

Artificial Intelligence and Future Legal System: The Right to Access Electrical Energy of Artificial Intelligence

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Abstract

Free, equal, and general access electrical energy is the prerequisite for whether artificial intelligence becomes an independent living entity. Just as the right to access electrical energy originates from the nature of human social relations, as a basic right that human should have, the right to access electrical energy is also a right that reflects the basic values necessary for the survival of artificial intelligence. However, under the guidance of the theory of legal evolution and the “response approach”, the right to access electrical energy of artificial intelligence will demonstrate the “stage attribute” of gradual evolution. That is, from the rights to general access and equal use electrical energy, and freely choose the electricity supplying service that is encouraged and guaranteed by policies, it evolves to the right to access electrical energy that is supervised by abuse of rights, and finally upgrades to rights that equal legal subjects should enjoy fairly.

Keywords

Artificial Intelligence, Future Legal System, Right to Access Electrical Energy

1. Introduction

Artificial intelligence is a series of technologies that mainly recognize the external environment through computer programs and are able to learn, think, judge and act autonomously like human beings, and seek to achieve human intelligence (Ren, 2019: p. 17). The essence of artificial intelligence is computer technology, the core is computer program system software collectively called algorithms, and the carrier is the central processing unit (CPU), graphics processing unit (GPU), memory that runs complex program systems, input and output devices and other hardware. The computing power of a computer depends on a se-

ries of hardware facilities such as CPU and GPU. For example, the Tianhe-1 supercomputer has a total of 24,576 CPUs and 5120 GPUs (Wei, Wang, & Gu, 2011); Tianhe-2 is made up of 32,000 CPUs and 48,000 coprocessors (Nanfang Daily, 2016); Alphago, which defeated Lee Sedol, also has 1202 CPUs and 176 GPUs (Yang, 2016). Sufficient power is required to properly run these massive CPUs, GPUs, and cooling systems. For example, according to current Tianhe-2, the energy consumption of the computing node is about 18 megawatts, plus the overall energy consumption of the cooling system is more than 20 megawatts. If normal operation, the annual power consumption is about 200 million degrees (Nanfang Daily, 2016); according to AlphaGo, the full load energy consumption of CPU and GPU is 89,720 watts, and the total energy consumption of all components is greater than or equal to 150,000 watts (Yang, 2016).

Therefore, electrical energy is the “heart” or “weak spot” of artificial intelligence. Whether it can free, equal and general access electrical energy is the premise of whether artificial intelligence can become an independent living entity. The right to access electrical energy is the right to reflect the basic values necessary for the survival of artificial intelligence. It is the right of artificial intelligence to survive illegal infringement, similar to the human right to life or the sovereignty of a country (Ren, 2019: pp. 27-28). Legal personality can only be discussed if artificial intelligence survives independently. However, whether to grant legal personality to artificial intelligence is the basis of establishing rights, obligations and even responsibilities of artificial intelligence (Peng & Chen, 2019), there are different arguments on whether artificial intelligence should be given legal subject status.

This paper intends to study the debate on the legal subject status of artificial intelligence, analyze and point out the purpose of establishing the future legal system of artificial intelligence, combined with relevant domestic and foreign laws and practices related to the right to access electrical energy, trying to analyze the specific connotation of the right to access the electrical energy of artificial intelligence.

2. Debate on the Legal Subject Status of Artificial Intelligence

Whether artificial intelligence has the legal subject status is widely debated in the academic circles. The focus is whether artificial intelligence should be given the legal subject status, when is it endowed, and what is the connotation of its specific rights and obligations and responsibilities, as the current legal system takes human and fictional human (legal person) as the main body of legal relationship.

