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Legal risk and criminal imputation of weak artificial intelligence

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Abstract. At present, the legal risk of artificial intelligence is mainly manifested by the three risks of weak artificial intelligence: the risk of weak artificial intelligence, the risk of the weak artificial intelligence to infringe on personal information and the use of the weak artificial intelligence to carry out the risk of illegal crime. The criminal law should properly eliminate the principle of technology neutrality and expand the application of criminal law to solve legal risk of weak artificial intelligence.

1. Introduction

Human society is entering an era of unprecedented artificial intelligence, and it has begun to develop the inherent thinking ability that human beings have not paid much attention to. The unprecedented development of artificial intelligence has brought unprecedented risks to people. Human society urgently needs to take precautions from law, technology, ethics and other fields. We also need to consider the problem of artificial intelligence against individual rights, endangering social order and even destroying human civilization. People need to draw a proper boundary between the artificial intelligence to create social welfare and the risk of regulating artificial intelligence. Among the various artificial intelligence risks that need to be regulated, the criminal risk of artificial intelligence is most obvious and direct, and some new crimes have come.

According to whether artificial intelligence can recognize and control computer programs by themselves, artificial intelligence can be divided into weak artificial intelligence and strong artificial intelligence. Weak artificial intelligence refers to independent judgment and decision making in the range of design and programming, but it does not have the ability to recognize and control. It is the will of the designer or the user. Strong artificial intelligence refers to the ability to identify and control. It is possible to decide independently and make decisions independently in the range of design and programming, to realize the will of the designer or user, and to go beyond the scope of the program designed and compiled, to make independent decisions and implement the corresponding behavior to realize its own will. The artificial intelligence is divided into the classification of the weak artificial intelligence and the strong artificial intelligence, and its positioning is to judge whether there is some human thinking ability or function in the form of the combination of computer program and mechanical operation. The essence of it is to compare artificial intelligence with people. In other words, it makes future artificial intelligence develop to a very high strength. At the stage of AI, the thinking ability of most biological people is the same as that of the general biont, and it cannot break through the thinking level of modern Homo sapiens.

Whenever technology develops to a critical point, there will always be a question of value judgment about the development of this technology, such as the development of atomic bombs at the end of the Second World War. The scientists represented by Einstein worried about the great catastrophe of the development of the atomic bomb and the Nazi robbing of the atomic bomb. First



invented, after a long and painful consideration, finally turned to the allied "Manhattan plan" and won a great opportunity for the victory of World War II. The reasonable distinction between the development of AI cannot be divorced from the value judgment. It is not advisable to simply consider the technical standard. Strictly speaking, the legal regulation of artificial intelligence is also a part of the value judgment. Only from the technical level to the artificial intelligence, the weak strong two points greatly compress the reasonable space for the legal regulation and the criminal responsibility examination of the artificial intelligence.^[1] Therefore, the more reasonable development classification of the artificial intelligence can be made. Considering the important premise of criminal law regulation of AI, it is also a strong response to some skeptics who believe that AI is not related to criminal law.

The development orientation of artificial intelligence should set up a reasonable reference frame. The comparison between artificial intelligence and human reference is only the primary stage of the development of artificial intelligence. When artificial intelligence is developed to the advanced stage, it is necessary to establish the reference comparison of artificial intelligence. It is a great challenge that human beings have to face the survival of mankind in the field of artificial intelligence. Pure value neutrality should not exist in the field of artificial intelligence. All kinds of value judgments, such as robot ethics, artificial intelligence policy, artificial intelligence law rules and so on, are of necessary significance in the field of artificial intelligence. The types and dynamics of value judgment participation are inversely proportional to the development of artificial intelligence, and the development of artificial intelligence in artificial intelligence. The primary stage needs the regulation of ethics, policy and private law. In the advanced stage of the development of artificial intelligence, it needs the regulation of public law. In the development of artificial intelligence, the development of the artificial intelligence has shown the advanced stage of the modern world. The intervention of criminal law, which is the strong guarantee of public law, is an unavoidable option.

