to create “new” and competitive works.\(^{41}\) This is a

\(^{38}\) Statement of Mary Rasenberger, Executive Director, the Authors Guild and Authors Guild Foundation, \textit{Copyright in the Age of Artificial Intelligence} (Co-Sponsored by the United States Copyright Office and the World Intellectual Property Organization, Feb. 5, 2020, \url{https://www.copyright.gov/events/artificial-intelligence/} last visited April 7, 2023); Transcript at pp. 167-168.


\(^{40}\) For a good description and some excellent examples of AI-assisted literary techniques, see Statement of Jason Boog, West Coast Correspondent for Publishers Weekly, \textit{Copyright in the Age of Artificial Intelligence} (Co-Sponsored by the United States Copyright Office and the World Intellectual Property Organization, Feb. 5, 2020, \url{https://www.copyright.gov/events/artificial-intelligence/} (last visited April 7, 2023); Transcript at pp. 149-157.

\(^{41}\) See Statement of Mary Rasenberger, Executive Director, the Authors Guild and Authors Guild Foundation, \textit{Copyright in the Age of Artificial Intelligence} (Co-Sponsored by the United States Copyright Office and the World Intellectual Property Organization, Feb. 5, 2020, \url{https://www.copyright.gov/events/artificial-intelligence/} (last visited April 7, 2023); Transcript at pp.164-166.
concern under established copyright principles, but the question intensifies in the AI context as the
ability to “scrape” sources and distribute the results is heightened. The question, again, is whether
the infringement analysis should begin at the front end of the process (the training input), the
backend of the process (the resulting text), or both.

If we choose to locate a point of infringement analysis at the front end of the system, the question
arises as to whether we are abiding by the underlying purpose of the copyright system to promote
progress. There is, at least, an administrative convenience factor in the “input equals infringement”
approach. It also opens up potential new income streams for the creators whose works are used as
inputs. However, if the resulting work is not a derivative work or is a fair use or de minimis use
under established copyright law, are we going too far?

In general, we can expect AI system licensors and end-users to bristle at the suggestion that they
need a license to gather and process third party works beyond recognition or in an arguably de minimis or fair use manner. Some may point to Authors Guild v. Google, Inc., a case in which
the court held that Google’s digitization of entire books to facilitate indexing and third party
searches was a transformative fair use—although application of this case to an AI process that is
intended to create separate stand-alone (perhaps competitive) works instead of an indexing system
is not a perfect fit. It is notable, however, that precedent from the graphic arts (as opposed to music
sampling) has moved toward a more liberal fair use approach where the end result is
transformative.

In order to promote innovation, the Order specifically requires that, within 270 days of the date of
the Order or 180 days after the United States Copyright Office of the Library of Congress publishes
its forthcoming AI study that will address copyright issues raised by AI, whichever comes later,
the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent
and Trademark Office (USPTO Director) shall consult with the Director of the United States
Copyright Office and issue recommendations to the President on potential executive actions
relating to copyright and AI. The Order requires that “the recommendations shall address any
copyright and related issues discussed in the United States Copyright Office’s study, including the
scope of protection for works produced using AI and the treatment of copyrighted works in AI
training.” The key issues will include: (1) whether an AI system can be considered an “author”;
(2) whether and how copyright claimants will be required to identify AI generated features of the
claimed works; and (3) whether it is fair use or otherwise permissible to use unlicensed third-party
copyrighted works to train AI systems. Of course, the above-listed general issues can be more
finely parsed, and the answers or recommendations may vary depending on the specific context in

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42 804 F.3d 202 (2nd Cir. 2015), cert. den’d 136 S.Ct. 1658 (2016); see also, Authors Guild, Inc. v. Hathitrust, 755 F.3d
87 (2nd Cir. 2014).
43 See e.g., Cariou v. Prince, 714 F.3d 694 (2nd Cir. 2013), cert. den’d 134 S.Ct. 618 (2013); Seltzer v. Green Day,
Inc., 725 F.3d 1170 (9th Cir. 2013); see also, Rinkerman, Sampling Unleashed? Migrating Visual Art Fair Use
44 Order, Sec. 5.2(c)(iii).
45 Id.
46 See, e.g., Gary Rinkerman, Artificial Intelligence and Evolving Issues Under U.S. Copyright and Patent Law,
which the issue is raised. For example, regarding training sets, more latitude might be given where the third-party work is of a factual nature—such as a document on pharmacological properties and effects—as opposed to situations where the third party work is fiction, fanciful art, or musical compositions. The depth and utility of the recommendations submitted under the Order remains to be seen.

