

Research on position of weak artificial intelligence in criminal law

Sheng Wan

School of Humanities and Law, Northeastern University, Shenyang, Liaoning, 110169, China

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Abstract: The New Generation Artificial Intelligence Development Plan issued by the State Council summarizes the characteristics of artificial intelligence. Since 2017, artificial intelligence has experienced rapid growth. As a social science, law should respond to the changes in the economic base and superstructure. Because there is no strong artificial intelligence at present, the position of weak artificial intelligence in criminal law has greater research value. It is helpful to ensure the comprehensiveness of research by systematically combing the criminal legal risks involving artificial intelligence with the four elements of crime constitution. In the direction of criminal law, it is concluded that artificial intelligence is involved in the object, objective and subjective elements of criminal law, and the accurate position of weak artificial intelligence in criminal law is sorted out.

1. Introduction

1.1. Topic selection background and research status quo

With regard to the background of the topic, in 2017, the State Council released the Development Plan of the New Generation Artificial Intelligence, which summarized the characteristics of artificial intelligence as: deep learning, cross-border integration, human-computer collaboration, open group intelligence and independent manipulation. Since artificial intelligence was established as a discipline in 1956, it has experienced two lows and three high-speed developments in history. By 2023, artificial intelligence has ushered in great progress, which is the third accelerated development track. Nowadays, many new theoretical innovations and application directions have emerged. Naturally, the social and economic fields involving artificial intelligence have undergone corresponding changes. The society even thinks that the application of artificial intelligence technology will open a new stage of human history. Based on the theory of historical materialism, law, as a social science, is an integral part of the superstructure, and the superstructure needs to keep matching with the economic base in order to maintain its economic base. Therefore, while artificial intelligence is violently transforming the economic base, legal theory, as an integral part of the superstructure of law, needs to respond to what legal status artificial intelligence is endowed with in academic theory.^[1]

Regarding the research status, in the field of criminal law in China, the discussion on criminal

law involving artificial intelligence has gradually become active since 2017, and several problem groups have been formed, including the research necessity of "crimes involving artificial intelligence", the "criminal responsibility distribution" of users and developers, the subject status of artificial intelligence crimes, and the criminal legislation of artificial intelligence developers. Considering that there was a crime of using artificial intelligence in Zhejiang Province in 2017. The theme of "the position of artificial intelligence in criminal law" is launched on the premise that it is necessary to study it. It is a kind of horizontal research on the above problem groups with the research direction of "the position of artificial intelligence in the law". The purpose of this research is to analyze the criminal legal risks that may be caused by artificial intelligence according to the logic of the general criminal law.^[2]

More specifically, the discussion of "the position of artificial intelligence in law" in the field of criminal law has become increasingly frequent since 2019. According to the application fields, there are researches in judicial field, medical field, traffic safety field and robot field. From the perspective of criminal law, there are macro studies on artificial intelligence as the subject, object and tool of crime, and from the perspective of criminal law regulation, there are studies on individual crimes in various theories of criminal law, such as the crime of medical malpractice involved in medical behavior by artificial intelligence designers who have not fulfilled their obligations of production safety.

1.2. Research methods and discussion framework

Regarding the research methods, the author used the methods of literature collection, induction and deduction to study the position of weak artificial intelligence in criminal law. By using the literature in the library and network, this paper sorts out the related research on the position of weak artificial intelligence in criminal law, and summarizes it into some propositions based on the data, which is the premise of deductive reasoning. In a word, documents are used to ensure that the inductive argument is correct in essence and deductive reasoning is correct in form, so as to reach an objective conclusion.^[3]

In the framework of the discussion, the research background of the problem is generally sorted out, the concept of artificial intelligence and its research scope in criminal law are discussed and determined, and then the possible position of artificial intelligence in criminal law is analyzed based on reality. Finally, the new social form in the era of strong artificial intelligence and artificial intelligence is prospected. In the third part of the article, we classify the things that artificial intelligence may act as in a real problem. According to the sequence of theory and application, each category discusses the possible position of artificial intelligence in criminal law.^[4]

