



# On the Identification of the Policyholder of Artificial Intelligence Tort Liability Insurance

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**Abstract.** Artificial Intelligence (AI) technology has been developing rapidly in recent years, and a large portion of products, whether in the highly sophisticated industrial field or in daily life, are seeking to apply AI to their production processes, with a view to improving production efficiency and condensing it into part of their core values. This paper focuses on the dual perspectives of tort liability system and liability insurance system during the research process, and combines relevant principles from multiple academic fields such as civil law, insurance law, and artificial intelligence to study a series of legal issues related to the identification of the insured party of artificial intelligence tort liability insurance. I hope to conduct a comparative study on the liability subjects and insurance policyholders brought about by artificial intelligence infringement in the context of big data, and try to identify the common operating mechanisms and internal connections between the two. This will provide a theoretical basis for establishing an artificial intelligence infringement liability insurance system and establish an effective mechanism to achieve a balance of interests among all parties in the issue of artificial intelligence infringement.

**Keywords:** Artificial intelligence; Tort liability; Liability insurance; Insured policyholder

## 1 Introduction

With the wide application of artificial intelligence in various fields such as transportation, medical treatment, production and manufacturing, finance and even life services, the issue of the determination and assumption of tort liability arising from it has attracted much attention. In the era of artificial intelligence, a liability insurance system adapted to the new technological background should be established to make up for the defects and deficiencies in the allocation of liability and damage relief for artificial intelligence infringement, and to establish a new balance of interests among the participants, such as the owner or user, the designer and manufacturer, and the insurer.

Artificial Intelligence Tort Liability Insurance refers to liability insurance that applies to cases where the responsible person is liable for tort in connection with the use

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of Artificial Intelligence products. Regarding the determination of the insured policyholder of artificial intelligence liability insurance system, it has a great relationship with what kind of standard the artificial intelligence that commits infringement reaches in the degree of intelligence, and the artificial intelligence products should be divided into different levels according to the degree of intelligence, but there is no uniform division standard in the field of artificial intelligence and at the legal level<sup>[1]</sup>. In comparison, the division standard for unmanned vehicles according to the degree of intelligence within the field of driverless cars is more scientific, i.e., the Society of Automotive Engineers International (SAE) divides the driving level of automated vehicles into six technical levels, i.e., the degree of intelligence increases step by step from L0-L5, in which the vehicles in the L3-L5 stage can be categorized as self-driving cars, which is an important embodiment of the grade-by-grade maturation of AI products<sup>[2]</sup>.

### 1.1 Theoretical background

If we are to examine the issue of determining the policyholder of tort liability insurance for AI, one of the key issues is that we inevitably need to first discuss the question of whether AI can be a subject of tort in law, as opposed to a traditional subject. There has been no consensus in the theoretical community on the extent to which artificial intelligence will develop in the future, whether it will have legal personality, or even become a true legal subject. In China, there are both affirmation theories represented by scholar Zhang Yujie and negation theories represented by scholar Yang Lixin.

It must be pointed out that, at least in view of the existing legal system, regardless of the stage of development of artificial intelligence technology, artificial intelligence itself does not have the corresponding material assets and social behavioral capacity, i.e., does not have the ability to assume legal responsibility, so artificial intelligence does not yet have the qualification and status of becoming an independent legal subject<sup>[3]</sup>. However, in reality, the current West does not seem to fully believe so. The EU also mentioned in the draft report to the European Commission on the legislative proposal on civil legal rules for robots that the development of artificial intelligence technology has led to the formation of humanoid artificial intelligence, which is no longer a simple tool like before, but can make decisions and take action. Artificial intelligence has autonomy and initiative, and is no longer a purely controlled object. It should be legally designated as an 'electronic person'. Therefore, the draft does not include intelligent robots among the existing types of subjects, but instead proposes a new concept, namely "electronic humans". With the further development of artificial intelligence, this concept seems to have a tendency to be accepted by people..