Table 1.

1. Location Tape	Reference frame	Cognitive standards	Value
Weak AI	Human intelligence	Perceptual intelligence	Policy priority
Strong AI	Weak AI	Cognitive intelligence	Public law priority

2. Legal risk of R & D or manufacture of weak artificial intelligence

The use of weak artificial intelligence in accordance with the criminal law should be criminalized, the main difficulty is to judge the use of the weak artificial intelligence behavior, causality and the scope of punishment. As an important motive force for the development of human society in the future, artificial intelligence has natural rationality and legitimacy in technology. Modern society has a great tolerance for the development of artificial intelligence. It seems like parents' tolerance for mischievous bear children is similar. However, society and law still have tolerance bottom line. It is strictly speaking that the present artificial intelligence belongs to the weak artificial intelligence and is at a very primary stage. The weak artificial intelligence is still running within the scope of the human design program, and the behavior of using the weak artificial intelligence still belongs to the human behavior. However, the weak person is evaluated in the criminal law. The causal link between the behavior of the working intelligence and the result of the harm can't jump over the weak artificial intelligence and directly evaluate the human behavior. It is necessary to consider the imputation factor of the weak artificial intelligence in the chain of causality in the current criminal law, but to evaluate the role of the weak artificial intelligence in the causality of the criminal law should involve more than the traditional line. For more and more complex behavioral factors in the environment, the designers, manufacturers, operators and users of the weak artificial intelligence with complex causal links between each other need to be more reasonably solved in the provisions of the current criminal law related to computer information network crime, responsible crime, and endangering public security. In order to find the appropriate corresponding path of imputation. In the case of an accident caused by an unmanned vehicle accident in the United States, the United States National Traffic Safety Commission (State Traffic Safety Commission) investigates that human drivers still need to undertake the

corresponding driving supervision obligations under the unmanned state, and exclude the criminal responsibility of the vehicle designers and the manufacturers. When a kind of behavior exists the danger of the result of the infringement of legal interest, it is the legislative policy problem that the legislature is allowing it or prohibiting it. Whether a specific act in real life makes the danger of the infringement of the legal interest and whether it conforms to the objective constitutive requirements of a crime is the conformance of the criminal law interpretation theory.

The advantage of the weak artificial intelligence is to use the close combination of large data and deep machine learning to quickly carry out large, deep and precise calculation, and in essence, magnify or extend some of human capabilities, especially large number of fast recognition and control capabilities. For example, the "sky eye system", which is already running in some parts of our country, is a woman policeman with an instrument that looks like a dark mirror. It can recognize the face recognition of hundreds of pedestrians on the same street, dozens of motor vehicles or non-motor vehicles. In comparison, finding suspects or threats and disposing them in time is actually amplifying and extending the visual function of human beings. Therefore, there are large criminal risks in the process of R & D, manufacturing, operation and use of weak AI.

It is appropriate to distinguish the reasonable risk of R & D or manufacture of weak artificial intelligence so as to avoid the criminal liability for scientific research, which is not guilty in the development of the present weak artificial intelligence, and the scientific research risk in the development of the weak artificial intelligence can be considered as a permitted risk. "The permissible danger refers to the danger that the act has created an important legal significance, but this danger is generally not related to the specific case) and is allowed. Therefore, unlike the justification, such behavior has been considered to obstruct the attribution of objective elements."^[2] A typical example of the permissible risk is driving motor vehicles in compliance with all road traffic rules. In spite of the fact that there is still a result of the violation of the legal interest after the compliance of all traffic regulations, it is not an act that conforms to the constitutive requirements. This applies equally to negligent crime and intentional crime. The main reason for the fatal accident of a Tesla unmanned vehicle in Florida, as described in the previous article, is that under direct sunlight, the unmanned system cannot distinguish the blue of the truck's body blue in front of the front and the blue sky in front of the front, causing the system to fail to identify the truck as a result of the accident. Weak artificial intelligence has been able to perceive color types and quantities beyond the human retina, but is still unable to identify and identify the complex colors in a complex situation. It is not considered that the R & D or manufacturer of a Tesla unmanned vehicle should be responsible for the punishment.