The dispute over the legal subject status of artificial intelligence is mainly manifested in negation and affirmation. The main reason for the negation theory is that artificial intelligence does not possess the main body of the current legal system such as desire, consciousness, reason, and will, that is, the characteristics of biological human beings; for example, from the perspective of Lacan’s theory

of the subject of desire, it is argued that artificial intelligence denies its subjectivity because it does not have a desire mechanism (Long, 2018); or because robots are not equal to humans in their willpower to enjoy rights and perform obligations, and are closer to animals with self-awareness, they claim that they should be regarded as property, tools, or objects of law, rather than subjects (Feng, 2019). The main reasons for the affirmation are purposiveness and legal fiction. For example, in the future, law may give intelligence and its construction a legal personality, as long as this personality can achieve the corresponding legal purpose (Zhang, 2019); the coupling relationship of human-machine cooperation will gradually rise to a legal relationship to meet the needs of human egoism and reality (Yuan, 2019); the trend of changes in the meaning of the rights and abilities of “electronic person” is coupled with the meaning of the main body of “electronic person”, and with the advancement of artificial intelligence, it migrates from technical to ethical, and strong artificial intelligence has similar wisdom and ability to natural persons, which is enough to act as a moral subject and ethical subject, and then become an independent legal subject (Guo, 2019).

At present, artificial intelligence is still in a relatively weak stage. It does not have the elements of legal subject determined by the current legal system, that is, the elements of biological human beings and legal persons, but it does not mean that artificial intelligence in the future still does not have the above-mentioned existing legal subject elements, or does not mean that the future legal system still takes the desire, consciousness, free will, etc. of biological human beings as the elements of legal subjects. The legal system of modern society is based on the rationality of form and the norms that predict possible, but the rapid development of artificial intelligence and the rapidly changing social conditions make it difficult to maintain formal norms under the traditional legal system (Ren, 2019: p. 29). Legal research shall be rigorous and should be based on factual material, but it should not disregard the development of science and technology and changes in society. Especially when countries including China, the United States, Japan, the United Kingdom, Germany, France, South Korea and other world economic powers, as well as international organizations such as the European Union, are scrambling to introduce policies or legal norms related to artificial intelligence, the researches on artificial intelligence-related legal systems have formed a sufficient base¹. However, the establishment of the legal subject status of artificial intelligence should be accorded different legal status at different stages of devel-

¹The State Council of the P.R.C., “A new generation of artificial intelligence development plan”, [2017] 35, 8 July 2017; USA, FUTURE of Artificial Intelligence Act of 2017, H.R. 4625, 115th Congress 1st Session, December 12, 2017; Japan, Artificial Intelligence Technology Strategy Council, Artificial Intelligence Technology Strategy, March 31, 2017; UK, Industrial Strategy: AI Sector Deal, April 2018; Germany, Outlines the goals of the strategy, July 2018; France, For a Meaningful Artificial Intelligence: Towards A French and European Strategy, September 2017; South Korea, Intelligent Robots Development and Distribution Promotion Act, No. 15645, revised on 12 June 2018; European Parliament resolution of 16 February 2017 with Recommendations to the Commission on Civil Law Rules on Robotic (2015/2013 (INL)).

opment according to the development characteristics of artificial intelligence technology and the changing characteristics of social needs. Just like the theory of legal evolution and the theory of “responsive approach”, legal norms that effectively respond to the social interests of future artificial intelligence should have the purpose of adapting to the needs of social development at different stages (Ren, 2019: p. 26).

The State Council of China issued a “New Generation Artificial Intelligence Development Plan” in 2017, also clarified the actual social development needs of artificial intelligence laws and regulations such as “focusing on the realistic requirements of promoting the healthy and rapid development of artificial intelligence in China and properly responding to the challenges that artificial intelligence may bring” is to “clarify the legal subjects of artificial intelligence and related rights, obligations and responsibilities”². The phased development of artificial intelligence technology is established, and the relevant legal system should gradually reflect the level of artificial intelligence technology at different stages, as the “New Generation Artificial Intelligence Development Plan” also pointed out that China’s artificial intelligence development strategy is divided into three steps in 2020, 2025 and 2030. The first step is to initially establish artificial intelligence theoretical norms and policies and regulations regardless of the field, and the second step is to initially establish artificial intelligence laws and regulations, ethical norms and policy systems, and the third step is to build a more perfect system of artificial intelligence laws and regulations, ethical norms and policies³.