The Order recognizes the growing generation and use of “synthetic content” in expressive content, such as images, videos, audio clips, and text. As defined in the Order, “synthetic content” means information, such as images, videos, audio clips, and text, that has been significantly modified or generated by algorithms, including by AI. The core concern in this context is to reduce the risks posed by synthetic content, such as misrepresentation of the provenance or authenticity of the work. The general approach is to identify and assess “science-backed standards and techniques” for: (1) authenticating content and tracking its provenance; (2) labeling synthetic content, such as using watermarking; (3) detecting synthetic content; (4) preventing generative AI from producing child sexual abuse material or producing non-consensual intimate imagery of real individuals (to include intimate digital depictions of the body or body parts of an identifiable individual); (5) testing software used for the foregoing purposes; and (6) auditing and maintaining synthetic content. A key goal—which will also likely provide guidance to private industries—is strengthening public confidence in the integrity of official United States Government digital content by issuing guidance to federal agencies for labeling and authenticating such content that they produce or publish. A corollary will be a potential amendment of the Federal Acquisition Regulation to take into account the guidance for labeling and authenticating digital content offered for federal acquisition. In short, the aim is to ensure transparency in the content-generation process so that origin and accountability can be better assessed.

Authorship identification and control are also serious issues in private industries that produce digital content or expressive works generated in whole or part by AI or other digital means. This can be seen in the copyright battles over digital techniques for music composition, performance, and sampling to the recent pushback against AI generated content by the Screen Actors Guild and the Writers Guild. Rights of publicity and privacy are also implicated by the Order’s concern

47 Order, Sec. 3 (ee).
48 As stated in the Order, the goals are “[t]o foster capabilities for identifying and labeling synthetic content produced by AI systems, and to establish the authenticity and provenance of digital content, both synthetic and not synthetic, produced by the Federal Government or on its behalf.” Order, Sec. 4.5, Introductory Statement.
49 As defined in the Order, “watermarking” means the act of embedding information, which is typically difficult to remove, into outputs created by AI—including into outputs such as photos, videos, audio clips, or text—for the purposes of verifying the authenticity of the output or the identity or characteristics of its provenance, modifications, or conveyance. Order Sec. 3, (gg).
50 Order, Sec. 4.5(a)(i)-(vi).
51 Order Sec. 4.5(c).
52 Order Sec. 4.5(d).
54 Generally speaking, the right of publicity is the state-law-based right of an individual to control or forbid the use of his or her image or other identifying features in the context of third party advertising or packaging of goods. In other words, the right is premised on a concern that third parties will appropriate without authorization identifying features of a particular individual to advertise or add an identity-based element to the third party’s products or services. The
for potential abuses in the production of non-consensual intimate imagery of real individuals.\textsuperscript{55} These aspects of the Order can raise potential concern for ensuring that First Amendment and fair use rights are not discouraged or unduly burdened by federal “guidance” on the matter. Nonetheless, the use of labeling to correctly identify AI’s role in creation of particular content is an important initiative in addressing authenticity issues in a wide range of artistic, literary, audiovisual contexts.\textsuperscript{56} The first step in this process was (arguably) taken long ago under the Digital Millenium Copyright Act of 1998 (DMCA). Under the current version of the DMCA it is a violation of copyright to knowingly remove, falsify or alter any copyright management information (CMI).\textsuperscript{57} CMI can include the title of the copyrighted work, the name(s) of the author(s), and the name(s) of the owner(s) of the copyright.\textsuperscript{58} The statute contains the following more lengthy and particularized definition of CMI:

The term “copyright management information” means any of the following information conveyed in connection with copies or phonorecords of a work or performances or displays of a work, including in digital form, except that such term does not include any personally identifying information about a user of a work or of a copy, phonorecord, performance, or display of a work:

1. The title and other information identifying the work, including the information set forth on a notice of copyright.
2. The name of, and other identifying information about, the author of a work.
3. The name of, and other identifying information about, the copyright owner of the work, including the information set forth in a notice of copyright.
4. With the exception of public performances of works by radio and television broadcast stations, the name of, and other identifying information about, a performer whose performance is fixed in a work other than an audiovisual work.
5. With the exception of public performances of works by radio and television broadcast stations, in the case of an audiovisual work, the name of, and other identifying information about, a writer, performer, or director who is credited in the audiovisual work.
6. Terms and conditions for use of the work.
7. Identifying numbers or symbols referring to such information or links to such information.

