

# ***Behavior of Infringement of Online Virtual Property***

## ***--In the Prospective of Criminal Law***

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**Abstract:** Entering the Internet information era, although attached to specific network technology, virtual property has established a close relationship with real property. By selling the wealth created in virtual space, people can convert their virtual property into real wealth, which has led to a high incidence of illegal acquisition of virtual property in recent years. However, the academic community and judicial practice have been debated for many years regarding the infringement of virtual property in cyberspace, and so far, a consensus has yet to be reached. In the academic community, a unified viewpoint on the legal attribute of the virtual property has yet to be formed; whether the virtual property is data or property has yet to be determined. In judicial practice, differences in the selection of the crime and punishment have also been a long-standing issue. Therefore, conducting an in-depth study on the regulation dilemma of infringing on network virtual property is of great importance.

**Keywords:** virtual property, legal attribute, infringement, differences in convictions

## **1. Introduction**

With the continuous development of the Internet and the evolution of virtual property, the legal protection of virtual property has been discussed by academics for decades. In *the Civil Code of the People's Republic of China* issued in 2020, Article 127 uses the term 'network virtual property', clarifying its legal protection by stipulating that 'If the law has provisions on the protection of data and network virtual property, it should follow the provisions' [1]. However, due to the particularity and complexity of the virtual property, the provisions of China's criminal law on protecting virtual property are still like a fog. There are many problems in applying traditional crime charges in the regulation of infringement behaviors. In such context, this paper will show various dilemmas in regulating the infringement of network virtual property in terms of criminal law by using the methods of literature research and case study to analyze why these dilemmas are challenging to solve in the current stage of society.

## **2. The Regulation Dilemma on the Behavior of Infringement of Network Virtual Property**

This paper takes the CKNI database as a search tool, using 'virtual property' as the keyword and conducting the search in the scope of criminal law. As of July 2023, there were 271 articles (journals and dissertations) concerning the criminal law system of virtual property. Most scholars consider that

there are several problems in the legislation of China, such as the vague concept of property and few relevant laws and regulations about protecting virtual property. In judicial practice, there are problems like different convictions of stealing virtual property and the need for more knowledge of the types of infringing on virtual property [2]. The underlying reason is that few explicit legal provisions are stipulated in our criminal law for protecting virtual property [3]. Most scholars believe that the key point for better protecting network virtual property is to clarify its connotation and attribute [4].

After analyzing the literature reviewed, this paper found that there is currently a unified understanding of the definition of network virtual property in the academic community. Virtual property refers to electromagnetic data that exists only in cyberspace, which possesses real economic value but cannot physically manifest in the real world [5]. Since most people recognize its value and scholars acknowledge its property attributes, the academic community generally holds a positive view on protecting network virtual property through criminal law. However, there are still divisions in virtual property theories within the academic field, as well as differences in the conviction and sentence of specific criminal acts in judicial practice.

### **2.1. Ambiguity in the Definition of the Nature of Virtual Property**

As many scholars believe that clarifying the legal attributes of online virtual property is a prerequisite for judging the illegal acquisition of online virtual property [6], the controversy in the theoretical community has also focused on defining its legal attributes. However, the reality is that there is no consensus among China's academic community regarding the attributes of virtual property, leading to a wide variety of theories. Among them, the property right theory, debt theory, intellectual property theory, and new type of property theory have gained the support of most scholars.

The theory of property right holds that the legal attribute of virtual property should be rights in the property. Scholars supporting this view argue that the owner of the virtual property enjoys legal rights such as possession, use, usufruct, and disposition. Additionally, virtual property exhibits fundamental characteristics of dominance and exclusivity [7]. Therefore, virtual property should be classified as property rights.

However, many scholars disagree with this viewpoint and argue that the right to network virtual property is a form of debt, reflecting the debt-credit relationship between the user and operator. According to this perspective, by entering into an agreement with the network operator and paying the price, the user obtains the right to request corresponding services (e.g., game-related services) and ultimately acquires a claim [8]. Therefore, virtual property is considered to be the service provided by the network operator. Scholars favoring the debt theory believe that it is difficult to classify network virtual property as 'property'. Instead, it may be regarded as 'property interests' [9]. In other words, violating network virtual property would be an infringement of the claims of network users.