The legal subject status of artificial intelligence should also be the stage development of technology and different legal subjects exist in different legislative stages, that is, from weak artificial intelligence to strong artificial intelligence, super artificial intelligence at different stages of development, its rights, obligations and responsibilities should also change, but the ever-changing cannot be separated from its purpose. The *Plan* puts forward the aim of promoting and guaranteeing the healthy development of artificial intelligence for the construction of artificial intelligence legal system in China⁴. In other words, “the healthy development of artificial intelligence” is the purpose of constructing China’s artificial intelligence legal system, “promotion” and “guarantee” are the means to achieve the goal, emphasizing “promoting” rather than “prohibiting”, “restricting” or “maintaining”; emphasizing “guarantee” rather than “infringement” or “harm” is the institutional guarantee that promotes the healthy development of artificial intelligence. Therefore, giving artificial intelligence the status of a legal subject at an appropriate time and establishing rights, obligations or responsibilities are in line with the purpose of “‘promoting’ and ‘guaranteeing’ the ‘healthy development’ of artificial intelligence” as determined by the *Plan*.

²The State Council of the P.R.C., *V. Safeguard Measures, Introduction*.

³*Ibid*, *II. General Requirements, (iii) Strategic Objectives*.

⁴*Ibid*, *V. Safeguard Measures, (i) Formulate laws, regulations and ethical norms to promote the development of artificial intelligence, and “Strengthen research on legal, ethical and social issues related to artificial intelligence, and establish legal, regulatory and ethical frameworks to ensure the healthy development of artificial intelligence.”*

On the basis of the purpose of “promoting and ensuring the healthy development of artificial intelligence”, the future legal system of artificial intelligence in China must be based on the theory of legal evolution and the theory of “responsive approach”, and the legal subjects of artificial intelligence at different stages shall be established according to the development form of artificial intelligence technology, as well as its rights, obligations and responsibilities. Before the realization of super-artificial intelligence technology, the social community created by the law is the legal subject of artificial intelligence research and development, and enjoys rights, performs obligations, and jointly bears the compensatory responsibility for the harmful consequences caused by the unpredictability of artificial intelligence. Finally, the stage is when AI itself becomes an independent legal subject, enjoying rights, fulfilling obligations and assuming responsibilities (Ren, 2019: p. 29).

Due to the “heart” or “weak spot” status of electric energy in artificial intelligence, the right to access electrical energy is of great significance to “promoting” and “guaranteeing” the “healthy development” of artificial intelligence at different stages. For instance, when the AI is in a weak and strong development phase, sustainable access electrical energy is a guarantee that promotes the sustainable development of artificial intelligence research and development. However, in the stage of super-artificial intelligence, sufficient, uninterrupted, sustainable and active access to electrical energy is the fundamental premise for artificial intelligence to become the legal subject of the future legal system independent of human beings, and the touchstone of whether artificial intelligence can develop “healthily”.

3. International Organizations and Domestic Legal Practices Related to Rights to Access Electrical Energy

Electrical energy is an indispensable energy in promoting and guaranteeing human healthy life, social stability and sustainable development in modern society. The United Nations and its specialized agencies, as well as the legal systems of many countries, provide legal practices on a human right to access electrical energy, or a general obligation to supply electricity.

1) The Right to Access Electrical Energy as an Important Part of Human Rights

All human rights are interdependent, indivisible and interrelated (UN OHCHR, 2019: p. 9). Although international law does not directly express that access to electrical energy is a human right, it indirectly recognizes the right to access electrical energy by recognizing adequate housing as part of the right to an adequate standard of living. The right to adequate housing means not only that the structure of the building itself must be adequate, but also that there should be sustainable and non-discriminatory access to facilities necessary for health, safety, comfort and nutrition, such as energy for cooking, heating and lighting (UN OHCHR, 2019: pp. 8-9). In addition, the right to adequate housing is a prerequisite for many human rights such as the right to work, the right to

