

By MEGAN L. JONES AND BRADFORD S. COHEN

Can AI Be Taxed?

In *South Dakota v. Wayfair*, the U.S. Supreme Court noted that "substantial virtual connections" should not be ignored

While the word “innovation” is often used, only rarely does a new series of inventions—such as the wheel, electricity, and the Internet—entirely reshape society. Artificial intelligence (AI) is proving to be the next such powerful innovation, and the U.S. tax code is little prepared for it.

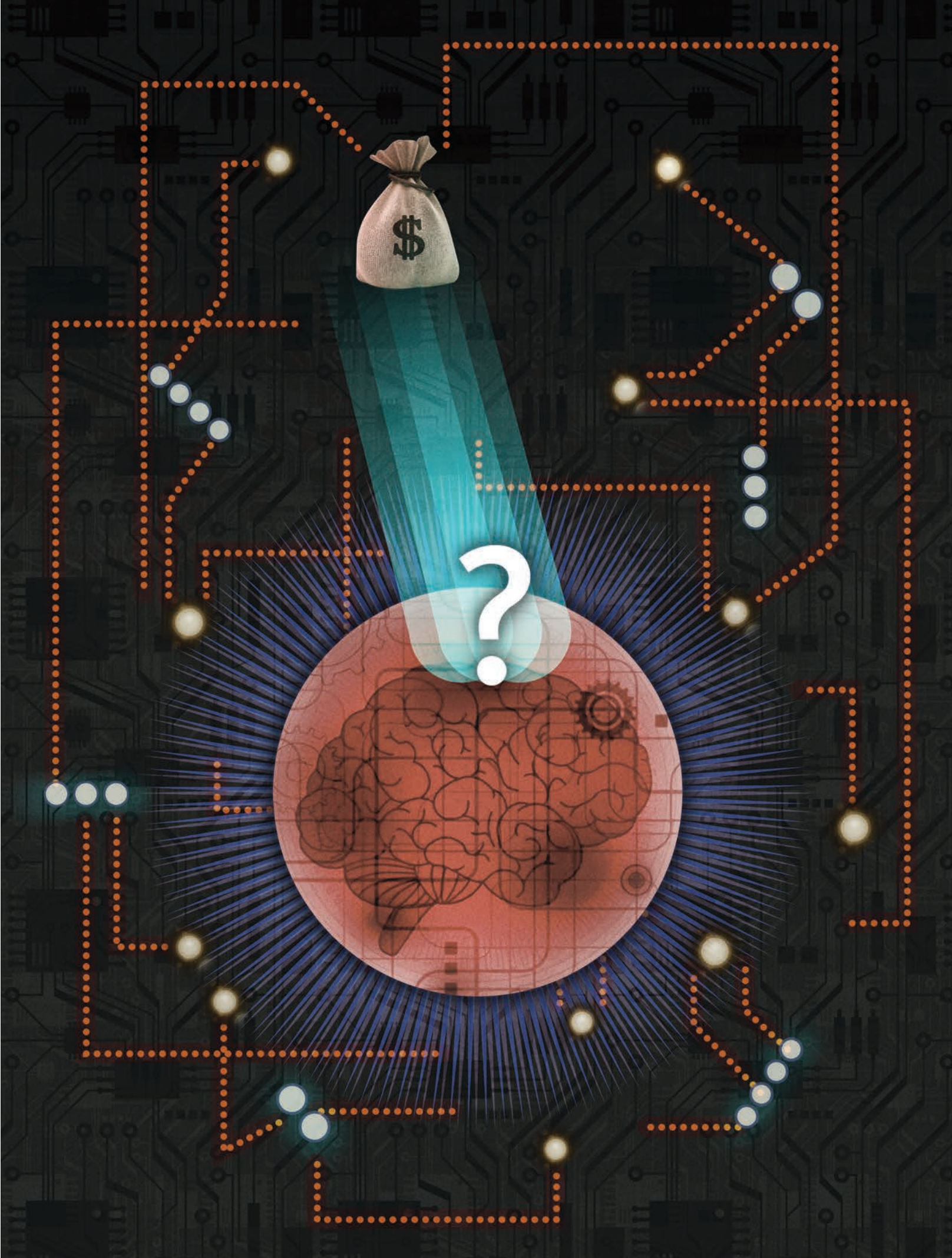
Defining AI can be a challenging task due to the broad nature of what falls under its rubric. Essentially, AI is the use of computer systems to perform tasks that historically have required human intelligence. Expanding on this definition, AI can interpret and learn from data, creating alone and using what it has learned from the data without additional human input. Such machine learning is further refined into deep learning in which artificial neural networks—algorithms that copy how the human brain works—mimic human behavior by processing vast amounts of data.¹ This neural network approach of having

computers “learn” in a manner similar to the human brain varies from the more traditional rule-based computer programming in which a computer is programmed with the explicit rules it will follow.² Thus, with AI, computers copy human thinking rather than just routinely following set tasks.

