

# INTELLECTUAL INFIDELITY: THE UNITED STATES, INTELLECTUAL PROPERTY LAW, AND THALER V. IANCU

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## INTRODUCTION

The earliest origin of current patent law, and moreover intellectual property law itself, dates to the Venetian Patent Statute of 1474. “The statute provided that patents might be granted for ‘any new and ingenious device, not previously made’, provided it was useful.”<sup>1</sup> We find here an underlying and recurrent theme that dates to the present day. Works must be new and original, not copied. Yet, we should also note that the earliest origin of patent law speaks nothing to the effect of inventors (or authors), and only speaks of the inventions (or works) themselves.

As time passes, societies and civilizations develop, and their laws evolve. Yet the underlying frameworks upon which changes and claimed improvements can be based upon cannot similarly change as time marches on. The underlying framework must remain the same.

Therefore, the framework of copyright and patent laws in the United States (U.S.) and the United Kingdom (U.K.) are dependent, at least to some extent, upon their predecessors in time, including the Venetian Statute of 1474. They must be, in part, based upon preexisting legal frameworks, and yet also impart changes to or include departures from those preexisting frameworks. Evaluating the American Constitution, specifically Article 1, Section 8, Clause 8, indicates this balance.<sup>2</sup> The underlying theme from previous law is clearly present, and yet the U.S. Constitution also shows a departure from its prior historical basis.<sup>3</sup> Evaluating the United Kingdom’s intellectual property (IP) law framework indicates a similar balance.<sup>4</sup> The U.S. and U.K. frameworks, even from their earliest iterations, show a straddled stance, with a single foot in the past and with a step toward the future.

Yet even the improvements present in the U.S. and U.K. IP law frameworks are not fully protective of all developments and changes

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1. Joanna Kostylo, *Commentary on the Venetian Statute of 1474* (2008), available at [http://www.copyrighthistory.org/cam/commentary/i\\_1474/i\\_1474\\_com\\_288200795317.htm](http://www.copyrighthistory.org/cam/commentary/i_1474/i_1474_com_288200795317.htm) 1 (last visited Mar. 20, 2021).

2. U.S. CONST. art. I, § 8, cl. 8 [hereinafter *Intellectual Property Clause*].

3. See generally *id.*

4. See, e.g., the changes between the *Licensing of the Press Act of 1662*, 14 Car. II c. 33 (Eng.); and, *The Copyright, Designs and Patents Act of 1988*, c. 48 (Eng.).

since the creation of those prior laws. Both the U.S. and U.K. frameworks speak of “authors” and “inventors” as individuals.<sup>5</sup> Both frameworks inherently assume that human beings are those responsible for any creative invention or work of authorship.<sup>6</sup> This assumption in U.S. law thus extends IP law protections only to those inventions and works of authorship created by human beings.<sup>7</sup> U.K. law, meanwhile and despite this assumption, extends IP law protections to individuals, regardless of the de facto “author” or “inventor” of the work of authorship or invention.<sup>8</sup> In other words, while the United States only allows IP law protections to be extended to individuals who themselves created a work of authorship or invention, British law allows IP law protections to be extended to individuals who are responsible for the creation of an AI system which itself was subsequently responsible for the creation of a work of authorship or invention.<sup>9</sup>

The practice of U.S. law is thus in direct contrast to U.K. law, and its effect on subsequent extension of IP law protections has been shown to be clearly erroneous in recent decades. Technological innovation and developments have made it possible for machines and computers to mimic, and in some cases even themselves exhibit, the human qualities and characteristics necessary for creation.<sup>10</sup> Artificial Intelligence (AI) systems are particularly indicative of such advancements.<sup>11</sup> AI systems now have the otherwise requisite capabilities to create works of authorship or inventions which would otherwise qualify for U.S. IP law’s coveted protections. While U.K. law reflects these technological advancements, U.S. law lags behind its counterpart across the pond.

Even further in favor of updating U.S. law, historical precedent dating back as far as the Venetian Statute of 1474 indicates that the public policy interests and incentives underlying the then-IP law framework were not dependent whatsoever on a human author or inventor

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5. See, e.g., *Intellectual Property Clause*, *supra* note 2; *The Copyright, Designs and Patents Act of 1988*, *supra* note 4.

6. *Id.*

7. *Thaler v. Iancu*, 1:20-CV-00903 (E.D. Va. filed Sept. 2, 2021) [hereinafter *Thaler v. Iancu*].

8. *The Copyright, Designs and Patents Act of 1988*, *supra* note 4.

9. In the United States, see, e.g., *Copyright Act of 1976*, 17 U.S.C. § 101; and, *Patent Act of 1952*, 35 U.S.C. § 100, 101. In the United Kingdom, see, e.g., *The Copyright, Designs and Patents Act of 1988*, *supra* note 4, at ch. 1, § 9(3).

10. Jake Frankenfield, *Artificial Intelligence (AI)*, INVESTOPEDIA (Mar. 8, 2021), available at <https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp#:~:text=Artificial%20intelligence%20is%20based%20on,includ%20mimicking%20human%20cognitive%20activity> (last visited Mar. 7, 2022).

11. *Thaler v. Iancu*, *supra* note 7.

requirement.<sup>12</sup> Instead, the underlying interest was that of providing incentive to inventors and authors for future creation and invention, all through the extension of legal protections.<sup>13</sup> This incentive, under the current U.S. framework, does not extend to creative works and inventions created by AI systems, or for that matter any non-human author or inventor.

It is therefore the argument of this Note that the current framework of copyright and patent law in the United States is simply imprudent. Its requirement of human authorship or creation for “works of authorship” or “inventions” is outdated and inconsistent with public policy interests and the incentives normally provided to authors and inventors under preexisting IP law. Revision to the U.S. framework, bringing it in line with the British legal framework and with the historical public policy interests and incentives long underlying IP law protections, is the appropriate path forward. The United States should spearhead a global approach, as has been shown with previous cohesive efforts in other areas (for example, the Berne Convention). *Thaler v. Iancu*, a recently decided case in the U.S. District Court for the Eastern District of Virginia currently pending appeal, provides the perfect opportunity for the U.S. to seize the moment, rise to the occasion, and begin a global march toward a smarter and more logical IP law framework.<sup>14</sup>

In *Thaler v. Iancu*, Mr. Stephen Thaler sued Mr. Andrei Iancu, in Mr. Iancu’s position as under Secretary of Commerce for Intellectual Property and as Director of the United States Patent and Trademark Office under the Trump Administration.<sup>15</sup> Mr. Iancu has since left office, upon the transfer of power from the Trump Administration to the then-incoming Biden Administration.<sup>16</sup> However, the underlying facts behind this case remain the same, and are this: Mr. Thaler is the creator/inventor of an AI system known as “DABUS.”<sup>17</sup> “DABUS” itself, through its own doing and using its AI capacities and abilities, created material and

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12. Kostylo, *supra* note 1.

