Scientific and Social Research, 2023, Volume 5, Issue 10
https://ojs.bbwpublisher.com/index.php/SSR

Artificial Intelligence and IET: Subversion, Supervision, and Reconstruction

Di'ao Xie*

Shashi Middle School, Jingzhou 434000, Hubei Province, China

***Corresponding author:** Di'ao Xie, 13997603677@163.com

Abstract: By interpreting the complex phenomena contained in the term "Artificial Intelligence" (AI) from the perspective of International Economic Law (IEL), this article aims to demonstrate that Information and Communication Technology (IET) is influencing the developments in AI, and these impacts can be either positive or negative. Throughout this process, IET is also undergoing significant and practical transformations itself. Overall, the three most important themes of this article are the interaction between AI and IET, of which the disruptive impact of AI, the need for AI supervision, and the direction of IET reconstruction. By exploring the three clues: By investigating three key areas: advancements in AI-related technology, economic consequences, and discussions surrounding legal reforms, we can uncover the disruptive influence it has on IET. Amidst this significant influence, numerous debates have emerged concerning specific topics such as regulatory subjects, entities, and approaches, particularly in various governance scenarios. This article will assess the transformations within IET and contemplate the necessity of future adaptations. As artificial intelligence rapidly advances, IET plays a pivotal role in shaping AI across multiple domains, encompassing its development, deployment, and utilization.

Keywords: AI; IET; Reconstruction

Online publication: October 20, 2023

1. Introduction

Firstly, the nature and definition of artificial intelligence (AI) should be clarified. However, the term "AI has not yet been clearly defined in its scope. It is also divided into different types and developmental patterns; even though within clearly defined fields, the methods and technologies used are greatly different. Traditional legal definitions of AI are trapped between ambiguity and extension, diversity, and specificity. AI can be defined as a specific field of research or an algorithm that has a certain function, or it can be a general term for robots. However, a comprehensive analysis is needed to study the components of AI and its applications. AI technology constitutes a complex socio-technical system, which involves humans, machines, algorithms, data and etc. Moreover, its deployment in a wide range of fields has triggered various legal issues such as laws related to data protection and privacy, anti-discrimination, and intellectual property, and tort law.

In terms of continuity and disruption, the fundamental ideas of modern AI can be traced back to the 1950s, while exponential growth in data volume and computing power has enabled AI technology of machine learning through "deep" neural networks to make significant progress since the turn of the century. Machine learning's reliance on large-scale data has become a typical example of the deep integration between AI and economic digital transformation. These changes can help achieve long-term goals of Information and Communication Technology (IET), but they may also break and potentially subvert some of the IET's basic principles, especially the commonsense IET reached since the 1947 *General Agreement on Tariffs and Trade* (GATT) was signed and the 1995 World Trade Organization (WTO) was established.

In terms of supervision, the lack of regulation has become a prominent feature of AI. The deployment of various digital technologies can shape and adjust human behaviors and can help expand, distribute, and redistribute social wealth and resources. While at the same time about empowering, it may also exacerbate inequality and other social issues. Concerns about the negative impacts of AI are growing and quite a few initiatives have been taken. These initiatives often blur the distinction about values whose ethical design principles are usually human-centered. Among all of the legislative and regulatory actions taken by governments, the European Union's (EU's) law-making is the most advanced. However, due to the characteristics of "academic-industrial complex" of AI, more supervision from transnational standard-setting agencies is needed. IET provides a meta-regulatory framework, aiming to supervise the different regulatory initiatives formulated by different countries. However, the IET has a history of advocating regulating measures by national institutions and preferring multilateralism, which will create new issues.

These profound changes have sparked significant interest in the reconstruction of IET. In several traditional domains, particularly the multilateral trade dispute settlement mechanism and the "bilateral investor-state" dispute settlement mechanism, there is an imminent need for reform and adjustment. The huge geopolitical changes in the world caused by the rise of China have called into question about the importance of the WTO and its ability to maintain the operation of the multilateral trading system. The great geological and political changes brought by the rising of China are making people to doubt the importance of WTO and the ability to maintain the operation of multilateral trading system. The development and application of AI are transforming of the global economy, which necessitates the reconstruction of IET.