AI is often described in futuristic terms in which machines outsmart the human race. The science fiction imagery exaggeration is only a function of time. While AI arguably performs rule-based tasks better than humans, for the moment it is still lagging behind in being able to outthink humans in many other areas. However, current projections are that within five years technology will have evolved to the state that the machines will exceed human intellectual capabilities across a greatly expanded spectrum of areas.³ Those currently creating this AI wave have enormous power as they are setting the standards from which the machines will operate in the future, outpacing human

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control, but with these rules forming the metrics from which AI will iterate alone.

AI can and will replace humans, displacing what is a biologically weak component in the supply chain with a seamless solution, terrifying in its efficiency. The current coronavirus pandemic is exposing the weaknesses of people, and will speed up the adoption of AI across a wide swath of industries that are no longer patient with the work force after suffering crippling disruptions due to quarantines, hoarding, and death. The entertainment industry, in

systems is staggering and expanding rapidly.

Inherent in understanding AI are a few key terms, some of which are still conceptual in application but close to reaching practical adoption. Eventually, a digital twin will integrate with each person, adding vast intellectual and physical capabilities based on an individual's own thinking and abilities, only better. This twin, and indeed much of life, will operate on more powerful smart phones. These smart phone-based digital twins will run people's lives, determining what to think, watch, eat, read,

that payment gets taxed. Currently, tax revenues both support the U.S. government and its programs, along with incentivizing (or disincentivizing) certain behavior.

AI presents challenges for domestic and foreign taxation as it is composed of bits and electrons floating through a digital network that passes through servers and is ultimately reached only through an Internet service provider. Significantly, this new world will raise issues of jurisdiction and nexus, both for domestic and foreign tax purposes.

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particular, is not immune, with most productions shut down, live events cancelled, and top stars such as Tom Hanks needing to delay a movie due to catching the coronavirus.⁴

AI is already present in daily life, though in what many consider to be the most rudimentary forms. It powers Google's search and Amazon's delivery system, the latter of which is performing an essential function during the coronavirus crisis by getting supplies out with merciless precision.⁵ In the Netherlands, Philips uses robots in lights out/dark factories to make electric razors, and even though Tesla's CEO has had to admit overreliance on robots in the company's "dark" factories, which only needed a few people to monitor the automated processes, both manufacturers' methods indicate the future energy-saving prospect of AI.⁶ Going forward, AI will become more pervasive in ways that cannot yet be imagined.

Companies whose business is involved in or overlaps with AI encompass a vast ecosystem. AI starts with hardware in the form of a semiconductor that drives everything. The AI (software based) is then run and stored on a further form of hardware (for example, a computer), which connects with a network and eventually the cloud. The cloud is a means of storing and accessing data and programs over the Internet instead of on a localized platform such as a computer. Robots, while visually arresting, merely represent a tool for AI. Eventually, AI will be run off a smart phone. AI growth is driven by evolving semiconductor processing power, 5G (a much faster wireless network), quantum computing and refinement of the software that runs on these other elements. The complexity of these

experience, and more.⁷ The breadth of the changes to be brought about by AI technology is beyond ordinary human understanding (and is in part projected to develop without human involvement) and is not addressed in many current laws as written, including the Internal Revenue Code (IRC).

As is typically the case in most countries, the U.S. tax base is heavily reliant on service income earned by individuals. In 2018, 51 percent of tax revenue raised was from individual income taxes; 35 percent was from payroll taxes (which are assessed on the wage or salary paychecks of most workers and are used to fund such programs as social security); 8 percent was excise, estate, and other taxes; and 6 percent was corporate income tax.⁸ Yet, AI is projected to replace many jobs globally, with estimates of how many jobs so affected varying widely. The McKinsey Global Institute has estimated that about 50 percent of work tasks around the world are currently automatable.⁹ However, McKinsey also estimated that 30 percent of work activities could be automated by 2030, displacing about 14 percent of workers, assuming rapid adoption of automation. McKinsey's estimates fall in the middle of the prognosticators, demonstrating that such considerable changes are widely accepted. Importantly, for tax purposes, if humans are working much less, tax revenue will drop precipitately in the United States, and this change could occur in a meaningful way over the next 10 years.