13. See, e.g., *Intellectual Property Clause*, *supra* note 2.

14. *Thaler v. Iancu*, *supra* note 7.

15. *Id.*

16. Scott Graham, *Andrei Iancu Formally Bids Farewell to USPTO*, LAW.COM (Jan. 19, 2021, 4:24 PM), available at <https://www.law.com/nationallawjournal/2021/01/19/andrei-iancu-formally-bids-farewell-to-uspto/?sreturn=20210221181003#:~:text=U.S.%20Patent%20and%20Trademark%20Office%20Director%20Andrei%20Iancu%20has%20made,administration%20transitions%20to%20Joe%20Biden.&text=He%20then%20concluded%20from%20a,team%20in%20the%201936%20Olympics> (last visited Mar. 4, 2022).

17. *Thaler v. Iancu*, *supra* note 7.

subject matter which was then submitted by Mr. Thaler to the U.S. Patent and Trademark Office (USPTO).<sup>18</sup> Importantly, “these applications named DABUS as the inventor and Plaintiff [Mr. Thaler] as the applicant and prospective owner of any granted patents.”<sup>19</sup> As a result, “[d]efendants, in a final agency action, denied both patent applications on the basis that they failed to disclose a natural person who invented the subject matter of the applications.”<sup>20</sup> It is thus argued by Mr. Thaler, and is the main issue in this lawsuit, that “[t]he Rejections create a novel substantive requirement for patentability that is contrary to existing law and at odds with the policy underlying the patent system.”<sup>21</sup> Further, Mr. Thaler claims that “[d]efendants’ position is anti-intellectual property and anti-business, and it puts American businesses at an international disadvantage compared to businesses in jurisdictions that will choose to grant patents on AI-generated inventions.”<sup>22</sup>

Given the argument already set forth, this Note will proceed with further detail in three parts. Part I, entitled “The Current Framework: U.S. and U.K. Intellectual Property Law,” shall be divided into three subsections. Subsection A will discuss the current framework and state of American and British copyright law. In doing so, we will examine relevant sections and provisions of the American *Copyright Act of 1976*, as well as the British *Copyright, Designs and Patents Act of 1988*. Subsection B will discuss, in similar fashion to Subsection A, the current framework and state of American and British patent law. In so doing, we will evaluate the American *Patent Act of 1952*, and again look to the catch-all British *Copyright, Designs and Patents Act of 1988*. Proceeding then to summarize our findings from subsections A and B, and drawing pertinent conclusions therefrom, Subsection C will seek to determine whether either U.S. or U.K. Intellectual Property law provides protection to the works of authorship or inventions created by AI systems.

Part II will then seek to answer what is perhaps the fundamental question belying this piece: should U.S. and U.K. law afford IP law protections to works of authorship and inventions created by AI systems? This question must be answered first without bias or partisanship. Rather, we must seek to initially answer it on a hypothetical basis, irrespective of whether the current legal frameworks already so provide. Within, this Note evaluates the strengths and weaknesses of both possible scenarios.

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18. *Id.*

19. *Id.*

20. *Id.*

21. *Id.*

22. *Id.*

In concluding Part II, this Note will then return to the current state of affairs, as first discussed in Part I, Subsection C, above, to find that while both U.S. and U.K. law should provide IP law protections to works of authorship and inventions created by AI systems, only U.K. law currently does.

Given that U.S. law should, as is the opinion of this Note, align itself with the position of U.K. law with respect to this topic, Part III will provide recommendations for the U.S. moving forward. Part III will specifically highlight the opportunity provided by *Thaler v. Iancu*, a pending Federal appeal already generally discussed. Furthermore, Part III will also discuss the benefits of the U.S. taking a global approach to its own changes to its legal framework, and as a result will only enhance and reiterate the reasoning and logic behind making such changes to U.S. law.

## **PART I: THE CURRENT FRAMEWORK: U.S. AND U.K. INTELLECTUAL PROPERTY LAW**

Allow us, then, to start at the beginning. As previously noted above, it is the argument and purpose of this Note to show that current U.S. IP law does not protect inventions or works of authorship created by AI systems, and in so doing demonstrate why and how such protection should be afforded. Let us first, however, give a full picture of current U.S. and U.K. IP law for works of authorship (via copyright law) and inventions (via patent law).

### **A. American and British Copyright Law**

#### **U.S. COPYRIGHT LAW**

All American Intellectual Property law is premised on the Intellectual Property Clause of the U.S. Constitution (namely, Article 1, Section 8, Clause 8). The Intellectual Property Clause states that the Congress of the U.S. shall have the power “To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”<sup>23</sup>

Subsequent legislation has been since passed by the U.S. Congress, which is more directly applicable to copyright law and its extended protections. Currently, the relevant law is the *Copyright Act of 1976*. Among its multitude of provisions, the most relevant for our purposes is Section 102. Entitled “Subject matter of copyright: In general,” it states

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23. *Intellectual Property Clause, supra* note 2.

in relevant part that “(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”<sup>24</sup> Furthermore, it notes that:

“(a) [W]orks of authorship shall include the following categories: (1) literary works; (2) musical works, including any accompanying works; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.”<sup>25</sup>

More succinctly, to qualify for copyright law protections, a human author must produce an “original work of authorship” which is to be “fixed in any tangible medium of expression,” and which falls under at least one of the eight provided categories in Section 102(b).<sup>26</sup> The protections afforded by U.S. copyright law are more fully outlined in other sections within the *Copyright Act*, including Sections 106 and 107. It should be specifically noted, however, that there is no definition of “author” provided in Section 101 of the *Copyright Act of 1976*, which provides “Definitions.”<sup>27</sup> Despite providing definitions for innumerable other terms, no definition of “author” is offered.<sup>28</sup>

So, then, how do we know that U.S. copyright law requires a human author? Well, relevant case law on the subject is determinative. In *Naruto v. Slater*, the 9<sup>th</sup> Circuit U.S. Court of Appeals sought to “determine whether a monkey may sue humans, corporations, and companies for damages and injunctive relief arising from claims of copyright infringement.”<sup>29</sup> In finding against “Naruto” (the non-human, animal, monkey), the Court noted that “we conclude that this monkey—and all animals, since they are not human—lacks statutory standing under the Copyright Act.”<sup>30</sup> For further discussion of why non-human authors are ineligible for copyright protection, look no further than *Kelley v. Chicago Park District*.<sup>31</sup> In *Kelley*, the 7<sup>th</sup> Circuit U.S. Court of Appeals was faced with a naturally growing garden, rather than an animal monkey

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24. Copyright Act of 1976, *supra* note 9, at § 102(a).