2. Artificial intelligence and its position in criminal law

2.1. Weak artificial intelligence and strong artificial intelligence

First of all, in order to distinguish weak artificial intelligence, we need to define strong artificial intelligence first. Artificial intelligence refers to a kind of software and hardware technology that enables a machine to complete a certain task like a human. At present, artificial intelligence technology is making rapid progress, which greatly promotes productivity and opens a new historical stage. The leap-forward development of artificial intelligence is likely to be the "industrial revolution" of this era. In response to this change, it is necessary to recognize the historical stage of human artificial intelligence technology at present. In the field of artificial intelligence, strong artificial intelligence and weak artificial intelligence are divided based on whether they surpass instrumental artificial intelligence to reach the standards of emergence, intentionality, propositional

attitude and free will of the main world content. At present, the possibility of realizing strong artificial intelligence is still controversial. From the technical definition, all technical products at present are undoubtedly only weak artificial intelligence.^[5]

Strong artificial intelligence defined by simple technical definition cannot solve all the problems of criminal law involving artificial intelligence, because the legal definition of strong artificial intelligence is weaker than the technical definition of strong artificial intelligence. In order to facilitate the research, some scholars in the legal field put forward that strong artificial intelligence and weak artificial intelligence should be distinguished by the subject position in criminal law. Strong artificial intelligence needs to have the ability of recognition and control, which is different from the above-mentioned "technical" strong artificial intelligence.

Strong artificial intelligence in technology is based on the original definition of artificial intelligence. Strong artificial intelligence and weak artificial intelligence are not only different in strength, but are based on human research on consciousness and artificial intelligence in brain science, neuroscience, philosophy, computer science and other aspects, so as to realize the emergence of the subject world content, and the final definition can not be determined before it is realized, and it is not necessary to determine it.^[6]

However, the definition of strong artificial intelligence in criminal law research should directly bypass the complex algorithmic essence and be born directly before the technical definition of strong artificial intelligence, for three reasons. On the one hand, it is difficult to give an accurate standard of its intelligence in law, so it is impossible to define the strength accurately through the algorithm, so the algorithm should be bypassed; On the other hand, the current research on human brain and consciousness is not complete, but it does not affect that the law has set a clear-cut standard for the subjective evaluation of crime, so the strong artificial intelligence definition of law has the possibility of "premature birth". Finally, due to the thrust of practice, the definition of strong and weak artificial intelligence is imminent, and some artificial intelligence technologies are very close to having recognition ability, so it is necessary for the law to distinguish strong and weak artificial intelligence now. Comparatively speaking, the legal definition of strong artificial intelligence must not be consistent with the technical definition of strong artificial intelligence at present, and this difference is obviously that the technical definition of strong artificial intelligence is farther away from us.^[7]

Because of the discipline particularity of law, it is necessary to take a step ahead in the definition of artificial intelligence, so it is still possible for "technically" weak artificial intelligence to reach the level of "legally" strong artificial intelligence: that is, a kind of weak artificial intelligence that has no subject world content and has achieved the subject status in criminal law. In addition to weak artificial intelligence, which is the subject of criminal law, it is of course possible to have weak artificial intelligence as an object, a tool and other objective aspects. Therefore, even if the realization of strong artificial intelligence in technology is unpredictable and in the foreseeable future, the weak artificial intelligence technology is approaching or has touched various theories and norms of criminal law.

In short, in order to avoid ambiguity, all "strong artificial intelligence" in the following text refers to artificial intelligence with legal recognition and control ability. Therefore, weak artificial intelligence is a machine that can replace the brain function of natural people, although it does not have this ability.^[8]

2.2. The Status and "Legal Status" of Weak Artificial Intelligence in Law

The status of weak artificial intelligence in law is different from the meaning of "legal status". According to the Dictionary of Law published by China University of Political Science and Law

Press in 1991, "legal status refers to the actual state of the rights and obligations of the subjects of legal relations stipulated by law." Starting from this definition, the legal status of artificial intelligence only refers to its subject status, which will give artificial intelligence criminal responsibility in the field of criminal law. However, according to the purpose of "systematically sorting out the criminal legal problems involving artificial intelligence", "the position of artificial intelligence in criminal law" can not be limited to the legal position, but also involves the position in other constitutive elements of crime, including the possible position in objective aspects and objective elements, such as being the object and tool of crime. Some scholars have also systematically discussed the difficulties that artificial intelligence may cause in some criminal cases from the perspective of criminal liability.^[9]