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\textsuperscript{55} Order Sec. 3,
\textsuperscript{57} 17 U.S.C. §1202 (b)-(c).
\textsuperscript{58} Id.
(8) Such other information as the Register of Copyrights may prescribe by regulation, except that the Register of Copyrights may not require the provision of any information concerning the user of a copyrighted work.\textsuperscript{59}

Identification of AI contribution or purported authorship – whether legally mandated or not – will be readily and logically adapted into the definition of CMI and into the proscriptions in other laws against misrepresentation of origin or authorship. For example, a misleading representation about AI involvement or non-involvement in the creation of a particular work can trigger application of federal and state laws against fraud, false advertising and unfair competition. The Order’s requirement that recommendations for potential executive orders in these areas will likely be best confined to the recommended generation of studies to provide legislative and judicial guidance on them.

An additional important proviso is the statute’s anticipation of CMI alteration or removal for legitimate federal or state investigative purposes. Therefore, the statute provides that: “This section does not prohibit any lawfully authorized investigative, protective, information security, or intelligence activity of an officer, agent, or employee of the United States, a State, or a political subdivision of a State, or a person acting pursuant to a contract with the United States, a State, or a political subdivision of a State.”\textsuperscript{60} As used in the statute, “information security” means activities carried out in order to identify and address the vulnerabilities of a government computer, computer system, or computer network.\textsuperscript{61} Therefore, the pertinent provisions of the DMCA dovetail nicely with the Order’s signaling that AI attribution is among the mechanisms being considered to avoid false and misleading communications about whether or not AI played a role in generating the content.

Also, the inclusion of Open Source materials in a particular AI-related work will have potential impacts on, e.g., how authorship of the work is determined, and the collection of such information under the Order will necessarily have to include considerations about, e.g., publication and proper notice. An evaluation of the various Open Source licenses and their potential impacts on innovations would also be a welcome area of focus. For example, the open source initiative\textsuperscript{®} (OSI) has published a searchable list of dozens of open source licenses, and a survey of their terms will reveal that there are (sometimes critical) variations and even ambiguities in some of the licenses.\textsuperscript{62}

5. Patents

To promote innovation and clarify issues related to AI and inventorship of patentable subject matter, the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (USPTO Director) shall:

\textsuperscript{59} Id. at (c) Definition.
\textsuperscript{60} Id. at (d) Law Enforcement, Intelligence, and Other Government Activities.
\textsuperscript{61} Id.
\textsuperscript{62} See https://opensource.org/licenses/ (last visited Dec. 4, 2023).
(i) within 120 days of the date of this order, publish guidance to USPTO patent examiners and applicants addressing inventorship and the use of AI, including generative AI, in the inventive process, including illustrative examples in which AI systems play different roles in inventive processes and how, in each example, inventorship issues ought to be analyzed; and

(ii) subsequently, within 270 days of the date of this order, issue additional guidance to USPTO patent examiners and applicants to address other considerations at the intersection of AI and IP, which could include, as the USPTO Director deems necessary, updated guidance on patent eligibility to address innovation in AI and critical and emerging technologies.63

Regarding patent matters, the Executive Order is not operating in a vacuum. On July 29, 2019 the United States Patent and Trademark Office (“the PTO”) received two patent applications listing a “creativity machine” called DABUS (a/k/a “Device and Method for the Autonomous Bootstrapping of Unified Sentience”)64 as the sole inventor with regard to each of the applications. The assignee of the DABUS applications is identified as (the now familiar) Stephen L. Thaler,65 although Thaler conceded in further filings at the PTO that “[i]t is accepted that an AI system such as DABUS cannot, under current law, own property.”66 The PTO responded by issuing a Notice to File Missing Parts of Nonprovisional Application because, in the PTO’s view, Thaler needed to supply an identification of the human being or human beings who invented the claimed subject matter. In essence, the PTO determined in its Thaler opinion that the U.S. patent statute does not permit the listing of a non-human entity as an inventor.67