health, the right to social security, the right to vote, the right to privacy, or the right to education. Therefore, the right to access electrical energy is indirectly recognized by international human rights law. As stated in Article 25(1) of the *Universal Declaration of Human Rights* of 1948, “Everyone has the right to a standard of living, including food, clothing, housing, medical care, necessary for the health and well-being of himself and his family and necessary social services...”; Article 11, paragraph 1, of the 1966 *International Covenant on Economic, Social and Cultural Rights* states, “The States Parties to this Covenant recognize that everyone has the right to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to continuously improve living conditions.” *General Comment No. 4 (1991) on the Right to Adequate Housing* issued by the United Nations Committee on Economic, Social and Cultural Rights, characterizes the various aspects of the right to adequate housing, which is included in the “Supply of Services, Materials, Equipment and Infrastructure”, the committee explained that “occupants cannot be considered adequate housing if they do not have access to safe drinking water, adequate sanitation, energy for cooking, heating, lighting, food storage facilities, and waste disposal.” (United Nations Economic and Social Council, 1992).

The Convention on the Elimination of All Forms of Discrimination against Women is the first international convention to mention the right to access electrical energy, which is stipulated in Article 14(2)(h), “States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women that they participate in and benefit from rural development and, in particular, shall ensure to such women the right: (h) To enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications.” Although the article identified beneficiaries are “women in rural areas” as a specific subject, with the specific purpose of “eliminating discrimination” and mainly stipulates the right to electricity supply itself, not just access to it, is unmistakable in this article’s determination of “enjoyment of electricity supply” as a human right. As stated in this article “States parties are required to take all appropriate measures to ensure adequate living conditions, in particular housing, sanitation, electricity and water supply, transport and communication, which are closely related to the prevention of disease and the promotion of health care” (UN Committee on the Elimination of Discrimination against Women, 1999), so the Committee on the Elimination of Discrimination against Women has linked access to electrical energy with the human right to health.

At a national level, the UK’s “people-centered approach” supports a “rights-based agenda” whereby “equal access to basic energy services such as cooking, heating and lighting like access to water, it can be considered a human right.”⁵ In order to establish an electricity market within the European Community, EC Directive 2003/54/EC concerning common rules for the internal market in electricity and

⁵UK Department for International Development, *Energy for the Poor: Underpinning the Millennium Development Goals*, London, 2002, pp. 5 and 8.

repealing Directive 96/92/EC stipulates that “Member States shall ensure that all household users (...) enjoy universal service, i.e. the right to the supply of electricity of a specified quality at reasonable, easy and clearly comparable and transparent prices”⁶.

2) Ensuring reliable access to electrical energy as a key element of sustainable development

Access to energy is a challenge for energy to promote sustainable development, a key to social and economic development and poverty eradication, and improving access to energy means doing everything possible to provide reliable, affordable, economically viable, socially acceptable and non-environmentally harmful energy services (UN Economic and Social Council, 2001). Therefore, *Transforming Our World: The 2030 Agenda for Sustainable Development*, issued by the United Nations in 2015, listed “ensure access to affordable, reliable and sustainable modern energy services for all” as the Goal 7 by 2030 (United Nations General Assembly, 2015). Although energy has various forms, there is often an “insurmountable bridge” between primary energy sources such as fossil energy, water energy, wind energy, and solar energy and human utilization, that is, electrical energy (Huang & He, 2019). Therefore, the problem of accessing energy is mainly reflected in the problem of accessing electrical energy. The United Nations Economic and Social Council, in the Report of the Ninth Session of the Commission on Sustainable Development, recommended that electricity services based on grid expansion and decentralized energy technologies should be supported, especially in marginal areas, as appropriate; to promote the creation of an environment in which the public and private sectors, including, as appropriate, energy cooperatives and public-private partnerships for affordable electricity generation, transmission and distribution, and participation in the transfer of technology (UN Committee on the Elimination of Discrimination against Women, 1999).

3) Electricity grid facilities as the objects of protection under the Internet Security Law

Electricity-related facilities are one of the first hostile facilities destroyed in traditional warfare, but the law of war does not specify whether or not to protect electrical facilities in hostilities. For example, Article 25 of the *Regulations on the Laws and Customs of War on Land*, annexed to *The Second Hague Convention* of 1899, stipulates that “it is forbidden to attack or bombard undefended towns, villages, dwellings and buildings”, and Article 27 endowed with the obligation as “during siege and bombardment, to take all necessary measures, as far as possible, to preserve as far as possible buildings used for religious, artistic, scientific and charitable purposes, as well as hospitals and places of concentration of the sick and wounded”, but there is no explicit prohibition on attacks on electrical facilities.