Scholars who support the intellectual property theory suggest that virtual property is computer code that exists in a competitive and interactive manner, imitating the real world [10]. Furthermore, scholars advocating this view are divided into two opinions. One opinion holds that the creativity of virtual property originates from the network operator, making the nature of virtual property program code [11]. For example, in online games, everything from character image, game tasks, and virtual currency to the later maintenance and operation of the game is designed and programmed by the operators and game designers. Therefore, all the wealth acquired by players in the virtual world is essentially digital code, and the intellectual outcomes belonging to the game manufacturing company. Another viewpoint is that virtual property, whether obtained through game tasks or by upgrading equipment in other ways, is the result of the players' efforts and intellectual achievements, and should be attributed to the players [12]. However, regardless of which viewpoint is taken, the creativity and property value of the virtual property are recognized as outcome of intellect [8].

In addition, some scholars believe virtual property is a 'new type of property' that possesses the attributes mentioned above. According to the new type of property right theory, virtual property includes three legal attributes: property right, debt, and intellectual property right [13]. On the one hand, due to the service agreement signed between the user and the operator, the virtual property has the property of a 'debt'. On the other hand, the exclusive control of the subject of the right over the password of the network account confers the attribute of property on the virtual property. In addition, operators and users have paid a large amount of intellectual labor in creating virtual property; therefore, it also has the attributes of intellectual property rights. Since the virtual property has the characteristics mentioned above simultaneously, it cannot be solely categorized as one of them. Instead, treating it as a new type of property is more desirable.

To sum up, this paper argues that the new type of property right theory is most suitable. The reason why virtual property has become a 'new type of property', is because it has 'double attributes'. It has general property characteristics but can only exist in virtual space and cannot get rid of 'data attributes'. From the perspective of the 'property attribute' of virtual property, in the era of rapid development of network technology, although the formation of virtual property depends on certain network technology, it has established a close relationship with real property. People put their wealth in the real world into the virtual space, obtaining sensory and spiritual stimulation, affecting their mood and spirit for the change of virtual property at the same time, achieving the purpose of entertainment eventually, which shows the use value of the virtual property. In the online trading market, some users are entitled to turn virtual property into real wealth by making a deal with others and selling their creations formed in virtual space. These transactions also fully demonstrate the exchange value of the virtual property. And this kind of transaction also follows the requirements of the law of value spontaneously and consciously, making virtual properties more and more able to be measured by the existing evaluation criteria. The connection with the real property is also strengthened continuously. Whether it is the operators or those online players who spend time and money to build 'castles' in virtual space, their virtual properties are affecting real wealth at the same time, which also shows that virtual property is a 'new type of property', and there is a close interrelationship between real property and virtual property.

From the perspective of the 'data attribute', the essence of virtual property is electromagnetic data which cannot appear in the real world, and these data are present in different states or results due to personal intelligence or labor. Taking online games as an example, players can use virtual currency to buy equipment and clothing and build their own 'castle' in the online game world. However, the accumulation virtual wealth in the cyberspace cannot directly represent the individual's property in the real world. A millionaire in the virtual world may only be an ordinary programmer in real life. Considering that the virtual property he possesses cannot be transformed into real wealth by other means, in that case, it is only the accumulation of data in the virtual space and citizens cannot obtain authentic material ultimately.

Some scholars disagree that treating virtual property as a new type of property, the attribute of its right has yet to become clear but makes it more complicated [8]. This article does not agree with this viewpoint because the legal attributes of virtual property are complex in themselves, and they cannot be fully absorbed by the existing theoretical system and are attributed to any of the categories of property right, debt, or intellectual property right. On the contrary, recognizing the complexity and multilayered nature of the virtual property makes it possible to find the most appropriate point of criminal liability in a specific case.

## 2.2. Discrepancy in Convictions

In addition to disagreements over the delimitation of the attributes of virtual property, the theoretical community and judicial practice also had significant disputes over the convictions of the infringement

behaviors. That is, whether the act violating virtual property should be criminalized as a property-type or a computer-type crime.