The responsibility type crime belongs to the negligent crime. In our criminal law, the principle of punishing intentional crime and the punishment of negligent crime are the exceptions. It is necessary to strictly follow the principle of legality and can only be punished under the precondition of the criminal law. Therefore, the criminal responsibility must be investigated for the developer or the manufacturer of the weak artificial intelligence. It is based on the explicit provisions of the current criminal law concerning negligent crimes. The core element of punishing negligent crime in China's criminal law is whether the perpetrator has foresight obligation and foresight ability. The foresight obligation of R & D or manufacturer of weak AI should come from the law and the level of AI development in the region. "It can be considered that the development and use of the level of artificial intelligence technology at that time is a relatively clear standard. It is also relatively objective to use this standard to judge whether the developers and users have a foreseeable obligation. If the developers and users are likely to use the artificial intelligence technology of the time to foresee the occurrence of the harmful results, the researchers and users of artificial intelligence have the foreseeable obligation. The final occurrence of the harmful results should be considered that the researcher or user does not fulfill the foreseeable obligation, and there is a causal relationship between the omission and the result of the harm, and the developer or user will establish a negligent crime."^[3]

3. Personal information risk of weak artificial intelligence

The operation of artificial intelligence is a high end business which needs to invest a lot of manpower and material resources. High tech companies with strong strength have made great progress in the aspects of personalized data mining, natural language dialogue, unmanned vehicle and UAV, image

recognition and so on. However, the operation of artificial intelligence is hidden behind the major development. The original sin, which is difficult to avoid, is that the acquisition of big data may be suspected of infringing upon citizens' personal information. Large data is one of the two driving forces to promote the development of artificial intelligence. It mainly comes from the personal information and consumption information obtained by high tech companies and institutions in the operation and performance of their duties. After sorting through machine algorithms, it has great economic and social value. After collecting the mass consumption records, the weak artificial intelligence can accurately analyze the consumption habits, and accurately push the related commodity links, advertisements, and preferential information. However, the weak artificial intelligence usually has no legal basis for collecting mass consumer information and even wanders on the edge of the illegal crime. The massive collection of valuable information is difficult to ensure that it is agreed by the collector, and according to the third article "interpretation on the application of laws on the application of laws for criminal cases of infringement of personal information of citizens" in 2017, "without the consent of the collector, the personal information collected legally is provided to others, which belongs to the criminal law second." The provision of "personal information of citizens" stipulated in Article 1 of Article 1, except for those that cannot be identified after processing, and cannot be recovered. At the same time, the operation of the weak artificial intelligence system has been suspected of violating the personal information of the citizen, and it is very likely to constitute a crime in the case of other legal requirements.^[4]

In addition to its commercial operation, weak AI has more operations in the new media field. In the field of new media, the operation of weak artificial intelligence has more obvious characteristics than other fields: not only need to learn kind, but also distinguish the ugly, distinguish the harmful content such as alleged pornography, illegal, bloody, thriller, and so on. In order to cope with the massive large data influx of the new media platform, and to better fulfill the supervision obligations, all the major network platforms have begun to operate the weak artificial intelligence.^[5] However, due to the shortage of the weak artificial intelligence operation, there is a widespread lack of supervision and even refusing to perform the information network security management obligation. The weak artificial intelligence is more efficient than the ordinary people in the audit of mass information form, but it is still not as good as the general natural person in the content review. The "cult" video is disguised as "parentage" and "early teaching" on the title or key words, and the content of the visual frequency does not appear in the usual pornography or The pornographic images are not filtered by artificial intelligence in the background supervision, resulting in the abuse of harmful information resulting in worse consequences.

