LET ME GET MY HUMAN FOR THAT: THE STRUGGLES OF A BROKEN PATENT SYSTEM FOR AI INVENTORS

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I. INTRODUCTION

"Hey, Siri, what is artificial intelligence?" A quick question to Apple's Siri elicits the Wikipedia definition stating that Artificial Intelligence (AI) is "intelligence demonstrated by machines, as opposed to the natural intelligence displayed by animals including humans."[1] The idea of AI evokes a variety of images for different people. Some may think of robots; others may even envision Siri herself. Siri comes in many forms; someone may associate her with the floating, colorful orbital at the bottom of the iPhone screen, or he may have a full image of what she looks like from head to toe. Others thinking of AI will turn to the elusive Sophia, Hanson Robotics' human-like robot who "personifies our dreams for the future of AI."[2] Sophia is acclaimed for her talents and visited television sets worldwide, as she walked the stages of *The Tonight Show*[3] and *Good Morning Britain*.[4] Sophia demonstrated to the world how AI steps closer to possessing human-caliber intelligence every day and with every innovation.

While we once lived in a world in which humans created AI, and then humans coined the AI as their inventions, we now encounter far developed AI that creates its own inventions, absent human interaction. For example, Lucid.AI claims that its technology can make human-like qualitative deductions and can successfully solve the business world's most complicated problems.[5] As such, Lucid.AI worked on behalf of an investment banking client and saw "connections across long chains of relationships not detected by human compliance functions."[6] While impressive, Lucid.AI's output falls short of ground-breaking for technology capabiliC /P ₦Cs i Tm( )Tj0.435 T aonprcofslos(o)10.9 (f)-y (3 ( )11 /P ₹ now, L(p)10.9 h.2 (e)9.2

useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."[11] Further, the U.S. formed the Patent Act, 35 U.S. Code, to grant additional protections to inventors.[12] The Patent Act prohibits double patenting for the same invention, proscribes the subject matter eligibility, describes the utility necessary for the invention, and defines who may be named an inventor.[13] People in the intellectual property community largely accept the law, but the area of who may be named an inventor leads to a hot debate.

U.S. patent law requires the inventor named on the patent be the person who mentally conceives of the IP.[14] Before the technological advances of AI, patent law adequately met the needs of human inventors. However, since AI now can mentally conceive of its own IP, proponents of AI inventors believe that the law must change to allow for AI inv

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DABUS mentally conceived the invention.[21] Courts in South Africa, the United Kingdom, the U.S., Europe, and Australia reviewed DABUS's patent application.

the inventor or inventors; and (b) where the applicant is not the sole inventor or the applicants are not the joint inventors, indicating the derivation of his or their right to be granted the patent; and, if he fails to do so, the application shall be taken to be withdrawn."[43] The UK Court of Appeal initially denied Thaler's patent because DABUS failed to be an adequ (t)-2.6 ( )0.91.6 ((t)-2.6 ( )0. t)-ea6 (i)6.3 fni:g

cannot be an inventor under Australian law.[51] Further, the court reasoned that while AI can create inventions that satisfy novelty, inventiveness, and utility, it cannot meet the last requirement of being a human inventor.[52] After the decision,[53] Thaler sought judicial review, citing Section 15 of the Judiciary Act of 1903,[54] and he claimed that the Act and Regulations do not preclude AI as being treated as an inventor.[55] On appeal, Justice Beach, justice for the Federal Court of Australia, shared his opinion that artificial intelligence can be an inventor in the eyes of the Act because 1) an inventor is an agent noun, which could include a person or thing; and 2) there are many situations in which humans cannot be held as inventors; and 3) nothing in the Act definitively says otherwise.[56] Justice Beach further argued that while humans can be inventors, so can AI, and he believes that the High Court's argument in the past decision focused too heavily on textbook definitions for "inventor," and that the system described in the past decision improperly precludes inventions which are created by non-humans.[57] He continued to say that no provisions incorporated in the Australian patent law "exclude an inventor from being a non-human artificial intelligenc

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 “himself or herself,” thus indicating that an inventor must be a human being, which DABUS fails to meet.

include mutual assent, expressed by a valid offer and acceptance; consideration; capacity; and legality.[87] AI would have difficulties satisfying these elements. The Restatement of Contracts defines consideration in terms of exchange and requires that a promise be supported by consideration in order to be legally enforceable.[88] Considering that AI is property itself, and cannot legally own or transfer property to another, AI cannot properly give adequate consideration. Second, having the capacity to legally enter a contract means a person is of "legal capacity to incur at least voidable contractual duties,"[89] and someone who is not "under guardianship, or an infant, or mentally ill or defective, or intoxicated."[90] AI neither meets the qualification of being "a person," and opponents of AI patent rights will argue that AI is not "of sound mind." Thus, AI cannot legally enter contracts to promote the furtherance of its invention.

However, Thaler would argue that he orchestrated a legal assignment when he appealed the decision of the USPTO on DABUS's behalf. As noted above, Thaler attached an "Assignment" contract, which stated that DABUS assigned Thaler all intellectual property rights in DABUS's inventions to Thaler.[91]

provide machine-made solutions to human problems, perhaps more efficiently and creatively than a human could.[96] They believe AI will create more breakthroughs, which would further benefit society.[97] Abbott, Thaler's counterpart, argues that allowing for AI-generated patents "would make inventive AI more valuable and incentivize AI development, which would translate to rewards for effort upstream from the stage of invention and ultimately result in more innovation."[98] If AI receives recognition and protection over its inventions, proponents believe that the AI's creators will "be motivated to create more and better AIs—which will in turn develop new and better ideas to improve human well-being."[99]

While proponents of AI patent ownership argue that AI needs this power to further promote computer-generated innovation, AI patent owners would actually decrease innovation. If AI were to receive inventor rights, it would be the sole individual capable of licensing and granting use of its inventions to third parties. However, based on the above, AI cannot legally enter contracts, and thus, its inventions would be at a complete standstill. To further the process of in.006 Tc 0.006 Tw -19 -1.9 (-4.3.9 (t (us)-2.Xli)-44.7 (s)-2.3 (19 (t

supplemental examination, which only the patent owner can seek.[109] AI inventors do not presently have the functionality or capabilities to request these proceedings from the court. Since the patent owner is the only individual with the right to file for supplemental examination, an AI invent

humans cannot articulate the AI's processes as a witness in court, so the AI should not be granted a patent, and the invention will have to be protected through another means.