In addition to simply interpreting the statute in the PTO’s final rejection of applicant Thaler’s arguments, the PTO cited a number of cases, including Univ. of Utah v. Max-Planck-Gesellschaft zur Forderung der Wissenschafen68; Burroughs Welcome Co. v. Barr Labs, Inc.;69 and Beech Aircraft Corp. v. EDO Corp.70 for the proposition that only natural persons can be inventors. According to the PTO, “[w]hile these Federal Circuit decisions are in the context of states and corporations, respectively, the discussion of conception as being a “formation in the mind of the inventor” and a “mental act” is equally applicable to machines and indicates that conception – the touchstone of inventorship – must be performed by a natural person.”71 Notably, in response to

63 Order, Sec. 5.2(c)(i)-(ii).
64 A description of DABUS can be found in U.S. Patent Publication No. 2015/0379394 A1, published Dec. 31, 2015. According to the abstract: “A system for monitoring an environment may include an input device for monitoring and capturing pattern-based states of a model of the environment. The system may also include a 5 thalamobot embodied in at least a first processor, in which the first processor is in communication with the input device. The thalamobot may include at least one filter for monitoring captured data from the input device and for identifying at least one state change within the captured data. The system may also include at least one critic and/or at least one recognition system.”
65 See In Re Application of Application No.: 16/524,350, Decision On Petition For Reconsideration, p. 2, n. 2.
66 Id. at p. 2, n.2.
67 Id. at p. 4.
68 734 F.3d 1315 (Fed. Cir. 2013).
69 40 F.3d 1223, 1227-28 (Fed. Cir. 1994).
70 990 F.2d 1237, 1248 (Fed. Cir. 1993).
71 Id. at p. 5.
Thaler’s argument that the PTO recognized the capabilities of DABUS in patents relating to the DABUS machine, the PTO stated that:

The granting of a patent under 35 U.S.C. § 151 for an invention that covers a machine does not mean that the patent statutes provide for that machine to be listed as an inventor in another patent application – any more than a patent on a camera allows the camera [to] hold a copyright.72

Thaler then brought an unsuccessful action under the Administrative Procedures Act in the U.S. District Court for the Eastern District of Virginia in which Thaler sought summary judgment compelling the PTO to reinstate and process the two applications, based on a determination that “a patent application for an AI-generated invention should not be rejected on the basis that no natural person is identified as an inventor” and “a patent application for an AI-generated invention should list AI where the AI has met inventorship criteria.”73 On appeal the U.S. Court of Appeals for the Federal Circuit succinctly phased its perception of the controlling issue:

This case presents the question of who, or what, can be an inventor. Specifically, we are asked to decide if an artificial intelligence (AI) software system can be listed as the inventor on a patent application. At first, it might seem that resolving this issue would involve an abstract inquiry into the nature of invention or the rights, if any, of AI systems. In fact, however, we do not need to ponder these metaphysical matters. Instead, our task begins – and ends – with consideration of the applicable definition in the relevant statute.74

The court then noted that “the Patent Act expressly provides that inventors are ‘individuals,’” although the “Act does not define the term ‘individual.’”75 Nonetheless, the Court noted that the Act’s use of personal pronouns, i.e., “himself” and “herself” rather than “itself,” supports the proposition that the Act uses “individual” in its accepted, general sense to mean a human being. Also, the Court cited Supreme Court precedent that “‘[a]s a noun, ‘individual’ ordinarily means a human being, a person” as well as common dictionary definitions of the term “individual.”76 Notably, in response to Thaler’s argument that the use of “whoever” in the statute can include non-human entities, such as corporations that infringe patents, the Court stated: “That non-humans may infringe patents does not tell us anything about whether non-humans may also be inventors of patents.”77 In short, the Court found that the plain meaning of the Patent Act requires that an inventor must be a human being, not a machine.