25. *Id.*

26. *Id.* at § 102.

27. *Id.* at § 101.

28. *Id.*

29. *Naruto v. Slater*, 888 F.3d 418, 420 (9<sup>th</sup> Cir. 2018).

30. *Id.*

31. *Kelley v. Chicago Park District*, 635 F.3d 290 (7<sup>th</sup> Cir. 2011).

as in *Naruto v. Slater*.<sup>32</sup> In ruling against finding copyright protection for the naturally growing garden, the 7<sup>th</sup> Circuit noted “[t]he real impediment to copyright here is not that Wildflower Works fails the test for originality (understood as ‘not copied’ and ‘possessing some creativity’), but that a living garden lacks the kind of authorship and stable fixation normally required to support copyright.”<sup>33</sup> The Court later stated “[a]uthors of copyrightable works must be human; works owing their form to the forces of nature cannot be copyrighted.”<sup>34</sup> It is thus undoubtedly clear from these sources, and the aforementioned above, that U.S. copyright law requires human authorship for the extension of its protections.

### U.K. COPYRIGHT LAW

In the United Kingdom, the relevant statute for copyright law and the protections offered by it is the *Copyright, Designs and Patents Act of 1988*.<sup>35</sup> Under Part I, Chapter I, Section 1, entitled “Copyright and copyright works”, the statute states “(a) Copyright is a property right which subsists in accordance with this Part in the following descriptions of work—(a) original literary, dramatic, musical or artistic works, (b) sound recordings, films [or broadcasts], and (c) the typographical arrangement of published editions.”<sup>36</sup> Subsequent sections provide for additional categories for the copyrighting of works, with Section 4, for example, providing for “Artistic works”, and Section 7 providing for “Cable programmes”.<sup>37</sup>

Furthermore, in Part I, Chapter I, Section 9, entitled “Authorship of work”, the statute provides that:

“(1) In this Part ‘author’, in relation to a work, means the person who creates it... (3) In the case of a literary, dramatic, musical, or artistic work, which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken.”<sup>38</sup>

All protections granted through copyrighting a work of authorship are provided for in other areas throughout the Statute, including Part I, Chapter I, Section 2<sup>39</sup> and Part I, Chapter II (entitled “Rights of Copyright

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32. *Id.* at 290.

33. *Id.* at 303.

34. *Id.*

35. The Copyright, Designs and Patents Act of 1988, *supra* note 4.

36. *Id.*, at ch. 1, § 1.

37. *Id.*, at ch. 1.

38. *Id.*, at ch. 1, § 9.

39. *Id.*, at ch. 1, § 2.

Owner”).<sup>40</sup> Thus, as a direct result of the provision found in Part I, Chapter I, Section 9, subsection 3, U.K. law does not require human creation for the extension of IP law protections. Instead, the IP law protections extend to the human individual responsible for the creation of the AI or other computerized system or machine.<sup>41</sup> In other words, take the example found in *Thaler v. Iancu*, first discussed above.<sup>42</sup> Suppose that, instead of living in the United States, Mr. Thaler was a resident of the United Kingdom. Assume further the same set of facts, namely that Mr. Thaler created his “DABUS” AI system, which then created work otherwise protectable under IP law. Were this to be the case, and Mr. Thaler had created “DABUS” with its own subsequent creations thereafter, under U.K. law, these subsequent creations by “DABUS” would be protectable by Mr. Thaler, who would be assigned the honorary title of “author” or “inventor” of such creations.

## B. American and British Patent Law

### U.S. PATENT LAW

As noted above, all American Intellectual Property law is based within the bounds of the Intellectual Property Clause of the U.S. Constitution (Article 1, Section 8, Clause 8).<sup>43</sup> Again, it states that Congress shall have the power “To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”<sup>44</sup>

In the United States, more applicably to patent law, the relevant federal statute is the *Patent Act of 1952*.<sup>45</sup> Section 101 of the Patent Act, entitled “Inventions patentable”, states that “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”<sup>46</sup> Sections 102 and 103, entitled “Novelty” and “Non-obvious subject-matter”, respectively, provide additional requirements and conditions for patentability.<sup>47</sup> In other words, in order for an invention to

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40. The Copyright, Designs and Patents Act of 1988, *supra* note 4, at ch. 2.

41. *Id.*, at ch. 1, § 9(3).

42. *See, infra*, discussion of *Thaler v. Iancu*, *supra* note 7.

43. *Intellectual Property Clause*, *supra* note 2.

44. *Id.*

45. *Id.*

46. *Id.* § 101.

47. *Id.* § 102, 103.



be patentable in the United States, and thus eligible for the protections offered by American patent law, the invention must be novel, useful, and non-obvious.

Further, Section 100(f) of the Patent Act defines the term “inventor”.<sup>48</sup> It states that “The term . . . means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”<sup>49</sup>

### U.K. PATENT LAW

In Great Britain, the relevant statute in the field of patent law is also the *Copyright, Designs, and Patents Act of 1988*.<sup>50</sup> Part V and Part VI, entitled “Patent Agents and Trademark Agents” and “Patents”, respectively, are most applicable here. The United Kingdom’s Intellectual Property Office (IPO) provides for a “statement of inventorship.”<sup>51</sup> The IPO website notes that a “statement of inventorship” must be completed when the applying individual is not the inventor, is a member of a group or team of individuals responsible for the invention, or is applying on behalf of a company or business.<sup>52</sup> Patents Form 7, however, provides no space for an applicant to claim that they are applying for a patentable invention created by a being other than a human individual.<sup>53</sup> Instead, only the three possible exceptions noted above are provided for. However, this is not necessarily to say that U.K. patent law requires an inventor to be an individual human being or a group thereof. Instead, consider two distinct possibilities.

First, consider the effect upon which U.K. copyright law might have upon U.K. patent law. U.K. copyright law explicitly allows and provides for non-human creation of a work of authorship. Would it not then be illogical and inconsistent for U.K. patent law to require human invention and disallow such invention by AI and other computer systems and machines?

Second, consider any relevant case law on the subject. In doing so, highlight for yourself the almost magical and miraculous fortune of

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48. *Id.* § 100(f).