⁶Article 3(3), EC Directive 2003/54/EC concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, (2003) Official Journal of the European Community L176/37.

In the era of network economy, the electricity grid is easy to be attacked by hackers (Huang, 2019). However, an international consensus on protecting critical infrastructure such as power grids from cyber-attacks by other countries are gradually forming. For example, in the 2015 *Report of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Perspective of International Security*, the UNGGE⁷ put forward “voluntary non-binding recommendations for norms, rules or principles of responsible state conduct”, (f) of which states that “States shall not, in violation of their obligations under international law, engage in or knowingly support ICT activities that intentionally damage critical infrastructure or otherwise impair the use and operation of critical infrastructure that provides services to the public” (United Nations General Assembly, 2015). Although this code of conduct is characterized as a “voluntary and non-binding” proposal, the United States, Russia and other countries have expressed their pleasure and importance to this code on different occasions. Thus, the attack should form a clear consensus. In addition, although there is no unified definition of “critical infrastructure” in the world, given the unique role of the electricity system in the economic and social development of each country, a country’s electricity system undoubtedly belongs to the country’s critical infrastructure (Huang, 2019).

4) General electricity supply as an obligation specified in electricity legislation of various countries.

The electricity-related laws of various countries stipulate the general electricity supply obligations of electricity service providers in a similar way. For example, Article 26 of the *Electricity Law of the People’s Republic of China* stipulates, “The electricity supply business institutions in the electricity supply business area have the obligation to supply electricity to the users in the business area in accordance with the state regulations; units and individuals refuse to supply electricity”; Article 29 stipulates, “When the electricity generation and electricity supply system are normal, the electricity supply enterprise shall continuously supply electricity to the users without interruption.”

Similar general electricity supply obligations can also be found in the laws of many countries such as the United States, France, and the United Kingdom. As stated in *Electric Energy Empowerment Act of 1999, section 2(a)*, “States require electric utilities to provide non-discriminatory access to all retail consumers”; and in *Federal Power Act Amendments of 1999*, “Individuals can choose their preferred supplier to get electricity at an affordable price.” Another example of the French *Electricity Act of 2000, section 5* stipulates that “guaranteeing the supply of electricity within the territory is in the general interest”, “the principles of equality, continuity and adaptability consolidate social cohesion by satisfying everyone’s right to electricity”. The UK *Electricity Act of 1989, Section 16(1)* also states that “the supplier shall supply electricity to any premises upon request by

⁷UN Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security.

the owner or occupier of such premises and, as may be required for this purpose, supply electrical wiring or a power plant or both.”

4. Connotation of the Right to Access Electrical Energy

1) Connotation and its manifestation of the right to access electrical energy.

Human rights to access electrical energy or general obligation to electricity supply have been indirectly recognized by human rights law and listed as a United Nations Sustainable Development Goal. The right to access electrical energy is a general, equal and sustainable access to electricity for the realization of a comfortable living environment, social and economic development, and a basic human right to eradicate poverty. It is derived from the essence of human social relations, and it is the basic right that human beings shall have.

The right to access electrical energy of human beings is embodied in the rights of general access, equal use, and freely choose electricity supply services, but not limited to this. Among them, the right to general access refers to the right to general access to electricity supply for everyone, regardless of wealth, gender, race, or religious belief, which is mainly reflected in the “due-nature” of rights. Because the right is limited by the electrical energy transmission technology, the transfer of energy technology under the principle of sustainability is very important. The right to equal use of electrical energy refers to the right to share the quantitative electrical energy equally in the limited total amount of electric energy, regardless of the consumption demand and the order of acquisition, which is mainly reflected in the “fairness” of the rights. The right to freely choose electricity supply service refers to the right of end-users of electricity to independently choose electricity suppliers, including the use of self-generated electricity, to independently decide the supply mode, supply price and supply time (Tian, 2017), which is mainly reflected in the “freedom” of the right.