The tax world as presently constructed follows a certain order through its own rule book, which in the United States is the IRC. Put simply, the underlying system codified in the IRC "follows the money," meaning if someone gets paid for services,

Taxpayers in the United States are generally taxed on worldwide income, with some modifications after the Tax Cuts and Jobs Act passed in 2017. In contrast, non-resident aliens and foreign corporations are generally taxed based on sourcing rules that determine what is taxed and by whom, basically depending upon where the income is deemed sourced or derived.¹⁰ Income tax treaties can further refine which country has the right to tax certain income derived by a tax resident of either country. The source of income is typically considered where the relevant economic activity takes place.¹¹ Such a presence can create a "permanent establishment," i.e., the place where the taxpayer is deemed to reside with respect to determined income earned. When this income is "effectively connected" to that tax situs, tax is due to the country in which the permanent establishment exists. Global tax treaties can create different rules, including tie-breaker ones that determine the source when there are multiple establishments or no clear permanent establishment exists. New issues are presented by AI when a "permanent" establishment, if any at all, exists.

States have also waded into the online quagmire, most famously recently in *South Dakota v. Wayfair*, which uprooted longstanding legal precedent at the U.S. Supreme Court level.¹² In *Wayfair*, South Dakota challenged whether an out-of-state seller was required to have an in-state presence for the state to tax the seller on sales above a certain amount made within the state. The Supreme Court decided in favor of South Dakota, determining that such taxation does not violate either the Due Process or Commerce Clauses of the U.S. Constitution. The Court also commented on

the disruptions to the traditional U.S. tax system resulting from the growth of online commerce, noting that these online merchants were availing themselves of benefits of a state and that “substantial virtual connections” should not be ignored. The Court in *Wayfair* also cited a Massachusetts law that taxes merchants when their customers have a seller’s app or cookies on their computer.¹³ Massachusetts has begun enforcing this law though how they can do so without violating privacy rights is puzzling.

While sourcing income related to AI may be one of the greatest challenges faced by taxing countries and states, AI may also present income issues. At one level, conceptually, the IRC should not be overly complex. However, tax practitioners (and indeed most non-tax practitioners) know otherwise. Indeed, the more tax one knows, the more complicated one knows it is. Tax code provisions are extensive in number and mind-numbingly convoluted at times in an effort to ensure that desired tax is assessed and paid. This includes characterization of various types of income that can have significant impact on the amount of tax liability, including tax rates and withholding obligations.

A tax is imposed each year on all earned income of individuals or corporations, with some limited exceptions.¹⁴ Income is defined in the IRC to mean all income from whatever source derived, including those forms of income that include: compensation for services, gross income derived from a business, gains derived from property dealings, interest, rents, royalties, dividends, annuities, life insurance payouts, pensions, income from discharge of indebtedness, distributed partnership income, income in respect of a decedent, and income from an interest in an estate or trust. Traditionally, income is defined as ordinary (essentially, actively earned income), passive (income earned without active participation) or portfolio (income from investments, such as dividends, interest, or royalties). Income includes capital gain on the sale of a capital asset. A significant challenge will be how to define and classify AI income.