49. *Id.*

50. The Copyright, Designs and Patents Act of 1988, *supra* note 4.

51. *Patenting your invention*, GOV.UK, available at <https://www.gov.uk/patent-your-invention#:~:text=You%20can%20use%20a%20patent,can%20be%20made%20or%20used> (last visited Mar. 4, 2022).

52. *Id.*

53. *Form 7*, U.K. INTELLECTUAL PROPERTY OFFICE, available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/711838/Form\\_7.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/711838/Form_7.pdf) (last visited Mar. 4, 2022).

having the same individual apply for the same series of rights in multiple countries. In so doing, try to recognize and appreciate my own personal delight at this discovery. Mr. Stephen Thaler is truly a godsend to this Note, and I send him my sincerest thanks for the fortuitous luck he has provided. In *Thaler v. The Comptroller-General of Patents, Designs and Trademarks*, Mr. Thaler likewise submitted applications for patents in the U.K. for his “DABUS” AI system.<sup>54</sup> In finding for Mr. Thaler, the England and Wales High Court for Patents noted:

“It is common ground that DABUS is not a person, whether natural or legal. DABUS is not a legal person because (unlike corporations) it has not had conferred upon it legal personality by operation of law. It is not a natural person because it lacks those attributes that an entity must have in order to be recognized as a person in the absence of specific (statutory) legal intervention. It is, therefore, clear, that DABUS cannot make an application for a patent, whether by itself or jointly with another...As I have noted, in this case DABUS is not the applicant: Dr. Thaler is. The requirements of section 7(1) are, therefore, met.”<sup>55</sup>

As such, given both the relevant case law and the predisposition against such a blaring contradiction within portions of a country’s Intellectual Property laws, it is only logical to conclude that the United Kingdom does, in fact, allow inventions created by AI systems to be eligible for patent law protections.

### **C. Does the current U.S. and U.K. law afford protection to AI systems?**

The previous section examined the current state and framework of American and British IP law, in the realms of copyrights and patents. Moving forward, we must in a conclusory fashion determine whether the American and British IP legal frameworks provide protection to inventions and works of authorship created by AI systems. In so determining, we must evaluate just how far the protections afforded by U.S. and U.K. law extend.

#### THE UNITED STATES OF AMERICA

The American IP legal framework was explored in some detail above. Here, however, we must conclude that U.S. IP law does not extend protections to works of authorship or inventions created by AI

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54. *Thaler v. The Comptroller-General of Patents, Designs and Trade Marks* [2020] EWHC 2412 (Pat.) [hereinafter *Thaler v. Comptroller-General*].

55. *Id.*

systems. We can make so easy and clear a conclusion by returning to the law itself, and the interpretations of it made by several U.S. courts.

In the field of copyright law and the protections offered thereby, the *Copyright Act of 1976* is again the relevant statute. We thus re-examine American copyright law's requirements. First, there must be an original work of authorship.<sup>56</sup> Secondly, the work of authorship must be fixed in a tangible medium of expression.<sup>57</sup> Additionally, the work of authorship must fall under one of the eight categories listed in Section 102(b).<sup>58</sup> Lastly, while the Copyright Act itself provides no definition of its own for who is and who is not an "author", we can infer from multiple sources that a human individual (or individuals) is required. First, it would be difficult to imagine, and would indeed seem incredible, that American law would require human creation of inventions to merit protection, all the while allowing computers and AI systems to create works of authorship and affording them protection in contrast. Additionally, we can point to such case law as *Naruto v. Slater* and *Kelley v. Chicago Park District* for support of the proposition that copyright protections are only afforded to human individuals as a result of their own creations. We can thus unequivocally conclude that American copyright law does not extend the protections offered by it to works of authorship created by AI systems.

In the field of patent law and the protections offered thereby, the *Patent Act of 1952* is again the relevant statute. We, therefore, re-examine American patent law's requirements. Namely, the invention in question must be new, useful, and non-obvious.<sup>59</sup> Additionally, however, and in contrast to the *Copyright Act of 1976*, the statutory language of the *Patent Act of 1952* explicitly requires the inventor to be an individual human being or a group thereof.<sup>60</sup> For the purposes of American copyright law, we in part inferred this human-creator requirement to likewise apply, noting specifically that it would seem incredible for U.S. IP law to include such a jarring and distinct contradiction in such similar respects. Additionally, and especially for the purposes of this Note, we further have the recent case and pending appeal of *Thaler v. Iancu*, in which this human inventor requirement is directly at issue.<sup>61</sup> We can therefore unequivocally conclude, based upon the statutory language and

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56. Copyright Act of 1976, *supra* note 9, at § 102.

57. *Id.*

58. *Id.*

59. Patent Act of 1952, *supra* note 9, at § 101, 102, 103.

60. *Id.* at § 100(f).

61. *Thaler v. Iancu*, *supra* note 7.

relevant case law, that U.S. patent law does not extend the protections offered by it to inventions created by AI systems.

### THE UNITED KINGDOM

The results in the United Kingdom are in distinct contrast compared to those found in the United States. For both patents and copyrights, the relevant statute is again the *Copyright, Designs and Patents Act of 1988*.<sup>62</sup>

For copyright analysis, we turn to Part I, Chapter I, Section 9, which defines who can be classified as authors and states in relevant part:

“(1) In this Part ‘author’, in relation to a work, means the person who creates it...(3) In the case of a literary, dramatic, musical, or artistic work, which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken.”<sup>63</sup>

For the purposes of patent law analysis, we turn to Parts V and VI of the *Copyright, Designs and Patents Act of 1988*.<sup>64</sup> Parts V and VI do not include a definition of their own as “inventors”, nor do they include an unequivocal statement of the human-creator requirement. Here, we can again (similarly to the relationship between U.S. Patent Law and Copyright Law, but differently in terms of specific context) infer that different laws passed by the same government would tend not to directly conflict with one another, especially in such similar fields. Furthermore, where one field of the law (for the U.S., patent, and for the U.K., copyright) so clearly defines and states either a human-creator requirement (in the case of the United States), or the lack thereof (in the case of the United Kingdom), we must infer that the same human-creator requirement (or lack thereof) applies to a similar field of law (for the U.S., copyright, and for the U.K., patent). Similarly, we can also turn to the case of *Thaler v. The Comptroller-General of Patents, Designs and Trademarks* for even further evidence, and indeed proof, of U.K. law’s lack of a human creator or inventor requirement.<sup>65</sup> As seen in that case, where an AI system has created material of its own making which would otherwise be eligible for patent protection under U.K. law, the invention is indeed eligible for protection, and the creator of the AI system itself is the individual who receives the legal protections afforded by U.K. IP law.