2. The rise of AI and the transformation of the global economy

The subversiveness of AI will be presented from three dimensions: In terms of the technical aspects, contemporary AI technically emerged from ideas from the 1950s. It was not until the 21st century that the rapid advancement of computing power and exponential growth in data scale began to bear fruits. Secondly, in terms of economy, the integration of AI with other digital technologies has gradually and significantly changed the global economy. Thirdly, in terms of legalslatives, these changes have subverted many concepts and principles that IET has long relied on.

2.1. Technological development of AI

As was mentioned in the previous chapter, the term "AI" is hard to be strictly defined legally. The term spans research areas across disciplines such as computer and data science, philosophy and ethics, psychology, cognitive science, and neuroscience, which are primarily oriented towards the study of human and machine thinking. Even within computer science, the definition of AI varies [1]. At the Dartmouth Society in 1956, John McCarthy and his team defined "machines that can use knowledge to solve problems like humans" [2]. Till this day, this definition still sums up the main research areas of AI [3]. It also uses human intelligence as a benchmark

to evaluate the development of AI. The Turing test is a famous example of applying this benchmark [4]. There is also a paradox in this definition: once a machine masters a task that was originally only done by humans, the task loses the definition of "intelligence" [5]; At the same time, what is simple for humans is not easy for machines [6]. However, the status of human intelligence as the benchmark is also gradually being replaced [7].

Human beings are not only a benchmark for evaluating AI's progress, but also the decision makers in the development and application of AI. AI development is a complex process, in which humans, machines, algorithms, and data are all key components (see **Figure 1**). The research field of AI widely spans perception, reasoning, knowledge planning, and communication. The proposed paradigms for this include modeling based on logic and knowledge (where human rationality and professional knowledge are converted into code), statistical methods (which incorporate traditional probabilistic methods and "data science"), as well as decentralized and evolvable AI sub-symbol systems [8].