Professor Zhang Mingkai believes that the perpetrator stole the virtual property of the online game, though it is electronic data in essence, it has commonality with the general property of citizens. The perpetrator targeted the property value of the virtual property and illegally obtained the victim's property rights and interests in the subjective aspect, it should be convicted of theft [14]. However, some scholars support that the violation of virtual property should be punished according to the provisions of computer crime. Scholars Zhang Chi considers that virtual property is a game service provided for the user, and the perpetrators steal the property technically, they should be convicted and punished according to the provisions of computer-type crimes [15].

The same confusion is reflected in China's criminal justice field, that is, the discrepancy in convictions between different courts. This paper selects two typical cases for comparative analysis, demonstrating the judicial confusion in the current practice.

Table 1: Case Analysis.

Case	The Meng and He's Cyber Theft Case [16]	Wang's Illegal Acquisition of Computer Information System Data Case [17]
Basic Fact	The injured enterprise was an agent of Tencent's online Q-coins for online sales. Defendant Meng stole the account number and password to access the Tencent online top-up system through a hacking program. They conspired to collect money from buyers through online banking, and He invaded the victim unit's online recharge system to steal Q-coins and then topped up Q-coins for the buyers' QQ numbers notified by Meng. He then stole 32,298 Q-coins valued at RMB 24,869 and 134 50-point and 60 100-point top-up cards valued at RMB 1,079 from the victim's account.	Defendant Wang purchased over 60,000 sets of online game accounts and passwords illegally obtained by others and then sold the game equipment and other items in the accounts through the Internet for monetary profit. Finally, he sold the game equipment and other items equivalent to RMB 69,093.
Referee points	The Q-coins obtained by paying a specific price are not only virtual property in the online environment but also money owned by citizens in real life, which should be protected by criminal law.	Items such as game equipment and game currency are data stored in a computer system.

By comparing the two cases in the Table 1, it is easy to find that in the process of conviction, since the courts have different understandings of the legal attributes of virtual property, the results of their beliefs are varied. In *the Meng and He's Cyber Theft Case*, the court held that the Q coins obtained by paying a certain price were not only virtual property in the virtual world but also represented property that the victim had in real life; thus, stealing Q coins should be recognized as theft. On the contrary, in *Wang's Illegal Acquisition of Computer Information System Data Case*, the court held

that game coins and other items are data stored in the computer system, which should be protected under the umbrella of data security. Some scholars have pointed out that the prerequisite issue is determining whether the essence of virtual property is property or data [6]. This paper believes that due to virtual property's diverse characteristics, its essence's delimitation cannot be generalized. Based on different legal interests or objects, the delineation of its legal attribute should be further analyzed according to the fundamental issues of the case itself.

### **3. Reasons for the Long-standing Existence of Dilemma**

Although in judicial practice, some courts think that virtual property is objectively manageable and governable with economic values, which means they belong to the 'property' in Criminal Law and might become the object of stealing. However, based on the difficulty of transition between electromagnetic data and real property, there are still differences in the regulation results of infringing acts between courts. This paper considers that entering the era of rapid development in cyberspace, due to the diversity of internal classification of virtual property, as well as the instability of its valuation, the regulation dilemma cannot be solved in the short term.

#### **3.1. The Internal Classification of Virtual Property is Diverse**

As a typical type of electromagnetic data, the ways virtual properties exist are diverse, such as social app accounts, online game accounts, game equipment, and game currency. For different types of virtual property, identifying its attributes and selecting crime for the offense cannot be generalized, it should be analyzed according to the basic fact in cases.

Scholar Jiang Bo divides virtual property into three categories [18]:

The account-type virtual property is the account that is manageable and governable, combined by the arrangement of the different digits. Users can control their accounts by setting passwords and enjoy potential benefits by putting efforts into cultivating them.

The item-type virtual property, typical examples are the equipment and clothing in online games that players can acquire by spending time and effort doing tasks, breaking through games, or paying prices directly.

The currency-type virtual property is an exchange tool issued by online game operators and can be purchased directly through real currency in a particular proportion setting in advance.