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62. Copyright, Designs and Patents Act of 1988, *supra* note 4.

63. *Id.* at ch. 1, § 9.

64. *Id.* at Parts V and VI.

65. *Thaler v. Comptroller-General*, *supra* note 54.

Therefore, we can unequivocally conclude that U.K. patent law does not extend the protections offered by it to inventions created by AI systems.

We can thus, in summary, conclude that while American law offers no protection or eligibility to works of authorship or inventions created by AI systems, U.K. law stands in direct contrast by offering extending such protections.

## **PART II: SHOULD U.S. AND U.K. LAW AFFORD PROTECTION TO AI SYSTEMS?**

Whether U.S. and U.K. law afford protection to creations of AI systems is an entirely different question than whether U.S. and U.K. law *should* afford protection to creations of AI systems. In other words, just because U.S. law does not afford protection to creations of AI systems, and just because U.K. law does afford such protection, does not necessarily mean that either U.S. or U.K. law takes the appropriate approach. In fact, upon further examination, we find that U.S. law takes an entirely imprudent approach, while U.K. law seems to strike an apt and advisable technique.

To reiterate again, and hopefully in lieu of sounding too much like a broken record, in the United States all intellectual property law is premised in the Intellectual Property Clause of the U.S. Constitution.<sup>66</sup> It states that the Congress of the United States shall have the power “[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”

It should be noted that there is no human-creator requirement to be found neither expressly stated nor implied included in the text of the Intellectual Property Clause of the Constitution. Instead, the clear public policy interest underlying the Intellectual Property Clause of the U.S. Constitution is that which *is* explicitly stated: namely, the government’s interest in promoting creation and innovation via the extension of legal protections to authors and inventors. The government promotes creation and innovation among authors and inventors by giving them incentive to continue such creation and invention, specifically through the means of protecting and preventing infringement upon their already created or invented works.

We can look to the United Kingdom (U.K.) for perhaps the best evidence of this singular governmental interest in full force and effect.

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66. Intellectual Property Clause, *supra* note 2.

The sole interest underlying the U.K.'s IP law framework of patent and copyright laws is the advancement and progress of the arts and sciences. This interest permeates throughout the *Copyright, Designs and Patents Act of 1988*.<sup>67</sup> Indeed, in the United Kingdom this interest stretches as far back as the *Statute of Anne*, passed in 1710, and some may even argue further to the *Licensing of the Press Act* of 1662.<sup>68</sup> It isn't mere coincidence that the formal title of the *Statute of Anne* is "[a]n Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of Copies, during the Times therein mentioned."<sup>69</sup> Indeed the preamble of the statute states "[f]or Preventing therefore such Practices for the future, and for the Encouragement of Learned Men to Compose and Write useful books..."<sup>70</sup>

Thus, it must be said that, in direct contrast to our discussion of the United States, current U.K. IP law extends protections to works of authorship or inventions created by AI systems in consistency with the historic underlying interest of U.K. government in promoting innovation and creation.

Similarly, preventing the inventions and creations of AI systems from eligibility for copyright and patent protections is in direct contrast to the sole underlying interest present in the American Constitution's Intellectual Property Clause. How can it be said that the government is promoting the advancement and progress of the arts and sciences by preventing the creative works and inventions of AI systems from being eligible for copyright and patent protections? The only logical answer is that it cannot be so said. Preventing works of authorship and inventions created by AI systems from being eligible from copyright and patent protections provides no incentive for further progress and advancement of the arts and sciences. In fact, doing so actually inhibits and prevents such progress and advancement.

Indeed, there is no logical reason why such works of authorship and inventions should not be granted the same protections as those made by human creators. The works themselves are forced to meet the same set of requirements. All entities, human beings or otherwise, are made to play by the same set of rules under the applicable law(s). Works of authorship seeking copyright protection must be original, fixed in a tangible medium of expression, and fall under one of the eight categories

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67. Copyright, Designs and Patents Act of 1988, *supra* note 4.

68. Statute of Anne 1710, 8 Ann. c. 21; Licensing of the Press Act of 1662, *supra* note 4.

69. Statute of Anne 1710, *supra* note 68.

70. *Id.*

provided in Section 102(b) of the Copyright Act.<sup>71</sup> That continues to be the case no matter if the author is a human being or an AI system. The same can be said for inventions and patent law. Every invention will still have to be novel, useful, and non-obvious. The law should not make arbitrary discriminations between authors or inventors, and single out one segment out for differential treatment, especially when there is otherwise no logical or important reason to do so.

So why, then, does U.S. IP law do exactly that? I, for one, have difficulty imagining a situation in which laws are enacted and enforced for no good reason or underlying interest. In fairness, the United States has occasional (and sometimes, not so occasional) difficulty in passing any law, regardless of the merits or reasons. So, there must be *some* reason why U.S. IP law takes the stance of refusing to extend protections to the works of authorship and inventions created by AI systems.

By referring to academic research and other thoughts offered on the topic, we can best determine and then evaluate the reasons why American IP law might not extend protections to the works of authorship and inventions created by AI systems. After reading and pondering a multitude of such sources, I find that there are three such reasons which are central and shared.

First among such reasons is this: some scholars and onlookers believe the works of authorship and inventions created by AI systems cannot be extended IP law protections, simply because they are insufficiently creative. As we can recall from our discussion of U.S. copyright and patent law, there are statutory requirements listed as to what does and does not qualify for eligibility. These scholars and observers posit that, in both the worlds of copyright and patent, AI systems are incapable of creating sufficiently original or creative works to qualify for eligibility of IP law's protections.

As Samuel Scholz notes in a recent article, "we can conclude that because patents and copyrights are only issued to products of human creativity, and autonomous AI derivative works are not an example of human creativity, that AI derivative works are not eligible for patent and copyright protection."<sup>72</sup> But why, in the opinion of these individuals, are AI systems incapable of demonstrating or possessing human creativity? In other words, what about "human" creativity distinguishes itself so significantly from "ordinary" creativity?

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71. The Copyright Act of 1976, *supra* note 9, at § 102.

72. Samuel Scholz, *A Siri-Ous Societal Issue: Should Autonomous Artificial Intelligence Receive Patent or Copyright Protection?*, 11(1) CYBARIS AN INTELL. PROP. L. REV. 81, 117 (2020).