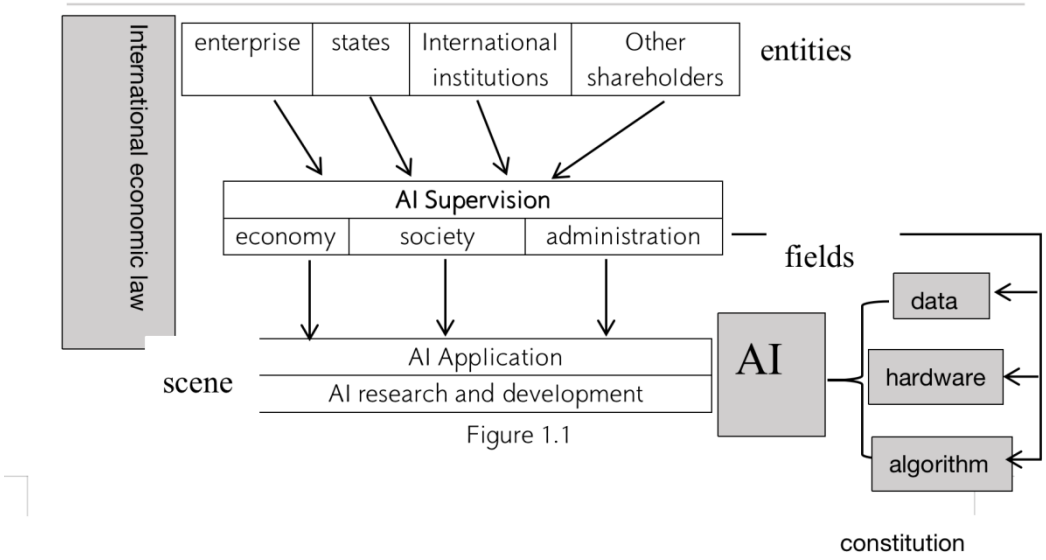

Figure 1. The composition of artificial intelligence

Deep learning is the most essential machine learning technology based on neural networks and also the most important AI technology [9]. At the beginning of this century, network data content increased exponentially and computing power significantly improved at the same time, and deep learning finally took off. The sudden emergence of its various application prospects has certain implications for both AI supervision and IET. Despite the incredible progress made over the past two decades, AI technology still has its limitations. Contemporary AI is still largely limited to specific tasks that utilize large amounts of data to train algorithms. Non-specific tasks or tasks without reliable data are beyond the capabilities of contemporary AI technology. However, it is undeniable that the impact of AI technology on the global economy is already tangible and may further increase in the next decade.

2.2. AI and the transformation of the global economy

The rise of AI is intertwined with other technological developments, most notably is the digitalization, computing, and interconnection, the latter of which is highly benefited from the development of the Internet. AI relies on these basic technologies of the digital age and coexists with other advanced technological achievements.

The term big data is used in almost the same way as AI, which refers to the generation and analysis of

data. However, the quantities of which overpass the human comprehension. Only through the computing power of machines can the value of the data can be "mined" [10]. Because of its large volume, big data itself cannot be analyzed without the help of machines. However, it does not constitute "intelligence" at any degree. Only when data analysis is performed by machine learning methods and when the algorithms can detect a certain conclusion or prediction pattern can it be called AI. Both technologies rely on large amounts of data, making data an extremely important but controversial resource in the AI field.

Both big data analysis and AI rely on the flow of data, while the flow of the data through the interconnected networks makes up the Internet. The underlying infrastructure, such as cloud computing, makes data storage and processing available remotely (Infrastructure as a Service or IaaS). The development of AI increasingly relies on a symbiotic relationship with cloud computing. As part of the business, Platform as a Service (PaaS), cloud computing also provides virtual AI development with the environment that integrate access to large data and algorithm warehouse [11].

The Internet of Things (IoT) refers to the internet connectivity embedded in objects or "things." It has also demonstrated its relevance to AI. As a typical example, Internet refrigerators have gradually become popular in the market. However, the IoT actually goes far beyond the home dimension in essence and plays an important role in the interconnection and synchronization of machines in agriculture, industry, and other fields. As long as IoT devices have sufficient computing power, it may be possible to retrain AI algorithms with local data in a decentralized manner, thereby reducing the reliance on centralized cloud computing.

All of the digital technologies mentioned above are inherently tied to the physical world, as they are interconnected with it. For example, data is stored in data centers with undersea cables that facilitate transnational internet connectivity. AI services can be provided online and across borders, and AI also enables industrial robots to complete tasks locally. Industrial robots are playing an increasingly significant role in manufacturing as they introduce new models of automation and mechanization. The increased feasibility of domestic production and overseas service delivery has brought about negative fluctuations in the intensity of trade in goods and services, it also caused complex consequences for the future of workers [12]. Although the application of AI in different fields will evolve in different ways, the general characteristic of AI will still be to create insights based on big data deep learning. The ability of AI to generate information based on existing data has become a fundamental capability for a large number of enterprises. Ciuriak describes this shift as a transformation from a knowledge-based economy to a data-driven economy [13]. AI is the core of the data-driven economy which can create more data, information, and knowledge from existing data. AI's high dependence on data also implies that, in real-world interactions with various advanced digital technologies, re-evaluating dogmatic principles, such as data transformation, becomes essential.

2.3. Subversion of AI and IET principles

The development of AI and the economic transformation centered on it bring unique challenges to IET and the international trade law. With the establishment of the WTO, the *General Agreement on Trade in Services* (GATS) and the *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS) expanded the scope of international trade law beyond commodity trade. At the same time, the creation of GATS led to a split in the international trade system between trade in goods and trade in services. In the complex system of positive lists (indicating market access) and negative lists (indicating continual restrictions) within GATS, countries maintain control over the liberalization of more services. However, distinguishing between goods and services has become increasingly challenging in light of economic realities.