Ultimately, the business world is not ready to accept AI inventors as competent legal owners, and thus, in order to promote innovation, the patent system must allow for human co-inventors or another solution such as Work Made for Hire or a corporation treatment.

breach of contract or breach of confidence, then the company can show the information was classified as a trade secret.[127]

Trade secrets can also be protectable under a patent.[128] However, patents require the inventor to publicly disclose how the invention can be reproduced, whereas trade secrets protect an inventor's "secrets," including how they produced and created the invention. Trade secret law does not provide "defensive protection" for an inventor.[129] Thus, the protections of trade secrets and patents are at issue with each other, and courts will not issue both at the same time. In the interim, while the legal system decides how to patent AI-created inventions, trade secret law would provide adequate protection for AI inventors.

Other critics have discussed the idea of trade secret protection as an alternative to the AI inventor problem. Notably, Anna Carnochan Comer, the author of *AI: Artificial Inventor or the Real Deal?*, argued that trade secret law will not solve the AI-inventors' patent issues effectively.[130] Comer believes that "trade secrets do not always provide adequate protection due to the fluctuation of employees and the difficulty of actually keeping information secret."[131] Additionally, Comer argues that "trade secrets inherently inhibit transparency and collaboration," and that trade secrets do not "prevent competitors from independently coming by the same invention, and then filing a patent with a human as the inventor."[132]

However, Comer does not address the use of nondisclosure agreements, which is the "most effective way to protect trade secrets."[133] While trade secrets do not serve as the most protection for an invention, they do provide legal grounds for an inventor to file infringement claims. Inventors can limit their employees to a trusted group of individuals who can sign nondisclosure agreements for the invention. If a party to a nondisclosure agreement defies its commitments to the contract, then the

VI. THE NEED FOR HARMONIZATION OF INTERNATIONAL PATENT LAWS

Patent laws around the world are too diverse, and the legal system needs a uniform patent law to govern intellectual property. If countries fail to coordinate their approaches to patent law, then patent owners will forum shop for a jurisdiction which will allow for AI inventor protections. Given the inequalities in how AI is viewed, unfair competition and exploitation will ensue in favorable jurisdictions. For example, Australia proves to be an appealing forum for AI proponents because its courts are "blazing the trail for patent protection," following its DABUS decision.[136] A(U)4Utt beA13-0.009 ah8 (63 (be))9 Tc

Treaty.[149]

large number of countries."[157] The treaty procedure includes filing, international search, international publication, supplementary international search, international preliminary examination, and national phase.[158] Currently, 153 contracting states accepted the treaty.[159] While an applicant only files one international patent for countries to consider, each court still uses its own governing law to grant or deny the patent.[160] This filing system is appealing to inventors, as the application need only be filed in one language, and the inventor needs only to pay one fee.[161]

While the Patent Cooperation Treaty helps streamline the application process, this ease may be detrimental to the regions which will accept AI inventors. For example, South Africa and Australia both are contracting members of the treaty.[162] Therefore, inventors who use the treaty to file patents will have an incentive to file in these regions because with a quick check of the box, they have a high probability that their patents will be accepted. This treaty makes the patent application process too simple for inventors, and in turn, countries will be flooded with new patent applications to assess.

c. The Patent Law Treaty

The Patent Law Treaty aims to "harmonize and streamline formal procedures in respect of national and regional patent applications and

limits that may be imposed by the Office of a Contracting Party and reinstatement of rights where an applicant or owner has failed to comply with a time limit and that failure has the direct consequence of causing a loss of rights."[165] The Patent Law Treaty is similar in many respects to the Patent Cooperation Treaty, as both make the application process more refined so that inventors can easily file their patent in many regions. This treaty will result in the same issues of inundation and overflow of applications in regions that have a more lenient definition of an inventor. Thus, this treaty does not address the issues that would be solved by a uniform patent law.

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Additionally, the agreement sets forth a voting system, in which each member nation will hold one vote on each revision at issue.[172]

Currently, only sixty-four nations are members to the agreement.[173] The Strasbourg Agreement is the perfect breeding ground for the implementation of a uniform patent law to be used by all courts worldwide. Members of the agreement see the benefits of an international classification system. By filing these patents in a uniform manner, courts and inventors can track down different similar inventions that exist all over the world. The Committee of Experts is a particularly interesting component of the agreement. Experts from all different regions, with different interpretations of patent laws, bring their background and expertise to one conversation. Each expert is given one vote. This level playing field allows for a unique opportunity for the brilliant minds of patent law to come together to agree on the best approach for this legal protection. The classification system-unimen.opuae.9 (r)-4lteo (r)-4

protect the patent in court. Given the current legal system, those AI proponents who want the AI to be credited for its inventions can look to trade secret law to protect the IP. However, courts should consider adopting a system like copyright law's "Work Made for Hire" doctrine or mimicking how corporations are viewed in patent law to give AI similar protections. Ultimately, World Intellectual Property Organization needs to create a universal patent law to combat an abuse of the more lenient courts and to provide harmony and ease for the evolving inventors of today.