The Scholz article referenced above gives three supposed reasons as to why the creative works of AI systems are unlikely to be deemed as possessing “human” creativity. First, Scholz claims that extending IP law protections to AI creations is likely to decrease public trust.<sup>73</sup> Second, Scholz advances the theory that extending IP law protections to AI creations is likely to increase legal uncertainty.<sup>74</sup> And, lastly, Scholz hypothesizes that extending IP law protections to AI creations “creates a possible defense to patent infringement through incorrect inventorship.”<sup>75</sup>

Now, even at first glance, these “reasons” offered by Scholz in support of AI systems not possessing the capability for “human” creativity seem absurd and misplaced. What exactly does the public’s trust have to do with a factual determination? In other words, the public’s trust should have no impact on the simple factual analysis of whether an AI system can or cannot exhibit and possess the same levels of creativity as an ordinary human being. Likewise, the same concept can apply to the other two reasons offered. What exactly does legal uncertainty, or potential issues with patent infringement and defenses to it, have to do with a factual inquiry? Even Scholz himself seems to indicate this mismatching of an answer to question, noting “Although the definition of ‘inventor’ has yet to expand beyond human beings, it is possible for this to occur in the future, and we must consider the potential harm this may cause. Namely, expanding the definition of ‘inventor’ to include AI may decrease public trust, increase legal uncertainty, and create a possible defense to patent infringement through incorrect inventorship.”<sup>76</sup> It is clear, even from a birds-eye view, that Scholz is either incapable or unwilling to offer actual and legitimate reasons for why AI systems cannot possess creative capabilities similar to, if not the same, as those found in individual human beings. As a result, the first reason offered as to why IP law protections cannot apply to creations of AI systems, namely that they lack human creativity, must be dismissed.

Next among such reasons is the claim that providing IP law protections to the creations of AI systems will result in no “net social benefit.”<sup>77</sup> We can again look to the Scholz article for assistance in examining this theory.

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73. *Id.* at 111.

74. *Id.*

75. *Id.*

76. *Id.*

77. Scholz, *supra* note 71, at 117.



As Scholz claims, “Patent and copyright protection are only granted to transactions that present a net social benefit.”<sup>78</sup> Scholz notes that, with respect to the “natural rights” justification for IP law protections, “we can conclude that because copyrights are only granted under a natural rights justification to natural people, and AI does not have the same rights as natural people or groups of people, that copyrights cannot be granted to AI under a natural rights justification.”<sup>79</sup> This is a legitimately fair argument to make: under the natural rights theory, rights are only extended to natural people, and AI can never claim to be a natural person.

However, we know (and so, too, does Scholz) that in the United States the Constitution’s Intellectual Property Clause grants IP law protections for a singular reason: the advancement and progress of society through promoting innovation and creation.<sup>80</sup> Scholz even accepts that this is the case, stating “The United States copyright system likely follows this justification, as the Third Circuit Court of Appeals stated, ‘the purpose of the copyright law is to create the most efficient and productive balance between protection (incentive) and dissemination of information, to promote learning, culture and development.’”<sup>81</sup> Scholz’s statement, that “AI works can only receive copyright protection under the incentive theory if they present an expression with social value that provides a net social benefit”, further holds true.<sup>82</sup> It is only when we come to evaluate Scholz’s offered reasons as to why AI works do not, ultimately, provide a net social benefit that we again find fallacious logic and misplaced reasoning.

Scholz claims that “granting patent and copyright protection to autonomous AI derivative works may create three significant social costs: (1) a significant decrease in human employment, (2) an increase in legal uncertainty in the patent system, and (3) an increased burden on the USPTO.”<sup>83</sup> Again, we can point to a mismatch in reasoning within Scholz’s argument. The only incentive present in the Constitution’s Intellectual Property Clause is the advancement of society via innovation and creation.<sup>84</sup>

Regarding the first offered reason, IP law has never considered the economic ramifications of protecting an otherwise protectable and

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78. *Id.*

79. *Id.* at 121.

80. *Id.* at 89.

81. *Id.* at 121.

82. *Id.* at 123.

83. Scholz, *supra* note 72, at 126.

84. *Id.* at 89.

eligible creative work. If it did, it is likely that laptop computers, or televisions, would not be eligible for IP law protections. Did my purchase of a Lenovo Yoga 9 Series laptop last October not have a detrimental effect on the potential economic well-being of my local library? Did my purchase of a TCL flatscreen television when I moved into my apartment not have a detrimental effect on a multitude of businesses? Is my ability to watch the New York Rangers hockey game from the pleasure and comfort of my own living room not affecting the potential clientele of my local sports bar? Is my ability to tune in to CNN for a nightly news program not affecting the potential readership of the New York Times or a more local newspaper? Put in a slightly less personal, and more historical context, did Eli Whitney's invention of the cotton gin in 1793 not, at least immediately, result in a "significant decrease in human employment?"<sup>85</sup> The only logical answer to all these rhetorical questions is this: IP law does not consider economic ramifications. Innovation is almost always responsible for an immediate, and often short-term, reduction in human employment. Yet this fact has not, and should not, stop IP law from extending its protections to otherwise eligible works.

Next, we consider the next offered "social cost", namely "an increase in legal uncertainty in the patent system."<sup>86</sup> In doing so, and given Scholz's own reasoning, I think it best to evaluate this offered "social cost" at least in part with the last, namely the "increased burden on the USPTO" envisioned by Scholz.<sup>87</sup> For the former, Scholz notes:

[a]s AI computing power increases exponentially, the number of AI-related patents will also increase exponentially, and an exponential increase in the prior art will increase the likelihood of a patent application being rejected for anticipation or lack of inventive step. Even if a patent is issued, the owner must manage the increased risk of the patent being invalidated through post grant review, inter partes review, or litigation.<sup>88</sup>

Simply put, Scholz's concerns are totally legitimate. However, these concerns can be solved by less restrictive and burdensome means than a wholesale ban on extending IP law protections to the creations of AI systems.

What is more, the addition of further relevant case law will only add more clarification and certainty not less. If there are clear and drastic schisms in opinion and law among different U.S. Courts of Appeal, then the U.S. Supreme Court will intervene to once and for all clarify the topic

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85. *Id.* at 126.

86. *Id.*

87. *Id.*

88. Scholz, *supra* note 72, at 129.

at hand. But this assumption that more applications for patents and copyrights will inherently lead to more court cases, and then somehow magically transform into more uncertainty, seems preposterous. In a common law country, such as the United States, more court decisions provide more clarity, not vice versa.