Based on these classifications, this paper believes that whether the virtual property can show its economic value in the transaction process according to the interrelationship of supply and demand in the real society in a specific case and transform into real currency eventually, is an essential factor for the identification of its attribute. However, according to the different external forms or types of virtual property, the difficulty of transition between real currency differs, affecting the court's identification of the attributes in individual cases.

First, Among the three types of virtual property, the differences in the court's identification of the legal attributes could be relatively less noticeable when it comes to currency-type virtual property. From the 22 criminal cases of illegal acquisition of currency-type virtual property reviewed in this paper, 17 courts unanimously held that the essence of currency-type virtual property is property, and the intrusion into the computer system to steal the currency-type virtual property owned by others is nothing different from infringing on their real property. This paper thinks that, as the valuation of currency-type virtual property has been determined by the operator enterprises, following a certain exchange ratio with real currency in advance and has a fixed exchange rate with real cash, the court can calculate the value of the infringed property with the specific exchange ratio without efforts. As a result, there is relatively less judicial disagreement on applying property-type offenses to punish infringing acts.

Second, compared with the other two types of virtual property, the delimitation of the legal attributes of item-type virtual property is quite controversial in China's criminal justice field. Taking game equipment as an example, from the 15 criminal cases searched by this paper in which the stealing of online game equipment by intruding into the computer system, eight verdicts treat game equipment as a kind of property to protect, and the other seven verdicts regard the intrusion result as the illegal acquisition of system data. This paper thinks that whether the player gets the right to the equipment by paying a certain fee or investing time to complete specific game tasks to get the equipment as the fruit of his labor, finally, the player can get the actual monetary benefit by making a deal with others. However, even if the game equipment has economic value due to circulations, it can only achieve its value with real property in the exchange process within a specific group of people. The business can only happen in certain groups of people and on specific occasions, making the judicial field divergent in identifying the attributes of item-type virtual property.

Third, it is most complicated to deal with the account-type virtual property. For the complexity of its internal classification, this type of virtual property should be further subdivided into communication and social accounts, online game accounts, media dissemination accounts, and other forms. It is apparent that a large discrepancy still exists in the judicial practice for identifying and grasping the attributes of different account categories. Take *the Lv's Theft Case* and *Wang's Illegal Acquisition of Computer Information System Data Case* as examples. In *the Lv's Theft Case*, the court held that the defendant transferred his QQ account to the victim for RMB 4,500 and then got the number back by making a complaint to Tencent. At this time, the object of the theft had been materialized as the RMB 4500 obtained from the transfer of the QQ number, which was in line with the constitutive elements of the crime of theft [19]. In *Wang's Illegal Acquisition of Computer Information System Data Case*, the perpetrators used a Trojan horse program to get more than 120,000 groups of game account information. These account passwords were extracted, packaged, and sold for monetary profit, with illegal profits reaching more than 110,000 yuan. However, the court reckons these accounts as data stored in a computer system instead of property [20].

This paper thinks that users have exclusive rights over an account based on setting a password and can dispose of their accounts according to their own will and obtain certain property gains. Although the account may have been free of charge in its original acquisition, once the user reaches an agreement with others to make the deal and obtains the corresponding price, the account can be seen as an economic interest available to the user. Therefore, it should be considered as a general property to protect, which is also the underlying logic of the court's identification that Lv's unauthorized access to the account, which has been transferred to another person, is an act of theft. However, in *Wang's Illegal Acquisition of Computer Information System Data Case*, the court confirmed that the legal attributes of the stolen accounts were computer information system data. This paper thinks that although the 'data' had a high economic value, it was more appropriate to apply the crime of illegally acquiring computer information system data to protect information security since the application of the crime of stealing means that the damage caused is limited to property loss, but the defendant's unlawful behavior, in this case, affects the regular operation of the online system and infringes information data security. In conclusion, depending on various facts of cases, there are still significant differences in the court's identification of the attributes of virtual property among different types of accounts.

All in all, the diversity of internal classification of virtual property is a crucial reason for the long-standing existence of regulation dilemmas. Due to the development of network technology, virtual property will inevitably emerge new types and external forms for the identification of the attributes of virtual property. Therefore, there is still much room for discussion.