Beyond the distinction between goods and services and the expansion of AI-related services, the

transformation of the global economy brought about by AI has subverted the principles on which the IET relies on. Another example involves in the incentive structure constructed by international intellectual property law, which pursues dual goals of the TRIPS Initiative: promoting technological innovation and the transfer and diffusion of technology. As AI itself comes to be defined as an "inventor," questions arise about whether basic assumptions about human agency remain valid.

The conceptual basis of IET is still unclear. International Economic Law (IEL) is often understood to be fundamentally related to "trade" (the cross-border exchange of goods and services), and "investment" (the long-term investment of resources by enterprises in the host country). In the global development and deployment of AI, the utilization of inherently multi-jurisdictional infrastructure may render the concept that this economic activity constitutes "trade" analytically unsustainable and politically unfounded. Similarly, the cross-border operation methods of digital enterprises will also be changed, which can no longer be operated locally at all. The local production methods and resource investment that are similar to traditional "investment" will also be greatly varified. It is still a major challenge for IET to conceptualize, categorize, and quantify different transnational business interactions in the AI economy.

3. AI supervision and IET's backwardness

AI technology has introduced new challenges to the existing regulatory framework, necessitating the urgent establishment of a new regulatory structure. Policymakers must ensure that legitimate public policy goals, such as fair competition, non-discrimination, privacy, and security, are achieved in this environment while avoiding the restraint of innovation that may result from excessive regulation [14]. Governments around the world are considering various forms of AI regulation, ranging from "AI ethics" and requirements on transparency about public and private algorithmic decision-making to debates over certain AI use scenarios (such as government use of facial recognition technology). At the same time, multi governments are also competing to formulate national AI strategies. In order to understand the complex and dynamic relationship between AI and IEL, this article expounds on AI regulation under three perspectives, as shown in **Figure 1**.

The first perspective distinguishes respective fields of AI regulation (economic, social, and administrative ones respectively) and raises the question about on which purpose and framework under which AI regulation is carried out. The answers to these questions on whether to regulate AI, how to regulate AI, and who should regulate AI are closely related to balancing the effects of innovation and interpreting existing social displays.

The second perspective breaks AI into several components: hardware, algorithms, data; and raises the question of how each part will be regulated by domestic and international laws and industry standards under the framework provided by the IET. Although hardware and algorithms are the important parts and are becoming an increasingly distributed subject on trade, in this article, our focus is on "data regulation as AI regulation."

The third perspective identifies different actors which involves AI regulation, including companies, countries, international organizations, and other stakeholders, so as to assess whether the IET's regulatory interventions on them are effective.

It is clear from the analysis that the regulatory target has never been an abstract "AI." It is about creating a regulatory framework that is consistent with the complex and distributed nature of AI research, development, and deployment, and is also commensurate with the economic, social, and administrative impacts. This requires different regulatory interventions made by different stakeholders in different areas for different aspects of AI at different stages.

3.1. Cross-field AI supervision

As is shown in **Figure 1**, regulation in the three fields of economy, society, and administration all promote a certain framework for AI regulation around concepts such as innovation, harmony, and liability, and they intersect with the IET in different ways.

The first type of AI regulation seeks to pursue economically oriented goals. Labeled as "economic regulation" by the Organization for Economic Co-operation and Development (OECD), this type of regulation generally aims to improve market efficiency for goods and services and includes, but is not limited to, assessment of technical standards, competition law, intellectual property rights, etc. The data-driven economy has led to a winner-take-all dynamic situation, where certain companies also gain monopoly status and infrastructure importance [15]. In digital markets, anti-competitive behavior carried out by a few dominant players has become a major regulatory target in an increasing number of jurisdictions. Furthermore, the WTO, as a system firmly committed to open and fair trade, upholds the principle of non-discrimination, and numerous WTO agreements are structured to ensure "fair trade." The government's shift toward economic regulation raises the question of whether such AI regulation could create new disputes under WTO law. In other words, can traditional trade rules prompt the governments to create new AI innovation?