However, regardless of whether artificial intelligence can truly possess its own personality, the issue of artificial intelligence infringement on the existing legal basis still needs to be urgently discussed. In order to study the system of artificial intelligence tort liability insurance, because the artificial intelligence tort liability insurance must be premised on the insured's legal liability to other third parties<sup>[4]</sup>. Therefore, we first need to determine and allocate the artificial intelligence tort liability to sort out, in order to determine in a case of artificial intelligence tort liability, there are which subjects need to have the obligation to bear the legal liability arising from the incident, and from the

perspective of the insurance system to the main body's ability to pay, willingness to pay, attitude to risk, degree of rationality and other factors to analyze, so as to further arrive at the artificial intelligence How should the insured policyholder of tort liability insurance be determined in order to maximize the degree of relief for the right holder and the balance of interests of all parties to achieve a strong conclusion.<sup>[5]</sup>

## 1.2 Legislative background

In fact, some countries in the world today have long since begun to pay attention to the legislative work in the field of artificial intelligence science and technology. In order to keep up with the rapid development of AI science and technology in recent years and fill the legislative gaps in the field of robotics and AI, the European Parliament took the lead in 2017 in adopting the bill on the Civil Rules of Law for Robots, which contains a special design for the mandatory liability insurance scheme aimed at solving the problem of loss sharing in the case of damages caused by intelligent robots. And in the United States, some states, such as Nevada and Florida, are going through the route of amending their laws to allow self-driving cars with a certain level of artificial intelligence on the road. Japan also with its Rules for Testing Driverless Vehicles on Roads, released in 2017, stipulates that testers of driverless vehicles are legally liable for traffic accidents, but that liability is included in auto insurance payouts. The first part of the UK's Automated and Electric Vehicles Bill (AEVB) addresses insurance and liability for smart-driving cars. Among other things, the mandatory motor vehicle liability insurance provisions were amended so that intelligently driven cars can also be insured<sup>[6]</sup>.

## 2 Behavioral analysis of each responsible subject in artificial intelligence infringement cases

It is submitted that in AI infringement cases at the weak AI stage, general product infringement liability can be applied as the product performance is essentially the same as that of traditional non-AI products<sup>[7]</sup>. However, unlike traditional industrial technology products, in the strong AI and super AI stages, as such infringement cases are often based on the complexity of their causes: i.e., subjectively, they may not be attributable to the will of the user of the AI product (a natural person), and objectively, the mechanism of operation of the AI product's autonomous learning algorithms may also make it difficult to allocate its infringement liability.

Therefore, we need to make a more detailed and reasonable division of responsibility from each port link of AI products in stages and subjects, so that it is possible to establish the liability system of this kind of AI infringement cases, so as to make the insurance path between all kinds of insured subjects of AI infringement liability insurance become clearer<sup>[8]</sup>.

## 2.1 Designer:

As we all know, the core of AI products lies in their deep autonomous learning algorithms, i.e., AI can complete a specific task or solve a specific problem through certain algorithms, modeling, analyzing and calculating all kinds of statistical data through big data and other technologies, and adding anthropomorphic cognition and reasoning<sup>[9]</sup>. In other words, the most crucial technology of any AI product lies in the algorithm designed by the designer. As the most important technical end of AI technology, it can often be well-funded both in the private and state-funded sectors, and therefore, its designers have a considerable degree of ability to pay. Correspondingly, the designers also have a good willingness to pay, the reason is that, although the results of AI products after the algorithmic output can not necessarily be predicted accurately by the designers, but on the one hand, the designers should have a reasonable expectation of the logic of the algorithmic calculation and the consequences of the algorithm, on the other hand, vertically, from the product development link of the On the other hand, vertically from the upstream and downstream of the product development process, it is obvious that the designer should bear more responsibility for it compared to other subjects. When an AI infringement case occurs, a large part of the responsibility will need to be implemented into the product design process, and the designers will be more vulnerable to the risk of legal recourse. Based on the above, according to the principle of the unity of rights and obligations, it is also in line with the realistic requirement of achieving a balance between risks and benefits to identify designers as the policyholder of insurance<sup>[10]</sup>.