This brings us back, then, to Scholz's last "social cost," the burdensome impact that extending IP law protections to the creations of AI systems will have on the USPTO.<sup>89</sup> What Scholz has done here has provided within his own series of argument perhaps the best counterargument one can make. See, Scholz argues that extending IP law protections will have a deleterious effect on human employment.<sup>90</sup> Yet, then he also argues that the USPTO will be unduly burdened by the mass influx of applications? Then have the USPTO go hire some of those individuals, those who Scholz envisions joining the masses of the newly unemployed, to work for the USPTO and handle the incoming applications of the creative works of AI systems. What is more, Scholz even acknowledges this possibility, noting that "to counteract the issue of increasing the time needed to rule on a patent, the USPTO will need to hire additional examiners to review applications."<sup>91</sup> However, while Scholz claims these newly employed individuals "will create an additional cost on society," this can be disproven on two fronts.

First, we can see as a self-fulfilling prophecy that more applications mean more fees, which means more funding for the USPTO gathered from those fees, which means the ability to hire more people to work in the USPTO, resulting in the ability to process applications faster, which in turn leads to even more applications. It is a tautology!

Additionally, who is to say that the potentially slight increase that might be required in funding to the USPTO will necessarily outweigh the otherwise significant societal advancement and progress which would occur? Even further, the American Federal government almost exclusively spends its time, and its funds, trying to promote even the slightest gains in economic growth and societal progress. It is particularly hard to believe that Capitol Hill, or 1600 Pennsylvania Avenue for that matter, would be unwilling to make the down-payment in this case. As a result of these reasons, and those offered and explained above, the second reason as to why the creations of AI systems cannot be extended IP law protections, namely that they will provide no net social benefit, must be dismissed and disregarded.

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89. *Id.* at 126.

90. *Id.*

91. *Id.* at 130.

Third and last among such reasons as to why *not* to extend IP law protections to the creations of AI systems is this: there are perhaps better, more apt alternatives. For evidence of this argument, we can turn to one of many sources for further guidance and clarification. In *Artificial Stupidity*, Clark Asay raises the possibility of “Government AI” as a legitimate alternative to providing the creations of AI systems with IP law protections.<sup>92</sup> As Asay notes, “[o]ne of history’s important lessons is that dramatic, far-reaching innovation often requires significant backing from state actors.”<sup>93</sup> As he continues, “[t]he reason behind this is at least somewhat intuitive: ‘truly radical innovation needs patient, long-term, committed finance. This type of finance is hard to find in the short-term in the private sector.’”<sup>94</sup> Asay concludes by noting that “[t]he lessons of history suggest that if we are to avoid enduring artificial stupidity and make real breakthroughs in achieving general AI, government backing is necessary, and preferably in large doses.”<sup>95</sup>

Perhaps the best counterargument to be made to Asay’s proposed alternative is in his next sentences:

[t]his does not mean that private sector entrepreneurs will have no role to play in achieving general AI—they certainly will, and undoubtedly will have much to contribute. But as the history of many significant innovations teaches, often their breakthroughs will only come on the shoulders of governmental involvement.<sup>96</sup>

This appears to indicate, less an appropriate *sole* strategy moving forward, so much as an appropriate *dual* strategy moving forward. In other words, using Asay’s recommendations in conjunction with the position of this Note, we can kill two birds with one stone. If government wants to make significant investment in the AI space, that is perfect. Government funding will likely lead to better innovation and creation, and lead to it more quickly, all of which results in an even greater need than before for IP law protections to be extended to the creations of AI systems. In so saying, this approach is less an alternative in its own right, and more so a legitimate additional policy to be taken in conjunction with extending IP law’s protections.

In sum, then, we have now examined three reasons as to why the United States might *not* want to extend IP law protections to the creations of AI systems. Thus, despite the seeming attractiveness of these reasons

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92. Clark D. Asay, *Artificial Stupidity*, 61 WM. & MARY L. REV. 1187, 1252 (2020).

93. *Id.* at 1252-3

94. *Id.* at 1253.

95. *Id.* at 1255.

96. *Id.*

at first glance, our ability to dispel of them is rather simple and can be done with some ease. As a result, it is indeed the case that the reasons as to why *not* to extend IP law protections to works of authorship or inventions created by AI systems are few and far between, and when found, they cannot stand up to the tests of logic and common sense. In contrast, the reasons as to why IP law protections *should* be extended to works of authorship or inventions created by AI systems are simply more logical than those already discussed. We again find here, in support of the extension of IP law's protections, three shared and overarching reasons.

First, AI systems have legitimate and defined features and abilities which make them capable of producing identical work to an individual human being.<sup>97</sup> As Dr. Shlomit Yanisky Ravid and Xiaoqiong Liu offer:

“[w]e claim that there are eight crucial features of AI systems that create new challenges to intellectual property law . . . [they are:] [(1)] [c]reativity[; (2)] [u]npredictable [r]esults[; (3)] [i]ndependent, [a]utonomous [o]peration (t-autonomy)[; (4)] [r]ational [i]ntelligence[; (5)] [e]volving[; (6)] [c]apable of [l]earning, [c]ollecting, [a]ccessing, and [c]ommunicating with [o]utside [d]ata[; (7)] [e]fficiency and [a]ccuracy[; and (8)] ‘[f]ree [c]hoice’ [g]oal [o]riented.”<sup>98</sup>

As Ravid and Liu then note, “[w]e argue that, due to these features, AI systems are capable of independently developing inventions which, had they been created by humans, would be patentable (and able to be registered as patents).”<sup>99</sup> It appears from this that Ravid and Liu offer what is perhaps the best counterargument to Scholz's original issue with the extension of IP law protections. Namely, Scholz claims that AI systems lack the ability for human creativity and authorship.<sup>100</sup> In contrast, Ravid, and Liu claim, with significant evidence and support, that AI systems are in practice, and ultimately produce, identical to individual human beings.

Second, Russ Pearlman argues that the current position of U.S. law against extending IP law's protections to the creations of AI systems is “not based off statutory requirements but on assumptions about computer capabilities stemming from an analysis done in the mid-twentieth

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97. Shlomit Yanisky Ravid & Xiaoqiong Liu, *When Artificial Intelligence Systems Produce Inventions: An Alternative Model for Patent Law at the 3A Era*, 39 *CARDOZO L. REV.* 2215, 2224 (2018).

98. *Id.* at 2215-7.