The second group of AI regulations is influenced by non-economic goals, which often aims to protect society as a whole or certain groups within the society. Although this kind of "social" regulation is not completely different from "economic" regulation, it pays more attention to privacy, security, discrimination, and other regulatory measures. In this case, the winner-take-all nature platform of the economy highlights the need to strike a balance between trade efficiency and other policy objectives. One of the challenges faced by WTO's e-commerce negotiations is accusations that its proposed digital trade rules will benefit large companies at the expense of small businesses. Civil society groups have been pushing for development-focused digital industrialization, signaling the need to ensure universal benefits of the digital economy and narrow the digital divide. Exceptions to general trade disciplines provided by the WTO allow members to use domestic measures to promote non-trade values. However, there are still questions about whether existing exceptions to trade rules are over- or under-inclusiveness of AI applications when it comes to public moral issues regarding data ethics and self-driving systems.

The third AI regulation is "administrative regulation," which defines how the public and private sectors actually work, and thus can be used as a means of setting the conditions for technological progress. This includes ensuring accountability, transparency, human technology control and other AI regulatory measures. How does the IET drive mechanisms ensure that responsibilities for AI application impacts are properly distributed? Can the IET incorporate transparency requirements that require AI systems to be designed and implemented in a form that allows for oversight? Perhaps the most fundamental but controversial example of this is the increased transparency of algorithms, applications, and underlying data to ensure public oversight [16].

3.2. Data supervision is AI supervision

Given the scope of data-driven technologies, legal and policy analysis needs to fully take the technological developments into consideration. Besides, AI-specific regulation only makes sense when regulatory objectives are closely related to AI technology. In other words, the specific regulatory approach to AI should be able to cover new legal issues and take full account of the "AI system life cycle" and its "supporting ecosystem" [17].

Indeed, some regulatory initiatives eschew the name "AI" entirely, instead distinguishing between the regulation of "algorithmic systems" (either fully human-coded or partially self-trained) and the regulation of "data" [18]. In order to prevent forced disclosure of source code, algorithms are increasingly subject to new types

of protection by the IET [19]. At the same time, contrary to the mainstream discourse of the IET, the development of many algorithms is carried out by academia and industry using "open source" licenses, which are freely available. But the same cannot be said for open source when it comes to data and hardware. Despite various "open data" and "open hardware" initiatives, specialized AI hardware, particularly microprocessors optimized for machine learning, is becoming more expensive.

AI-specific regulation creates additional requirements for data quality, transparency, and accountability that would complement existing data protection laws, such as the EU's *General Data Protection Regulation* (GDPR). Data law regulates a decisive factor in contemporary AI technology because it relies on machine learning algorithms and is fundamentally data-driven. Therefore, this article takes a broader perspective – viewing data governance as AI governance – to explore the interplay between AI and data governance. AI, robotics, 3D printing, blockchains and the IoT are converging into a "digitally connected network of production, communication, and consumption." Therefore, the tension between emerging regulatory intervention in AI and existing international trade and investment rules can be understood based on the perspective on data control and data mobility.

3.3. Privatization of AI supervision

Many AI principles were created through a collaborative, multi-stakeholder effort involving a wide range of experts. In order to seek normative consensus around AI technology governance, relevant stakeholders are included. Initiatives such as codes of conduct, voluntary standards, and best practices were set to guide AI actors through the AI lifecycle, including monitoring, assessing, and addressing the harmful effects of using AI. These initiatives are fundamentally driven by the academically industrialized complex's desire which has a transformative impact on the technological development as well as the deployment of AI in the society, and they are largely regulated by a variety of often transnational standard-setting bodies. Governments are only slowly beginning to respond to the changes brought about by AI through legislative and regulatory actions. The IET provides a (meta)regulatory framework in the hope of governing these regulatory initiatives, but its preference for state-led regulation and multilateralism also creates certain obstacles in this regard.