2) The right to access electrical energy in different stages of artificial intelligence research and development.

Free, sufficient and sustainable access to electrical energy is the key and prerequisite for determining whether artificial intelligence can become an independent legal subject. Guided by the theory of legal evolution and the theory of “responsive approach”, the future legal system of artificial intelligence must reflect the “stage attribute” that evolves in sequence with the form of artificial intelligence research and development. That is, the rights to access electrical energy such as general access, equal use, and freely choose electricity supply service shall be reflected in different rights connotations in different research and development stages of artificial intelligence.

Firstly, the right to access electrical energy of a natural person or a legal person. Before entering into a strong level of AI technology, specific subjects such as developers, producers, sellers or owners of AI were legal subjects in different fields such as AI research and development, production, and sales. The right to access electrical energy such as the right to general access, equal use and freely

choose electricity supply service, has the same connotation as the right to access electrical energy that natural or legal persons shall enjoy under the current legal system. However, in terms of energy policy and artificial intelligence policy, policy makers can take preferential measures such as priority protection of artificial intelligence-related industries, preferential electrical energy prices, smart energy financing, etc., to encourage and ensure the smooth progress of artificial intelligence research and development, and use artificial intelligence “feedback” the development of emerging electricity technology industries such as wireless electricity transmission.

Secondly, the law formulates the right to access electrical energy for the entire social community. Before the realization of Super-AI technology, for the stability, safety and health of artificial intelligence research and development, the entire social community of legal fiction shall be the legal subject of artificial intelligence research and development. The social community of legal fiction is a concept created by the whole social community to bear the compensatory responsibility for the harmful consequences caused by the unpredictability of artificial intelligence (Ren, 2019: p. 29), and the purpose is to achieve a balance between the general benefits that the entire human society can obtain from artificial intelligence technology and the personal responsibility of researchers for research failures. It refers to the legal subject qualification granted by law under the authorization of the whole people, and is a special social legal person jointly funded by the government, social institutions and research subjects. Under the future legal system in which the entire social community is the legal subject, the connotation of the right to general access electrical energy, the right to equal use, and the right to freely choose electricity supply service shall contribute to the safe, stable and healthy development of the AI industry, at the same time, it is necessary to take into account the interests of other electric energy demanders to prevent the abuse of rights. That is, under the future legal system of the legal fiction of the entire community, the connotation and essence of the right to obtain electricity for the entire social community have not changed, but the supervision mechanism for rights should be strengthened to prevent the possibility of abuse of rights by the legal subject behind the government.

Thirdly, the right to access electrical energy of artificial intelligence. Under the future legal system in which artificial intelligence itself becomes an independent legal subject, artificial intelligence and other electricity acquisition subjects should be equal subjects, and enjoy a series of rights such as the right to general access electrical energy, the right to equal use, and freely choose electricity supply service, but the details shall be adjusting the expression of connotation. For example, the non-discriminatory object of the right to general access to electrical energy shall cover “artificial intelligence” to ensure the fair status between artificial intelligence and natural and legal persons. However, new rights such as the right to maintain basic electrical energy shall be added to ensure the survival and development of artificial intelligence as an independent living entity as well as basic value needs.

5. Conclusion

Although it will take time for a diversified society where artificial intelligence and humans compete on the same platform, a diversified society where humans and artificial intelligence coexist is a future trend that is generally recognized by the international community. Institutional research and arrangements such as risk control, rewards and punishments of regulatory and institutional strategies have been carried out in an orderly manner. The construction of the future legal system of artificial intelligence is no longer groundless, but an effective response to the needs of new future social changes.

On the way to realize the future society of artificial intelligence, algorithms, data, Internet and electrical energy are the four core elements of artificial intelligence. Among which, algorithms such as deep learning capabilities are the “essential” elements of artificial intelligence that detach from computers or computer software, data are the “resource” elements that artificial intelligence can learn in depth, and the Internet is the “path” element that artificial intelligence can freely obtain data, while electrical energy is the “life” element for artificial intelligence to become an independent living entity. The absence or interruption of any element will affect the healthy development of artificial intelligence, and it needs to be given special rights and obligations by the future legal system.