99. *Id.*

100. Scholz, *supra* note 72.

century, almost [forty] years ago.”<sup>101</sup> Pearlman later quotes from the Commission on New Technological Uses of Copyrighted Works (CONTU).<sup>102</sup> Pearlman later quotes from the Commission on New Technological Uses of Copyrighted Works (CONTU).<sup>103</sup> In 1978, CONTU determined that:

“[t]he computer, like a camera or a typewriter, is an inert instrument, capable of functioning only when activated either directly or indirectly by a human . . . [T]he computer affects the copyright status of a resultant work no more than the employment of a still or motion-picture camera, a tape recorder, or a typewriter.”<sup>104</sup>

Regardless of the validity of Pearlman’s claims, what is undoubtedly true is that there exists among many an ignorance about the current and rapidly advancing capabilities of AI systems. As Ravid and Liu argue, the development of AI systems has grown tremendously in recent years and decades, and AI systems are now capable of far greater and more sophisticated works than once before.<sup>105</sup>

Lastly, and perhaps most important, the fundamental interest underlying the extension of IP law’s protections to the creations of AI systems is *incentive*. As Ryan Abbott argues, “Treating nonhumans as inventors would incentivize the creation of intellectual property by encouraging the development of creative computers.”<sup>106</sup> Undoubtedly, this is true. For every reason above, extending IP law’s protections is the appropriate approach forward.

### PART III: MOVING FORWARD: RECOMMENDATIONS

In recent decades, the United States and its allies have increasingly taken a global approach to solving common legal issues and challenges affecting the global community. This approach can be seen through numerous iterations of international agreements, all of which seek to solve the legal challenge at hand and to bring the legal frameworks of the signatory parties into better and further cohesion. This can perhaps best

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101. Russ Pearlman, *Recognizing Artificial Intelligence (AI) as Authors and Inventors Under U.S. Intellectual Property Law*, 24 RICH. J. L. & TECH. 1 (2018).

102. *Id.* at 16.

103. *Id.*

104. *Id.* at 26.

105. Ravid & Liu, *supra* note XXX.

106. Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 57 B.C. L. REV. 1079, PIN (2016).

be illustrated by the changes made by the United States to its copyright framework under the Berne Convention.<sup>107</sup>

However, these international agreements (as was the case with the Berne Convention) often predate U.S. involvement.<sup>108</sup> In other words, numerous signatory parties had already adopted the provisions of the Berne Convention before the U.S. itself adopted its measures and became a signatory party.<sup>109</sup> Indeed, in the case of the Berne Convention, the United States was among the last to adopt its provisions.<sup>110</sup>

The present situation thus provides the United States with a wonderfully different opportunity: the chance to lead the way in the global community. The United States can individually act to cause change to its own legal framework in this space, rather than wait and react to the changes first made by allies and international partners. This very opportunity provides several avenues for the United States. First, by being the first to recommend widescale and global adaptation to the legal challenges raised by these technological advances, the U.S. can decide what to change about its own legal frameworks, how much to change about its own legal frameworks, and how (in practice) to change its own legal frameworks. In other words, being first to act within this space on a global scale provides the U.S. with far greater flexibility and choice than if the U.S. were to wait and play a reactionary role.

Further, acting first would reaffirm the oft-claimed American position as the leader of the free world, and as being the preeminent nation to which peers, allies, and foes alike look to for guidance and clarity. It is long past time for the United States to end even the appearance of its so-called “leading from behind” philosophy. American prestige and status around the world have been in decline for some time now and have only further been exasperated by recent events and developments.<sup>111</sup> By taking the lead once again on the global stage, by spearheading a coalition of nations moving toward a singular purpose of providing IP law protections to the creations of AI systems, the United States can begin (even if in some small part) to repair its image around the world.

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107. Berne Convention for the Protection of Literary and Artistic Works, Sep. 9, 1886, 828 U.N.T.S. 221.

108. *Id.*

109. *Id.*

110. *Id.*

111. See generally Max Pushkin, *Status and Responsibility: The Decline of American International Prestige in the Trump Era*, BROWN POL. REV. (May 30, 2020), available at <https://brownpoliticalreview.org/2020/05/status-and-responsibility-the-decline-of-american-international-prestige-in-the-trump-era/> (last visited Jan. 25, 2022).

So, what should be changed about the current U.S. IP law framework? How do we do it? These are perhaps as important of questions as the question of whether to change at all itself.

In my view, the best approach would be to bring the U.S. IP law framework in line with that found in the United Kingdom. Namely, the United States should begin by amending by some means the Copyright Act and the Patent Act to provide the creations of AI systems with the protections offered under the current IP law framework. What is more, the new U.S. framework should take the stance of the current U.K. framework even further, in granting IP protections to the individual responsible for the creation of the AI system, not granting the protections to the AI system itself. In doing so, the United States would fulfill the incentives and reasons provided above as to why, in the first place, it should even change its IP law framework. Additionally, and as suggested first by Asay's *Artificial Stupidity*, the U.S. government should also provide funding for the advancement and progress of artificial intelligence in the private sector. Taking this dual approach, in conjunction rather than simply one or the other, provides a double incentive. The incentive is now being provided to the private sector for artificial intelligence advancements, both through federal funding as well as through the protection of any creative works or inventions by IP law. American government has shown a clear willingness in the past to grant federal funds in exchange for even modest economic growth and should choose to do so again here.

As for the second, the U.S. should take advantage of the opportunity provided to it in the upcoming appeal, *Thaler v. Iancu*. This opportunity is two-fold. First, the appeals court could decide that the reasoning behind the current U.S. IP law framework is misguided and imprudent, and in doing so choose to itself singlehandedly amend American law in the ways suggested above. Allow me to note, this is highly, highly unlikely. It is highly unlikely that a federal court will disregard existing law, legal precedent, administrative practice, and abundantly clear statutory language, in favor of its own thinking on the matter. What is instead more likely is the second of these two possible scenarios: namely, that sufficient public attention can be brought to the case, and that public sentiment will be in opposition to what is likely to be a subsequent court's affirmation of the decision against Mr. Thaler. As a result of this public sentiment, we can then hope for and seek legislative action by the U.S. Congress in furtherance of the policy changes outlined above.

Only when the U.S. has changed its own domestic policy with respect to IP law can the United States proceed to taking a more global approach to the issue at hand. Envisioning a situation where the U.S., in



close coordination with the United Kingdom, seeks to rally and persuade its closest allies and international partners to sign a global agreement along the lines of that seen in the Berne Convention, would be ideal.

This three-step process will not happen overnight. It will undoubtedly take time, effort, and significant persuasive skill to change the American legal stance. But the scale of this effort should not dissuade from the taking and claiming the appropriate approach. There can be no question of the merits of making such changes. Though outlined in some detail above, it suffices to say that current U.S. law is in direct contradiction with its foundational principles and interests in the realm of preventing the protection of works of authorship and inventions created by AI systems. Further, the pending Thaler appeal provides the U.S. with the perfect vehicle for first making changes to its own legal frameworks. If it chooses to do so, the United States can then begin to spearhead a global movement among its allies and international partners, all moving toward acceptance and protection of works of authorship and inventions created by AI systems.