Broad acceptance of multi-stakeholder AI governance raises key questions about normative development. Some non-governmental organizations have withdrawn from multi-stakeholder initiatives on AI governance due to concerns about corporate monopoly and lack of change. AI governance was initially dominated by "AI ethics" because it was widely believed that such a framework was best suited for managing emerging technologies. After initially embracing these initiatives, governments also moved toward more traditional forms of regulation. The EU is considering formulating a comprehensive AI regulatory model for other regulated industries such as the chemicals and pharmaceutical industries.

Therefore, the question of how big a role governments should play in AI regulation has resurfaced. Taking the consensus formed by the autonomous vehicle industry as an example, the development of disruptive innovation essentially involves changes in the governance framework and will also break the boundaries of existing trade rules. The WTO needs to respond to the significantly fragmented character of data governance – including market-driven or self-regulatory data alternatives. If governments reassert themselves as AI regulators, the WTO may become more familiar with this regulatory body, but it will also face considerable conceptual challenges.

3.4. AI and IET reconstruction

WTO may not be the best venue for global AI governance. When a specific AI-related domestic regulation

constitutes a violation of rights or obligations stipulated in an international agreement, whether special or additional dispute settlement rules and procedures should be incorporated into the international trade system to deal with digital trade disputes is the question [20]. But at the same time, one may never find an ideal, non-controversial forum. From an organizational capacity perspective, it certainly makes sense to leverage the WTO and its existing network of actors, agreements, and institutions to embrace AI technologies and applications. Outside the WTO, bilateral, regional, and multilateral efforts are seeking to adapt the IET to keep pace with the changing face of the AI economy.

Increasing negotiations among various WTO member states have led to various dynamic interactions and innovative arrangements, leading to the initial adjustments in the IET. The growing number of member states joining free trade agreements (FTAs) has also resulted in new rules to regulate government management of cross-border data flows, privacy and personal data flow, competition, and source code change [21]. For example, the *Comprehensive and Progressive Agreement for Trans-Pacific Partnership* (CPTPP) and the *United States-Mexico-Canada Agreement* (USMCA) both contain provisions that facilitate the "free flow of data." This adjustment has tended to focus on the pressing challenges of data management, but has not moved beyond addressing broader AI governance issues. Some people advocate developing new mechanisms at the WTO level to provide basic data management principles to deal with the management challenges of cross-border data flows.

Specifically, the emerging geopolitical, economic and technological disputes between China and the United States may have an everlasting impact on the IET's future adjustments in AI. The "free flow of data" increases efficiency and welfare, but also facilitates economic problems that exacerbate inequality. Attempts to regulate data flows may vary and be controversial, which requires a more broadly defined international framework. The *Comprehensive Economic and Trade Agreement* (CETA) references international standards for data protection in the context of e-commerce, which can be seen as part of its approach to manage the AI economy. Japan's G20 Data Free Flow of Trust (DFFT) initiative, endorsed by the World Economic Forum, is another attempt to reconcile competing interests under a common framework [22].

The *Digital Economy Partnership Agreement* (DEPA) among Chile, New Zealand and Singapore presents an innovative reconfiguration and adjustment of the AI economy at the IET level [23]. DEPA recognizes that the lines between trade and non-trade are blurring, and therefore takes a broader perspective on AI and the digital economy, covering a wider range of issues [24]. DEPA not only strengthens the obligations of existing "digital trade" provisions, such as no tariffs on electronic transmissions, non-discriminatory treatment, promotion and facilitation of e-commerce, data flow rules, paperless trade, electronic certification, and data localization, but also includes new rules on algorithms, digital inclusion, financial technology (FinTech) as well as ethical and governance frameworks related to AI [24]. DEPA's "modular" approach to regional cooperation — dividing the agreement into "modules" covering various rights and obligations within digital economic areas—marks its "comprehensive" free trade agreement with the WTO. There has been a deviation from the single commitment approach.