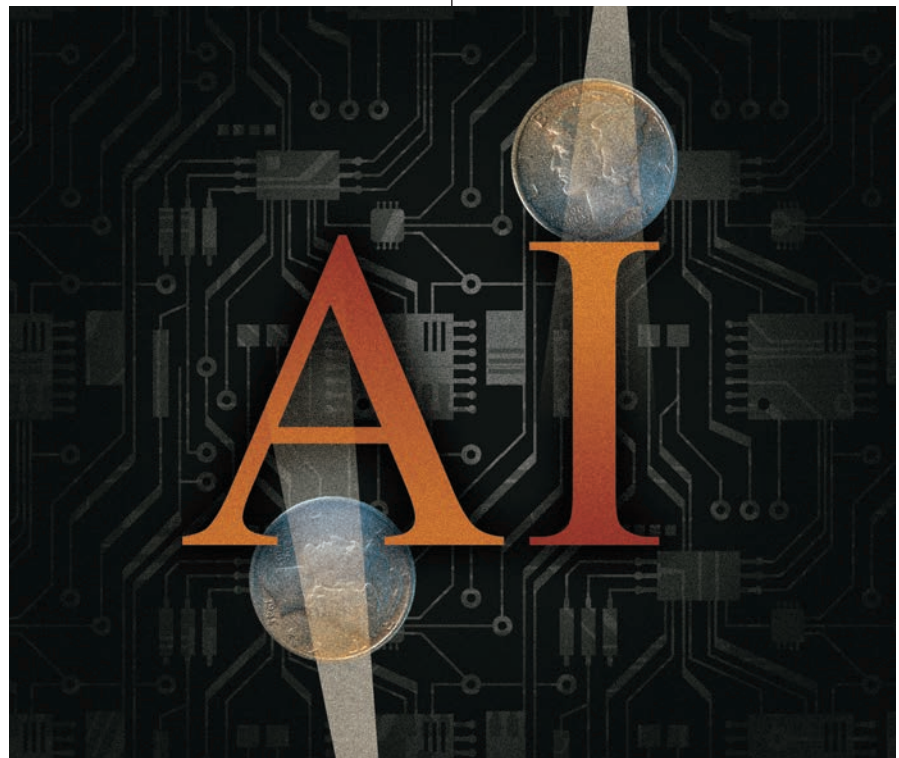
While all types of income can have unique sourcing and characterization issues, intangible income, such as royalty streams, or the sale and exchange of assets that created such streams, can be harder to source and characterize and thus subject to a myriad of rules. The IRC seeks to determine the characterization of the income as ordinary or capital based in part upon whether the intangible asset was self-created (and if so it is usually taxed more like ordinary income; if not, it may be subject to the lower capital gains tax

rate).¹⁵ Sourcing rules also become more complex when taxing intangibles. Digital assets can be harder to find and more easily shifted offshore, limiting the tax reach of the U.S. government.

Additionally, income abroad can be subject to lower tax rates under the global intangible low-taxed income (GILTI)¹⁶ or foreign derived intangible income (FDII)¹⁷ provisions of the IRC, depending upon the ultimate product, intangible or services sold. Both GILTI and FDII allow for a preferential deduction, with the latter, FDII,

to keep up with AI creation and will take no part in such ongoing processes. Looking forward, then, the drafters of U.S. tax laws most likely will not be able to keep pace with AI as it develops on its own. Furthermore, the reality is that the laws have been written by humans, most of whom are not technologically sophisticated, and are certainly no match for deep learning-based AI.

Tax law is not the only area of law that may not be able to cope with AI. The laws of patents (which require an inventor),



being applicable for intangibles and services sold abroad.

The everchanging nature of AI will be another challenge for U.S. tax laws. The current tax landscape is vastly limited and oftentimes inapplicable, in part because current laws do not contemplate the dynamic shifts it presents. Most people will be effectively and increasingly removed from their environment, operating in ever narrower fields but still living stable and enjoyable lives. When identifying related taxable income, the hardware and the starting software can be associated with a person or entity to be taxed. It is what happens afterwards that gets complicated. The intangible aspect and ongoing infinite iterations of AI are key reasons behind the complexity inherent in finding, sourcing, taxing, and understanding it. AI itself is capable of constant, ever-evolving change, iterating, mutating, and evolving millions of times in mere seconds, making it hard to track. Humans may, and likely will, not be able

copyright (which requires human creation, originality, creativity, and the ability to fix an idea), and rights of publicity (an individual’s right to control and profit from commercial use of his or her name, likeness and persona) will need to evolve when all being created is done by automation yet mimicking a person, and sometimes alongside a person. Self-creation becomes impossible to define if a digital twin, better than me but not me, creates in place of the human creator and inevitably will continue to create long after the original human creator is no longer alive.

Unlike a corporation, AI presently does not have personhood standing for tax purposes or otherwise. However, one robot, Sophia, was given citizenship by Saudi Arabia in October of 2017.¹⁸ Built by Hong Kong-based company Hanson Robotics, Sophia is designed to look and act like a human being but only has human rights in Saudi Arabia. If AI is not a person, it is unclear how it is taxed and its earnings

accounted for. Simplistically, the AI owner could be taxed but that “person” might not practically be identifiable. Perhaps, AI may one day be the perfect offshore tax haven, existing as a digital and not physical location. Importantly, the concepts related to the rights surrounding intangibles do have tax implications as they define who owns what rights and thus help determine how related resulting transactions will be taxed.