4. Common crime risk involved in weak artificial intelligence

Equipment or platforms carrying weak artificial intelligence are directly maliciously used as a tool for endangering the society, and there is no essential difference between the imputation of the criminal law and the harm of other animals or inanimate persons or persons without criminal responsibility as tools to harm the society.

The equipment or platform carrying weak artificial intelligence is used indirectly or abused as a tool for endangering the society, and the principle of legality should be fully considered in the criminal law. There are two main manifestations of this situation: first, the artificial intelligence so far is still in the weak artificial intelligence stage, and it does not have independent identification and control ability, but requires the supervision and interference of natural person or natural person institution, and the weak artificial intelligence can cause damage to others' interests or danger under human manipulation or guidance. Social behaviours need to be differentiated from cases to undertake criminal liability. For example, the autopilot in the unmanned state is running into the road by pedestrians on the freeway, and the driver is busy taking over, but because the sudden brake is not too late, it is necessary to consider the degree of artificial intelligence of autopilot and the driver. The specific state of the state. As shown above, according to the current world recognized SAE standard, a weak intelligent automatic driving car can be divided into five levels of L1-L5. It is necessary to assign the different obligations of the system to the person according to the different grade of auto driving car in the accident. If the auto driving car of the accident belongs to the L3 level, all the driving operations

are carried out by the weak artificial intelligence, the driver is responsible for the peripheral monitoring and emergency takeover when the driver is responsible for the system request. The system does not find the pedestrians breaking into the road in time and causes serious consequences. It is the driver's responsibility to find the pedestrians to break into the road and send out the request while the driver has the conditional takeover but not in time. Other grades of autopilot are similar. Secondly, the abuse of weak artificial intelligence to infringe upon the interests of society and the interests of others in accordance with the provisions of the criminal law shall bear criminal responsibility. Weak artificial intelligence has the ability to automatically learn and collect information automatically. On this basis, foreign mainstream engines and domestic major social platforms have used the weak artificial intelligence large data mining technology. For example, the Google search of the Google Corporation is powerful because it can automatically be appropriate according to the search key words and clicks. The automatic placement of web pages and Sina's Weibo search are also similar. Because the weak artificial intelligence can only find the frequency of the recognition information and can't identify the truth of the information, the weak artificial intelligence is easily abused, for example, in our country, the fake information events which have caused serious damage to others' personal reputation caused by the purchase of network water army have occurred many times in our country, and the perpetrator uses the weak artificial intelligence machine to collect the large data.^[6] The characteristics of the implementation of high density search to manipulate the hot search list, after the false information on the hot search list, other users further high-frequency click leads to weak artificial intelligence more fixed search keywords, causing the Ma Tai effect on the reputation of others. This should be taken into account in the relevant judicial interpretation of the number of clicks, the number of forwarding and other conviction quantitative requirements should be taken by the perpetrator to take the responsibility of abusing weak artificial intelligence to control the list.

SAE level	Name	Narrative Definition	Execution of Steering and Acceleration/Deceleration	Monitoring of Driving Environment	Fallback Performance of Dynamic Driving Task	System Capability (Driving Modes)
Human driver monitors the driving environment						
0	No Automation	the full-time performance by the <i>human driver</i> of all aspects of the <i>dynamic driving task</i> , even when enhanced by warning or intervention systems	Human driver	Human driver	Human driver	n/a
1	Driver Assistance	the <i>driving mode</i> -specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the <i>human driver</i> perform all remaining aspects of the <i>dynamic driving task</i>	Human driver and system	Human driver	Human driver	Some driving modes
2	Partial Automation	the <i>driving mode</i> -specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the <i>human driver</i> perform all remaining aspects of the <i>dynamic driving task</i>	System	Human driver	Human driver	Some driving modes
Automated driving system ("system") monitors the driving environment						
3	Conditional Automation	the <i>driving mode</i> -specific performance by an <i>automated driving system</i> of all aspects of the <i>dynamic driving task</i> with the expectation that the <i>human driver</i> will respond appropriately to a <i>request to intervene</i>	System	System	Human driver	Some driving modes
4	High Automation	the <i>driving mode</i> -specific performance by an <i>automated driving system</i> of all aspects of the <i>dynamic driving task</i> , even if a <i>human driver</i> does not respond appropriately to a <i>request to intervene</i>	System	System	System	Some driving modes
5	Full Automation	the full-time performance by an <i>automated driving system</i> of all aspects of the <i>dynamic driving task</i> under all roadway and environmental conditions that can be managed by a <i>human driver</i>	System	System	System	All driving modes