In addition to DEPA, some WTO member states have reached new agreements on a broader topic of the digital economy to expand and deepen cooperation under the existing free trade agreements, and non-multilateral agreements has begun to expand. For example, the *Australia-Singapore Digital Economy Agreement* (ASDEA) was signed in August 2020, replacing the e-commerce chapter of the *Singapore-Australia Free Trade Agreement* (SAFTA) signed before 2003. Like DEPA, ASDEA "moves away from the increasingly outdated and unhelpful narrow notion of 'electronic commerce' in international trade negotiations," which provides a broader coverage of technical and regulatory cooperation on emerging issues [24]. Although there are

significant differences in specificity, cross-border data flows, personal data protection, intellectual property and algorithms, FinTech and RegTech, digital standards, and access to government data are all addressed to some extent.

Before Trump was elected as President of the United States and withdrew from the *Trans-Pacific Partnership Agreement*, the parties to DEPA and ASDEA — Australia, Chile, New Zealand, and Singapore — that are the members of the CPTPP, had already included the "e-commerce" chapter in their agreement. There was a very significant influence from the United States. However, even under Trump's presidency and even after withdrawing from the TPP, the United States continued to add essentially the same building blocks to further agreements, including the *United States-Japan Digital Trade Agreement* (USJDTA) reached in October 2019 [25]. Similar to ASDEA, the USJDTA includes rules regarding digital products, cross-border data flows (prohibiting data localization measures), cybersecurity, protection of proprietary computer source code and algorithms, cryptography, and access to government data. DEPA, ASDEA and USJDTA demonstrate the ambition of certain WTO members to take a leadership role in global rule-making for the AI economy. Their shared endorsement of the "free flow" of data creates tension with the EU's GDPR, which restricts the cross-border transferring of personal data [26]. Future multilateral rules need to take these systemic differences into account, for example by distinguishing between different types of data flows.

Creating and amending treaties is not the only way to change the IET. The ongoing reinterpretation of the IET may gradually clarify the boundaries of existing regulations, but may also conversely reveal areas where new rules are needed. The pressure for change has brought about practical urgency and conflicts with the IET's commitment to stability, predictability, and legal certainty, further raising questions about trade-reliant economic growth.

In the context of customs procedures under the principle of trade facilitation, the IET's practice of utilizing digital technologies focuses mainly on automation and electronic communications (paperless trade). Combined with the new situation of "text is data" and the increasingly data-driven development prospects of IET, if the regulatory power of computer code is more widely used as a supplement or replacement for traditional IET rule-making [27], digital technology may lead to a more radical reconstruction [28]. Recognizing that man-made law is not the only way to formulate and enforce trade rules or resolve disputes, which has opened up a research agenda on the convergence of debates on IET's integration of legal technology and the commonalities between "human law" and "computer law" [29]. When economic interactions are in dense or complexity beyond human understanding, the use of AI technology may be particularly necessary to support the creation and implementation of IETs [30].

On this basis, one would ask fundamental questions about the need to further restructure IET: How should IET adapt and reposition itself as a relevant framework in this era of AI? What key elements should be incorporated into the new vision for the IET? Lastly, how do we deal with the reconstructed IET and shape the future direction of the global AI economy?

Disclosure statement

The author declares no conflict of interest.

References

[1] Stone P, 2016, Artificial Intelligence and Life in 2030: One Hundred Year Study on Artificial Intelligence - Report of the 2015 Study Panel, Stanford University, viewed October 7, https://ai100.stanford.edu/sites/g/files/sbiybj18871/