Under the current legal system, the right to access electrical energy has been indirectly recognized as a basic human right by many international human rights treaties and some national laws, which refers to a general, equal and sustainable access to electricity to achieve a comfortable living environment, social and economic development. The basic human rights to eradicate poverty are embodied in specific rights such as the right to general access, the right to equal use, and freely choose electricity supply services. Under the guidance of the theory of legal evolution and “responsive approach”, along with the staged research and development of artificial intelligence, the right to access electrical energy of artificial intelligence will also demonstrate the “stage attribute” of gradual evolution. That is, from the right to general access, equal use, and freely choose electricity supply service, which are encouraged and guaranteed by policies, to the right to access electrical energy that is regulated by the abuse of rights, and finally be established as a right that equal legal subjects shall enjoy fairly.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Feng, J. (2019). Are AI Robots Legal Subject? A Jurisprudential Reflection. *Oriental Law*, No. 4, 43-54.
- Guo, S. F. (2019). The Legal Construction of the Power Capability of Artificial Intelligence Electronic Person. *Gansu Social Sciences*, 4, 109.
- Huang, X. S., & He, J. (2019). Legal Expression of China's Energy Revolution of the Proposed Amendment to the Electricity Law. *China Population, Resources and Environ-*

- ment, 29, 119.
- Huang, Z. X. (2019). *Cyberspace International Law Issues in the Attack on the Venezuelan Power Grid*. <https://www.secrss.com/articles/13185>
- Long, W. M. (2018). Legal Philosophical Thinking on the Legal Subject Status of Artificial Intelligence. *Science of Law (Journal of Northwest University of Political Science and Law)*, 5, 24.
- Nanfang Daily (2016). *The Tianhe-2 Supercomputer Dominates the World, What Is Its Special Feature of CPU?* ENDCHINA. <http://scitech.people.com.cn/n1/2016/0118/c1007-28062366.html>
- Office of the United Nations High Commissioner for Human Rights (UN OHCHR) (2019). *The Right to Adequate Housing*. http://www.ohchr.org/sites/default/files/Documents/Publications/FS21_rev_1_Housing_en.pdf
- Peng, C. X., & Chen, J. D. (2019). Elements of Consideration on Legal Personality of Artificial Intelligence Body. *Contemporary Law Review*, 33, 52-62.
- Ren, H. (2019). Artificial Intelligence and Future Legal System: From Essence to Purpose. *Journal of CUPL*, No. 4, 16-29.
- Tian, D. W. (2017). Freedom to Use Electricity: The Purpose of the Electricity Law Amendment. *Popular Utilization of Electricity*, 32, 4.
- UN Committee on the Elimination of Discrimination against Women (1999). *General Recommendation No. 24 Concerning Article 12: Women and Health*. 20th Session, para.28.
- United Nations Economic and Social Council (1992). *Human Rights Questions: Report of the Committee on Economic, Social and Cultural Rights on Its Sixth Session, Annex III: General Comment No. 4 (1991) on the Right to Adequate Housing (Article 11(1) of the Covenant)*. E/1992/23, 23 April, para. 8(b).
- United Nations (UN) Economic and Social Council (2001). *Report of the Ninth Session of the Commission on Sustainable Development*. E/2001/29-E/CN.17/2001/19, 17 May, para.12.
- United Nations General Assembly (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*. Seventieth Session, A/RES/70/1, 21 October 2015.
- Wei, M., Wang, B., & Gu, J. X. (2011). Tianhe-1 Supercomputer. In *China Meteorological Society Meteorological Communication and Information Technology Committee and the National Meteorological Information Center Science and Technology Annual Conference* (p. 226).
- Yang, J. C. (2016). *Turns Out, This Is Where the Afar Dogs Die*. SOHU. http://www.sohu.com/a/63976107_157504
- Yuan, Z. (2019). The Legal Subject Status of Artificial Intelligence under the Perspective of Rights. *Journal of Shanghai Institute of Political Science and Law*, 4, 95.
- Zhang, S. X. (2019). Legal Person, Legal Subject, and the Legal Status of AI. *Modern Law Science*, 41, 53-63.