2.3. Criminal legal issues involving artificial intelligence

Criminal law is a law that stipulates crime and punishment. If artificial intelligence constitutes the dominant position in the legal sense, then it can constitute a crime as a subject and accept punishment. But in addition, regardless of the subject status of artificial intelligence, artificial intelligence can also constitute the object and tool in the objective aspect of crime, and can also constitute the object of crime as the property of natural persons and legal persons. In the future, after artificial intelligence is widely used, its research, manufacture and use will be regulated by criminal law, and "artificial intelligence management order" may also constitute the object of crime. In terms of subjective elements, whether the crime of expecting artificial intelligence belongs to indirect intention or not, and the possibility of foreseeing artificial intelligence behavior also involves the establishment of two kinds of negligence or accidents. This is the possible position of artificial intelligence in criminal law, and it is not limited to the direction of subject status.^[10]

3. The Status of Weak Artificial Intelligence in Criminal Code Based on Reality Analysis

3.1. Weak artificial intelligence as the subject of crime

As mentioned above, weak artificial intelligence defined by law will not obtain the main position of criminal law, no matter now or in the future. However, there are also views in academic circles that the strong artificial intelligence that will appear in the future may completely impact the existing criminal law theoretical system, leading to its disintegration from the aspect of criminal liability. Therefore, it is necessary to bring strong artificial intelligence into the subject of criminal responsibility, so that it can bear criminal responsibility and create several penalties for it, such as deleting, modifying data or permanently destroying artificial intelligence. Attending, however, considering the new theoretical risks, imputation gaps that this reconstruction will bring, and the existence of other schemes that save resources and reduce risks, such as interpretive and legislative schemes. Society will spontaneously choose a more reasonable approach, and in a short time, the impact of strong artificial intelligence will not lead to the reconstruction of the theoretical system of criminal law. Therefore, the dominant position of strong artificial intelligence can be ruled out at present.^[11]

According to this view, weak artificial intelligence's dominant position is obtained, because weak artificial intelligence is limited by the differences in algorithms, and weak artificial intelligence does not have the ability to judge and control, not only because the current technical level limits its low level of intelligence, but also because artificial intelligence does not have the biological nature of human beings and lacks the desire to take the initiative, that is, even if weak artificial intelligence with independent behavior appears technically, it does not have the desire to take the initiative, so it does not have subjectivity. Secondly, a comprehensive survey of the operating mechanism, tool

attributes and development context of different schools of artificial intelligence shows that it is difficult for weak artificial intelligence to obtain the dominant position in criminal law-artificial intelligence is far from human psychology and intelligence. On this basis, because weak artificial intelligence will not obtain the main position in criminal law, it will not temporarily affect the theoretical system of criminal obstruction, criminal form, joint crime and the number of crimes.

3.2. Weak artificial intelligence affects the establishment of subjective aspects of crime

3.2.1. Criminal intent

The so-called criminal intent refers to a subjective psychological attitude that knows that one's actions will have the result of endangering society and hopes or lets this result happen, thus constituting a crime. As mentioned above, weak artificial intelligence does not have the intelligence and psychology of a natural person, and naturally there will be no subjective psychological attitude. It is impossible for artificial intelligence to constitute a criminal intention without its subjective status. At the same time, it will not affect the establishment of natural person's intentional crime. On the one hand, the operation mode and result of weak artificial intelligence are simple enough, and will not go beyond the "knowing" category of ordinary people, thus affecting cognitive factors. On the other hand, artificial intelligence has no will, and naturally it cannot control the will of the actor. For example, using AI face-changing technology to spread obscenity and pornography, the intentional subject of the crime is a natural person. Knowing that using AI face-changing technology to spread obscenity and pornography will endanger the national cultural market management system and good social customs, I still hope that this result will happen. Whether artificial intelligence is used or not has nothing to do with the establishment of intentional crime.^[12]

3.2.2. Criminal negligence

The so-called criminal negligence refers to a psychological attitude that one should foresee the possible harmful consequences of one's actions, but fails to foresee them because of negligence, or believes that they can be avoided by foreseeing them. Although, like criminal intent, artificial intelligence can't influence the will of the actor, the more intelligent artificial intelligence is, the more it shows the characteristics of "black box". Sometimes, natural people can't understand and predict the behavior of artificial intelligence, so it doesn't constitute criminal negligence. Twelve kinds of negligent crimes are stipulated in the Criminal Law of People's Republic of China (PRC). If a natural person can't predict the occurrence of harmful consequences, it doesn't constitute a crime, but only an accident, which blocks the attribution of responsibility. In this case, for example, the imputation of Article 398 and Article 432, if the secret is leaked by the intervention of artificial intelligence, the cause and effect will be blocked, which will lead to a certain degree of imputation gap.