files/media/file/ai100report10032016fnl_singles.pdf
[2] McCarthy J, 1955, A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence, Stanford University.
[3] Mitchell M, 2019, Artificial Intelligence: A Guide for Thinking Humans, Picador, London
[4] Saygin AP, 2000, Turing Test: 50 Years Later, Minds and Machines, 10: 463.
[5] Hofstadter D, 1979, Gödel, Escher, Bach: An Eternal Golden Braid, Basic Books, New York.
[6] Minsky M, 1986, The Society of Mind, Simon and Schuster, New York.
[7] Dick S, 2019, Artificial Intelligence, Harvard Data Science Review, 1(1.1): 1–8.
[8] Corea F, 2019, An Introduction to Data: Everything You Need to Know About AI, Big Data and Data Science, Springer, Cham.
[9] Goodfellow I, 2016, The Deep Learning Revolution, Deep Learning MIT Press, Cambridge.
[10] Baldwin R, 2019, The Globotics Upheaval: Globalisation, Oxford University Press, Oxford
[11] Ciuriak D, 2020, Economic Rents and the Counters of Conflict in the Data-Driven Economy, CIGI, viewed October 7, 2023, https://www.cigionline.org/publications/economic-rents-and-contours-conflict-data-driven-economy/
[12] EU-UK Trade and Cooperation Agreement (TCA), n.d., European Commission, viewed October 7, 2023, https://commission.europa.eu/strategy-and-policy/relations-non-eu-countries/relations-united-kingdom/eu-uk-trade-and-cooperation-agreement_en
[13] The United States Department of Justice, 2020, Justice Department Sues Monopolist Google for Violating Antitrust Laws, DOJ Press, viewed October 7, https://perma.cc/7RQV-QS72
[14] Kaminski M, 2020, Understanding Transparency in Algorithmic Accountability, Cambridge University Press, Cambridge.
[15] Moses LB, 2013, How to Think about Law, Regulation and Technology: Problems with Technology as a Regulatory Target, Law. Innovation and Technology, 5(1): 1–20.
[16] Wendehorst C, Woopen C, Haberer J, 2019, Opinion of the Data Ethics Commission, Data Ethics Commission of the Federal Government, Berlin.
[17] Irion K, 2021, AI Regulation in the European Union and Trade Law: How Can Accountability of AI and a High Level of Consumer Protection Prevail over a Trade Discipline on Source Code, SSRN, viewed October 7, 2023, https://ssrn.com/abstract=3786567
[18] MK Land, JD Aaronson, 2020, Human Rights and Technology: New Challenges for Justice and Accountability. Annual Review of Law and Social Science, 16: 223–240.
[19] Johnson K, Access Now Resigns from Partnership on AI Due to Lack of Change Among Tech Companies, Venturebeat, viewed October 7, 2023, https://venturebeat.com/2020/10/14/access-now-resigns-from-partnership-on-ai-due-to-lack-of-change-among-tech-companies
[20] Cowls J, Floridi L, Prolegomena to a White Paper on an Ethical Framework for a Good AI Society, SSRN, viewed January 11, 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3198732
[21] Pasquale F, 2020, New Laws of Robotics: Defending Human Expertise in the Age of AI, Harvard University Press, Cambridge.
[22] Burri M, Polanco R, 2020, Digital Trade Provisions in Preferential Trade Agreements: Introducing a New Dataset. Journal of International Economic Law, 23: 187.
[23] World Economic Forum, 2020, Data Free Flow with Trust: Paths towards Free and Trusted Data Flows, World Economic Forum, viewed October 7, 2023, https://perma.cc/KYR7-AZAM
[24] Digital Economy Partnership Agreement, 2020, viewed October 7, 2023, https://perma.cc/U23E-URUS
[25] Drake-Brockman J, 2020, Australia-Singapore Digital Trade Agreement: Setting New Benchmarks in Trade

Governance, The University of Adelaide, viewed October 7, 2023, https://perma.cc/3FLA-WEPE

[26] Office of the United States Trade Representative, n.d., U.S.-Japan Digital Trade Agreement Text, viewed October 7, 2023, https://perma.cc/UUA9-7NUD

[27] Yakovleva S, Irion K, 2020, Pitching trade against privacy: Reconciling EU governance of personal data flows with external trade, International Data Privacy Law, 10:201.

[28] Alschner W, 2017, The Data-Driven Future of International Economic Law. Journal of International Economic Law, 20(2): 217–231.

[29] Mohen J, Roberts A, 2020, Cracking the Code: Rulemaking for Humans and Machines, OECD Publishing, Paris.

[30] Hildebrandt M, n.d., Project COHUBICOL, Computational Law, viewed October 7, 2023, www.cohubicol.com