## 2.2 Producers:

The production side is an important port for transforming AI products from design concepts into real output. On the one hand, along with the traditional product infringement liability, the legal risks borne by the producer is an objective fact; on the other hand, for the artificial intelligence infringement case, due to the complexity of the product function, the producer often also need to face some potential legal risks, such as the burden of proof for the exempted cause, and so on. Obviously, the producer is also can become the artificial intelligence tort liability insurance policy subject of qualified object.

## 2.3 Owner/user:

When the owner and the user of the artificial intelligence product are one and the same, the two can be merged and discussed in a unified manner. When the artificial intelligence infringement case, if the owner is also at fault and can be determined, then according to the ordinary principle of attribution of tort liability for the division of the size of the responsibility can be dealt with; if the owner is at fault or the size of the responsibility can not be determined, according to the characteristics of the case of artificial intelligence infringement, due to the artificial intelligence itself does not have the qualification of the subject of law, in order to realize the relief for the people who

have suffered damage to their rights, at this time should also be by the The owner to bear the legal responsibility of alternative liability, no-fault liability and so on. Therefore, the owner is a suitable object for the policyholder of insurance.

If the owner and the user of the AI product are separate, based on the above, the two must also have the legal risk of becoming the actual liability bearer in AI infringement cases. The question is just how the legal responsibility between the two should be determined. At this point, according to the existing legal framework, the two can be jointly and severally liable or by determining the size of their respective fault to bear the share of responsibility. In this way, the owner of the AI product is also fully qualified to be the policyholder of the AI tort liability insurance.

### 3 Conclusions

While AI technology is booming, the risks of its use and the legal issues that come with it have become a major challenge that we are about to face. Since AI infringement cases are a new type of infringement cases that can be foreseen in the future, and are even occurring now, in order to realize legal relief for the rights and interests of the infringed, strengthen the effective supervision of AI technology, and safeguard the long-term development of AI technology, it is necessary to pay more attention to and improve the establishment of theThe aforementioned three categories of different civil subjects from their behavior, although in the case of artificial intelligence infringement, each in a different link, the way they bear civil liability is also correspondingly different. But obviously, they all have become the qualification to be the policyholder of artificial intelligence tort liability insurance, and also necessary to assume certain responsibilities and obligations. According to the principle of "beneficiary compensation", the owner of artificial intelligence, developers and other artificial intelligence development and utilization of artificial intelligence to obtain the actual benefits of people, should be in the process of the use of artificial intelligence technology in the process of tort liability and the rights of the injured person to be compensated accordingly. For example, we can set up a "compulsory insurance" for the designers or producers of AI products, just like the existing "compulsory insurance" for motor vehicles, in order to ensure that the coverage effect of each AI product can be generalized, so as to ensure the safety of people's lives and properties at the level of the whole society. In order to ensure the coverage effect of each AI product is generalized, so as to provide a guarantee for the safety of people's life and property at the level of the whole society<sup>[11]</sup>.

In order to solve the problem of artificial intelligence infringement, the liability insurance system can effectively balance the interests of various parties in the application of artificial intelligence. The research and application of artificial intelligence infringement liability insurance system is based on the confirmation of the insured parties of this type of insurance, in order to provide corresponding liability insurance models for different types of artificial intelligence infringement problems. The identification of the insured parties in the artificial intelligence compulsory liability insurance system should be based on a scientific and reasonable allocation and assumption of civil tort liability. The allocation of insurance models, insurance obligations, compensation obligations, and burden of proof should be shifted from being dominated by owners or

users to being dominated by producers and designers, and different liability insurance models should be established based on different insured parties as the entry point, Stimulate insurers to underwrite the risks of artificial intelligence technology innovation, and adapt insurance compensation and loss allocation to the legal reality of ensuring the legitimate rights and interests of all parties when artificial intelligence infringement occurs.

In addition, in the case of AI infringement, in addition to private remedies, in view of the complexity of AI infringement cases, whether the public power can also participate in the division and determination of AI infringement liability as a regulator, and become a part of the AI infringement liability insurance system, there is still room for discussion.

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