Methodologically, there are two possible solutions. One is to interpret the R&D and producers of artificial intelligence as people with foresight to prevent the gap of liability. However, this solution will easily lead people engaged in R&D and production of artificial intelligence into a legally unsafe situation, which may stifle the scientific and technological development of artificial intelligence, and may also trigger analogical interpretation, even touch the clarity of criminal law and the principle of legally prescribed punishment for crimes against humanity. The second scheme is to set up new crimes for negligent crimes such as traffic accidents and medical accidents involving artificial intelligence, and set up corresponding obligations for R&D, production and users of artificial intelligence, and urge them to pay attention to their obligations while limiting the blow to R&D and producers to a certain extent, so as to prevent the widespread application of

artificial intelligence from causing severe guilt.

3.3. Artificial intelligence management order as the object of crime

Articles 125 and 126 of the Criminal Law of People's Republic of China (PRC) stipulate the crime and punishment of illegally manufacturing guns and illegally manufacturing and selling guns, because manufacturing guns and ammunition harms public security and undermines the state's gun management system. After the case of artificial intelligence hitting the library and coding, people can find that in the online world, the destructive power of artificial intelligence is similar to that of guns and ammunition. In the future, when the threshold of research and development and production of artificial intelligence is lowered from large companies to ordinary individuals and enterprises, the management system of artificial intelligence may enter the criminal law. If the perpetrator produces artificial intelligence specially used for committing crimes, even if artificial intelligence has not infringed on the interests of other countries, societies and individuals, However, it has destroyed the order of the artificial intelligence management system, and has the social harmfulness and subjective malignancy required by the criminal law. However, at present, the manufacture of artificial intelligence is not regulated by the criminal law. In the future, we can protect the order of the artificial intelligence management system and prevent the risk of artificial intelligence technology abuse through the newly established crime of training artificial intelligence that harms society, the crime of illegally using artificial intelligence, and the crime of major production safety accidents of artificial intelligence.

3.4. Weak artificial intelligence involves objective elements.

3.4.1. As the source of "omission" obligation

Harmful behavior is a part of the objective elements of crime, including act, omission and possession. Crimes involving artificial intelligence may affect the source of the obligation of omission. Among the sources of the obligation of impure omission, there are obligations caused by legal acts and obligations caused by previous acts. If there is a contractual relationship between the developers, producers and users of artificial intelligence, such obligations can be determined. However, there is no legal regulation on how the developers and producers bear it, and how the developers bear it internally when they are legal persons. If it is the duty of action caused by previous behavior, it is even more difficult to define the limit of the duty of action, and how much duty of care producers and developers need to do can be regarded as the duty of care for crimes that may be caused by artificial intelligence, and then the legal responsibility of omission is exempted. On the one hand, there is also a lack of necessary legal system. The formulation of these two systems needs to comprehensively consider the combination of criminal laws and other laws and regulations, and avoid stifling the development of artificial intelligence.

3.4.2. Causality

Artificial intelligence itself acts as a "black box". Coupled with the fact that artificial intelligence relies heavily on the training of big data and deep learning, and finally with the blessing of chaotic systems, it can be said that human beings can not fully understand the process of their behavior results. When the causal reasoning of criminal cases involving artificial intelligence is involved in legal theory research, legislation and judicial work, the traditional British imputation may hit a wall. For example, when judging whether the intervening factors are abnormal or not, jurisprudence traditionally thinks that if the pre-behavior and post-behavior are independent of each other, the post-behavior can cause the result independently, and then the causal relationship will be blocked.

Therefore, in the case of artificial intelligence driving a car, all traffic accidents can block the relationship between artificial intelligence developers, producers and harmful results on the grounds that drivers turn on automatic driving, as long as they do not violate other mandatory laws, they can be exempted from responsibility. There is a certain gap in the imputation system of artificial intelligence autopilot.