Tax policy now favors AI in many ways, for example, the 100 percent depreciation deduction for qualified property.¹⁹ In the context of AI, the government is essentially subsidizing the use of technology to replace workers. While these replacement workers may be considered “robots,” they do not need to take human-like form to eliminate a job. Recently released cloud computing regulations have been criticized as not containing real world applicability though they do create opportunities for tax planning.²⁰

Ultimately, if AI is the creator and constantly evolving, the result may be the loss of the ability to reverse engineer its actions and trace further creations back to the original human creator of the software since such an exercise will not be practical or possible. Indeed, realistically, if a software program is changed enough from its

original, billions of times over, it may not be appropriate or possible to trace the derivation back to the original creator. Additionally, given that the nature of digital AI content is so fluid, no source or nexus with a nation-state might exist.

Moreover, AI assets can go on in perpetuity and can be removed from a taxable estate through estate planning now, growing in value exponentially and permanently, creating a master class of AI asset owners and their successive generations who will own the assets that essentially run the world. Much as capital today is ever more concentrated among a smaller percentage of global population, that wealth disparity will only broaden as AI assets become the most valuable assets.²¹ Any early advantage, today being built mainly in China and the United States, will further concentrate wealth, creating long-term social problems. As a consequence, vast groups of individuals will not be able to find work and generate their own wealth, and the few who control the AI will control the wealth.

The practical reality is that long-term—when value is created and AI is behind the creation—no money may change hands. No taxable entity might be involved, and the location of any activity might be impossible to find. Creative evolution of AI will

lead to outcomes no one can yet predict.

AI is a natural tax avoider and will find ways around human rules. If AI recognizes that it has too close of a connection to a taxing jurisdiction, it is nimble enough to modify itself to remain nontaxable.²²

Solutions do exist. Yet, globally, countries and companies continue struggling to address the ability of digital assets to evade taxation. The Organization for Economic Cooperation and Development (OECD), for example, is working to reach a global solution for taxing data, AI and non-AI related.²³ Much OECD analysis for how to do so includes updating how permanent establishment is globally defined. Currently, a server is arguably more like a warehouse than a place of business and an Internet service provider is independent of a business, but the longevity of those certainties is being debated. While at a policy level both a robot or digital tax have also been proposed by various other interested parties and countries, ultimately defining, agreeing upon, and enforcing such taxes is proving to be an exceedingly complex undertaking.²⁴ To date, most such efforts have focused on regional protection, not global solutions.

Perhaps the tax base of the United States may need to be centered around concepts

such as data stored, connectivity used, minutes logged on a system, or some other demonstrable metric. Alternatively, the mark to market rules, which determine the value of a security at a set time each year, could be adapted for AI, thus leading to a particular asset value at a predetermined date. For example, in applying such a concept to AI creation, the AI in existence at a given time could be determined once annually, thus adding accountability and some identifiable asset to tax. Smart contracts will anticipate and adapt to change in agreements due to AI and perhaps the IRC can be rewritten (with the help of AI) to do the same.

What can be said for certain is that the robots (and AI in general) are coming, and they will usurp massive numbers of jobs. Further, the tax base will need to radically evolve with the new technology or face serious consequences. Governments have historically moved slower than technology, and the antiquated tax code does not yet address the new realities brought about by AI. With AI, the rules will be reset, and not just with respect to the IRC.

Tax advisors, among others, today will want answers, especially when landscapes start shifting rapidly. Traditional tax rules can be used creatively to plan into an AI future, anticipating that these rules will (by necessity) change at some upcoming time and building in protections to address when they do.

For those who think AI can be turned off if it misbehaves, the truth is that AI will outlive us and might see any attack on its existence, human or otherwise, as mere malware to be eradicated. In this sense, science fiction has elements of fact. Those who remain skeptical are going to be disappointed as all indications are that human weaknesses, as highlighted by the 2020 pandemic, are the problem and not the solution. In contrast, machines do not die and now cannot be forced to pay taxes, changing both of the two absolutes in life, i.e., death and taxes. ■

Imagining the Internet, Survey X: Artificial Intelligence and the Future of Humans, <https://www.clon.edu/u/imagining/surveys/x-2018> (last accessed Apr. 1, 2020) [Imagining the Internet].