### 3.2. The Instability in the Process of Valuing Virtual Property

The instability of the valuation of virtual property, that is, how to evaluate a certain kind of network virtual property, has yet to have a reasonable and unified standard. There are several views on the valuation of virtual property in the academic community [21]:

The first viewpoint is that the value of a virtual property is determined by the money and time spent by the owner. The second view is that it is decided by the economic benefits that the owner can obtain by transferring their virtual property into real money. The third holds that the scarcity and demand of virtual property determine its price. The scarcer it is, the higher the demand and its value will be. This paper thinks the three criteria above are not reasonable and comprehensive enough.

Firstly, taking the illegal acquisition of other people's game equipment as an example. In the case that the value of the virtual property is determined by the value of game currency recharged directly, based on the fact that the connotation of 'recharge amount' and 'market value' of virtual equipment is different, the meaning of 'recharge amount' is not entirely equivalent to that of 'market value'. In addition to the real currency of recharge, the upgrading and forging of game equipment generally condense other time and energy spent by users, and the value of this part is difficult to evaluate with a price. Secondly, it is unreasonable to determine the value of virtual property by the amount of time and energy spent by players. Based on the player's game competitive ability, computer configuration and other reasons, the investment of time in obtaining the same game equipment may differ. In addition, some virtual properties with 'scarcity' their valuation is more unstable. They can be divided into the virtual property with timeliness and the virtual property with randomness. For the virtual property with timeliness, taking the time-limited goods launched by game operators for marketing as an example, since players can only buy them within a certain period, the price of the goods will be very different within the period and after the expiration of the specified period. There may even be some 'out-of-print goods' with sky-high prices. For the virtual property with randomness, taking the lottery mechanism set by the game operator as an example, players need to recharge real cash to the account for the opportunity to obtain specific goods, and there is a certain chance to obtain the rare goods in the prize pool through the lottery. And such goods are usually set at a minimum 'explosion rate', meaning that acquiring such virtual property has great randomness, and the time and cost spent by different players to obtain the same virtual property are inconsistent. Under such circumstances, it is difficult to determine the price of virtual property.

In addition to the above methods, there are other methods to value a certain type of virtual property in judicial practice. Some courts believe that the value of the game account can refer to the market transaction price of the trading platform recognized publicly or the voluntary transactions' price between players to calculate the actual loss of the game account [22]. However, it is still tricky that not all types of virtual property can find their historical transaction price on the relevant trading platform, and the voluntary transactions between players have significant personal subjectivity. For example, some weapons and equipment in online games are only attractive to game enthusiasts, but there is no particular significance for others. Then it can be seen that some players are willing to spend lots of money for a specific virtual property to pursue spiritual satisfaction. The price of purchasing this virtual property does not have a reference value.

To sum up, owing to that there is no uniform standard for virtual property owners to obtain network virtual property, and there are inconsistencies in the time and cost spent by different owners to obtain the same virtual property, which is of significant contingency; it is unreasonable to confirm the value of network virtual property based on the labor and time spent by the owners. In addition, owners show a different subjective willingness to bid in the process of trading, which makes the price of virtual property fluctuate considerably. However, due to a lack of price guidance and supervision from the price management department, the transaction price of virtual property cannot truly reflect its actual

price. Since the above problems cannot be solved, and there is no idealized way to measure the value of the virtual property; the valuation of virtual property will be in a state of continuous instability.

#### 4. Conclusions

In the Internet era, the development of network virtual property presents a booming trend. However, there are still multiple dilemmas in China's judicial practice regarding the infringement of virtual property. At this stage, the path of indiscriminately incorporating virtual property into the protection of property crimes or computer crimes not only fails to achieve judicial fairness and justice effectively but also fails to promote the process of effectively maintaining the security of information. On the one hand, with the continuous development of network technology, virtual property will inevitably emerge new types and external forms. On the other hand, the process of evaluating its price is complicated, and sanctioning the behavior of infringing on the virtual property still has problems when applying traditional crimes to convict and sentence. Still, there are obstacles to overcome in the path of protecting virtual property in criminal law. Under such circumstances, the attributes of virtual property should be judged and analyzed through the basic facts of the cases to criminalize the specific behavior of infringement of network virtual property and, eventually, protect the fundamental rights and interests of the victim.

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