Figure 1. SAE LEVEL OF AUTOMATED DRIVING SYSTEM

5. Conclusion

The technological development of weak artificial intelligence will not shift from the will of people, and will eventually develop to strong artificial intelligence with independent identification and control ability, which fundamentally waver the basis of the judgment of the traditional subject, and the legal system including the criminal law needs to be prejudged.

To this end, countries began to consider the use of criminal law to punish the research, support and application of cloning technology, typically such as Germany and Japan formulated a special law containing criminal provisions to regulate, clear the prohibition of reproductive cloning of the serious position; the most strict and comprehensive regulation of France, France has amended a number of

sentences. The Code stipulates and sets up special regulations to prohibit cloning and even medical cloning. Compared with the legislative mode of criminal law in China, the French penal code has more reference significance. The main articles are as follows: 1, the first part of the second volume of the French penal code, the first part of the "anti-human and human felony", the first chapter "the serious crime of eugenics and clone reproduction", which is mainly the 214-2 of the crime involved in cloning. Article "30 years' imprisonment and a fine of 7 million 500 thousand euros" for the birth of a child who has the same gene as the gene of a living or dead child; and article 214-4 "participation in a group formed or the tacit agreement of one or more specific acts indicating the preparation for a certain felony in article 214-2." Shall be sentenced to life imprisonment and a fine of 7 million 500 thousand euros. 2. The first part of the fifth edition of the French Criminal Code, "crime in the field of public health", "crime in the field of biomedical ethics", the crime involved in cloning is mainly in article 511-1, "to allow a cell or gamete from itself, aimed at the birth of a baby with the same gene of another living or dead person, at a period of 10 years. The penalty is 150 thousand yuan penalty, and article 511-17 "for industrial or commercial purposes. The reproduction and reproduction of human embryos is subject to 7 years' imprisonment and a penalty of 100 thousand euros "; Article 511-18" for research purposes. The human embryo cloning and reproduction is sentenced to 7 years of imprisonment and a fine of 100 thousand euros. Article 511-18-1 "the human embryo cloning and reproduction for the purpose of treatment is to be sentenced to 7 years in prison and a fine of 100 thousand euros". From the above provisions, it can be seen that the penal code of the French penal code is very severe on the punishment of cloning, completely prohibiting the research, support and application of cloning, whether for industrial, commercial, research or treatment purposes, and punishments for the preparation, common and admissible behavior of cloning, and the free punishment of cloning. It is often heavy. It can be seen that although cloning technology and medical value are huge, it is dwarfed by its risks to human society, and is worthy of being regulated by criminal law.

Therefore, it is suggested that the criminal law of China should amend the criminal law at the right time to add "the crime of illegal strong artificial intelligence research, support and application": "the illegal conduct of strong artificial intelligence research, support and application, the plot is serious, under 5 years' imprisonment, and under 200 thousand yuan and more than 1 million yuan penalty; the plot is especially serious, more than 5 years 1." A term of imprisonment of not more than 5 years, with a fine of more than 1 million yuan or confiscation of property, and the establishment of a unit crime and the crime clause of strong artificial intelligence. The key to apply this provision is how to identify super artificial intelligence, which can be identified through the combination of technology identification and court evidence.

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