3.5. Weak artificial intelligence as the object of crime

3.5.1. Intentional crime against weak artificial intelligence

As a kind of computer software, weak artificial intelligence's legal attribute is the copyright of natural person or legal person. Although the research on the intellectual property rights of its specific owners involved in civil law is not involved here, criminal law has cracked down on criminal acts that take copyright and trade secrets as criminal objects. Similar to the intangible property of intellectual property rights, artificial intelligence can't be robbed or robbed, but it can be stolen. Stealing weak artificial intelligence should be an act of infringing intellectual property rights. If it involves trade secrets, it can constitute a crime of infringing trade secrets, not theft in the sense of criminal law. Artificial intelligence can also be destroyed, for example, the crime of destroying computer information system can be applied if the database of artificial intelligence is polluted and artificial intelligence is destroyed. In a word, there is no need to create a new charge for intentional crime with weak artificial intelligence. Only the existing criminal law can solve its practical problems, and the problems can be solved only by theoretical explanation. To solve.

3.5.2. Distinguish between this crime and that crime

In the same criminal act, taking artificial intelligence as the object of crime may affect the establishment of the crime. For example, ATM machine is a machine that replaces the recognition function of human brain, even if it is a weak artificial intelligence, so using the recognition error of ATM will constitute fraudulent credit card fraud. This is because artificial intelligence replaces the recognition function of human brain, and human brain can be deceived into misunderstanding, so can ATM machine. In the same way, if you use the mechanical failure of ATM to get money, it can only constitute theft, because the ATM machine at this time has not been cheated. It can be seen that whether the criminal object is artificial intelligence, as an objective element of crime, may affect the establishment of the crime.

4. Conclusion

To sum up, the position of artificial intelligence in criminal law involves various aspects of criminal law theory and norms. We respectively examine the theory of four elements of crime, and find that weak artificial intelligence can neither be the subject of crime nor affect the position of natural persons as the subject of crime. However, subjective elements will affect the establishment of criminal negligence; When artificial intelligence is regarded as the object of crime, it is found that a new object of crime can be introduced; In the case of objective elements involved in weak artificial intelligence, it may affect the source of crime's obligation of omission and the resistance of causality. Being the target of a crime may change the conviction of a crime. However, if legal science is actively involved in the research and development and manufacturing of weak artificial intelligence, it will play a role in the development of weak artificial intelligence. Intervening in the development of weak artificial intelligence in its ethics, legal thoughts and norms will also reduce its impact on criminal law theory and norms to some extent. For example, at the beginning of the

research and development of artificial intelligence for self-driving cars, the ideas and concepts of law were actively used as a kind of training material. After the self-driving cars were put into use, they took the initiative to act more in line with the legal norms when traffic accidents occurred, which could reduce their impact on criminal legal norms in fact and make them act more within the current legal norms.

On the other hand, in the process of popularization of weak artificial intelligence, the relationship between criminal law and weak artificial intelligence is still the main contradiction between criminal law to evaluate and influence artificial intelligence. However, when weak artificial intelligence is fully applied in the whole society or all parts of a field, the original content of some criminal legal norms may be adversely affected. For example, in order to reduce the probability of accidents, cars in the whole country are forced to use artificial intelligence to drive, so there is no target for traffic accidents in criminal law.

From the legal definition, there is no strong artificial intelligence that can identify and control at present. After the birth of strong artificial intelligence in the future, its position in criminal law is still unknown. However, it will also involve the status of the subject and other constituent elements. Examining the possible impact of new technology on existing theories and norms one by one along the constituent elements of traditional criminal law can reduce the situation of missing examination to some extent.

Finally, in fact, the industrial revolution with strong artificial intelligence is not inevitable, but the current weak artificial intelligence may indirectly lead to a leap-forward industrial revolution. For example, after weak artificial intelligence replaces a large number of jobs lacking innovation in the whole society, productivity is liberated, and a large number of people are released from working hours, which has already formed the foundation of industrial revolution. The new social form created by redundant labor force exerting its creativity and then influencing criminal legal norms is a more recent change than strong artificial intelligence. The position of weak artificial intelligence in criminal law should not be limited to direct relations, and indirect relations can not be ignored.

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