72 Id. at p. 7.
74 Thaler v. Vidal, 43 F.4th 1207 (Fed. Cir. 2022), petition for cert. filed, No. 22-919 (March 21, 2023).
75 Id. at 1211.
76 Id., citing Mohamad v. Palestinian Auth., 566 U.S. 449 (2012) and, e.g., Individual, Oxford English Dictionary (2022) (giving first definition of “individual” as “[a] single human being”); Individual, Dictionary.com (last visited April 7, 2023); https://www.dictionary.com/browse/individual (giving “a single human being, as distinguished from a group” as first definition for “individual”).
77 Id. at 1212.
The interface of U.S. patent law and AI is not, however, limited to critical issues of inventorship. Recently, for example, there has been concern that the use of an on-line AI tool to assist in the drafting of a patent application can cause an inadvertent publication that triggers the “countdown” to the U.S. bar date for filing the application. Depending on the terms of use that apply to the tool, including potential publication of the user’s input, there can be a risk of unintended disclosure.

6. AI-Related IP Risks

In addition to, or as part of, the Order’s concern for ensuring that the U.S. secures and maintains a leadership role in the development and international control of AI technologies and applications, the Order seeks information, recommendations and actions on “IP-related AI risks.” Among the likely concerns underlying this focus are the accusations that certain countries, including, e.g., China, are using AI to facilitate industrial and military espionage at an unprecedented rate. Therefore, it is not a surprise that the Order requires that:

Within 180 days of the date of this order, to assist developers of AI in combatting AI-related IP risks, the Secretary of Homeland Security, acting through the Director of the National Intellectual Property Rights Coordination Center, and in consultation with the Attorney General, shall develop a training, analysis, and evaluation program to mitigate AI-related IP risks. Such a program shall:

(i) include appropriate personnel dedicated to collecting and analyzing reports of AI-related IP theft, investigating such incidents with specifications for national security, and, where appropriate and consistent with applicable law, pursuing related enforcement actions;

(ii) implement a policy of sharing information and coordinating on such work, as appropriate and consistent with applicable law, with the Federal Bureau of Investigation; United States Customs and Border Protection; other agencies; State and local agencies; and appropriate international organizations, including through work-sharing agreements;

(iii) develop guidance and other appropriate resources to assist private sector actors with mitigating the risks of AI-related IP theft;

(iv) share information and best practices with AI developers and law enforcement personnel to identify incidents, inform stakeholders of current legal requirements, and evaluate AI systems for IP law violations, as well as develop mitigation strategies and resources; and

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78 See Ryan Davies, The Perils And Promise Of ChatGPT As A Patent Drafting Aid, IP Law 360 (March 17, 2023).
(v) assist the Intellectual Property Enforcement Coordinator in updating the Intellectual Property Enforcement Coordinator Joint Strategic Plan on Intellectual Property Enforcement to address AI-related issues.

One of the more interesting provisions appears in subsection (iv) and includes the directive to facilitate efforts to “evaluate AI systems for IP law violations.” This provision is a bit “murky,” but it appears to contemplate that there will be increased government-facilitated efforts to identify civil as well as criminal violations of intellectual property in selected (e.g., targeted) AI systems. From an IP perspective, this provision, and its potential implementation, deserves special attention. It can have great utility to U.S. companies who may be overwhelmed by what appears to be unprecedented levels of industrial espionage and IP theft. On the other hand, if used as a political weapon against selected companies or as a means of “over-harvesting” important trade secret information, this supposed enforcement power can be seriously abused.

7. Conclusion

The October 30, 2023 Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (the Order) is a sweeping and aggressive blueprint for advancing U.S. government awareness and control of technologies, applications, and policies that relate to Artificial Intelligence. While the Order can be viewed as a welcome, perhaps overdue, attempt to fashion a coordinated federal policy and plan of action on AI, there may also be a concern that overreach and politically-driven “perspectives” can affect the formation of government policies, subsidies, information-sharing, and enforcement actions regarding IP in the AI context. In essence, the Order is an invitation for participants in AI industries, legislators, State officials, members of academia, and private citizens to have input into, and to scrutinize, AI-related deliberations in the Executive Branch of the U.S. government. The economic and social consequences of these developments can be enormous. Things are moving quickly – especially as regards AI – and we need to move quickly to monitor and ensure that the actions of the Executive Branch are properly based and work within the Legislative-Executive-Judicial framework of the U.S. government as well as within current U.S. treaty obligations.