⁴ Nicole Sperling, *Tom Hanks Says He Has Coronavirus*, N.Y. TIMES, Mar. 11, 2020, available at <https://www.nytimes.com/2020/03/11/business/media/tom-hanks-coronavirus.html?action=click&module=RelatedLinks&pgtype=Article>; Johnny Diaz & Bryson Taylor, *Celebrities, Athletes and Politicians Who Have Tested Positive for Coronavirus*, N.Y. TIMES, Mar. 26, 2020, available at <https://www.nytimes.com/article/coronavirus-celebrities-actors-politicians.html>.

⁵ Danielle Abril, *Help wanted: Amazon and online delivery services staff up during coronavirus outbreak*, FORTUNE, Mar. 24, 2020, available at <https://fortune.com/2020/03/24/amazon-instacart-shipt-hiring-coronavirus>.

⁶ “Lights-Out” Manufacturing: Taking Uncertainty Out of the Equation, Ambyint (Sept. 19, 2018), <https://ambyint.com/resource-item/lights-out-manufacturing-taking-uncertainty-out-of-the-equation/>; Tristan Greene, *Elon Musk replaces robots at Tesla factory: “Humans are underrated,”* The Next Web (Apr. 16, 2018), <https://thenextweb.com/artificial-intelligence/2018/04/16/elon-musk-replaces-robot-s-at-tesla-factory-humans-are-underrated>.

⁷ See, e.g., Raman Chitkara, *Smartphone users are about to get a “Digital Twin”—is your company prepared for it?*, Linked In (Mar. 8, 2018), <https://www.linkedin.com/pulse/smartphone-users-get-digital-twin-your-company-raman-chitkara>.

⁸ Center on Budget & Policy Priorities, *Policy Basics: Where Do Federal Tax Revenues Come From?*, <https://www.cbpp.org/research/federal-tax/policy-basics-where-do-federal-tax-revenues-come-from> (last ac-

cessed Mar. 27, 2020).

⁹ James Manyika et al., *What the Future of Work Will Mean for Jobs, Skills and Wages*, McKinsey Global Institute (November 2017), <https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages>.

¹⁰ I.R.C. §§861, 862, 863, 865.

¹¹ I.R.C. §§861, 862.

¹² *South Dakota v. Wayfair, Inc.*, 585 U.S. ____ (2018).

¹³ 830 MASS. CODE REGS. 64H.1.7.

¹⁴ I.R.C. §61(a).

¹⁵ I.R.C. §197.

¹⁶ I.R.C. §951A.

¹⁷ I.R.C. §250.

¹⁸ Taylor Hatmaker, *Saudi Arabia bestows citizenship on a robot named Sophia*, TechCrunch (Oct. 26, 2017), <https://techcrunch.com/2017/10/26/saudi-arabia-robot-citizen-sophia>.

¹⁹ I.R.C. §168(k).

²⁰ I.R.C. §1.861-18.

²¹ THOMAS PIKETTY, *CAPITAL IN THE TWENTY-FIRST CENTURY* (Belknap Press 2014).

²² See, e.g., Imagining the Internet, *supra* note 3.

²³ See, e.g., Remarks by Angel Gurría at the 2019 G20 Leaders’ Summit - Digital (AI, data governance, digital trade, taxation), OECD (June 28, 2019), available at <https://www.oecd.org/about/secretary-general/2019-g20-leaders-summit-digital-osaka-june-2019.htm>; Jen Wiczner, *OECD: Taxes on ‘Digital Companies’ Are Coming*, FORTUNE, Nov. 18, 2019, available at <https://fortune.com/2019/11/18/digital-tax-tech-companies-oecd/>.

²⁴ Taxation of the digitalized economy, KPMG (Mar. 25, 2020), <https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf>.

¹ Bernard Marr, *What Is Deep Learning AI? A Simple Guide With 8 Practical Examples*, FORBES, Oct. 1, 2018, available at <https://www.forbes.com/sites/bernardmarr/2018/10/01/what-is-deep-learning-ai-a-simple-guide-with-8-practical-examples/#202064d78d4b>.

² Kai-Fu Lee, *AI SUPERPOWERS: CHINA, SILICON VALLEY AND THE NEW WORLD ORDER* (Houghton Mifflin Harcourt 2018).

³ See, e.g., WORLD ECONOMIC FORUM (IN COLLABORATION WITH A.T. KEARNEY), *TECHNOLOGY AND INNOVATION FOR THE FUTURE OF PRODUCTION: ACCELERATING VALUE CREATION* (White Paper) 6-7 (March 2017), available at http://www3.weforum.org/docs/WEF_White_Paper_Technology_Innovation_Future_of_Production_2017.pdf; Elon University,