

Research on Legal Issues of Virtual Property Inheritance

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Abstract: Regarding the legislation of virtual property, currently only Article 127 of the Civil Code exists, stating that where there are legal provisions for the protection of data and online virtual property, those provisions shall be followed. There are no specific provisions concerning the inheritance of virtual property. Academic circles also hold differing views, and no unified conclusion has been reached regarding the inheritance of virtual property. With the development of the Internet, the protection, inheritance, and related systems for virtual property have gradually become a research hotspot in the field of civil law. This paper, by comparing several mainstream views on the attributes of virtual property, concludes that virtual property should be categorized as creditor's rights. Virtual property is classified based on whether it involves privacy to determine its inheritability. Through the analysis of the current state of virtual property inheritance, this paper identifies legal issues such as standard terms excluding user inheritance rights, unclear valuation standards for virtual property, and conflicts between user privacy protection and heir inheritance rights. It also proposes solutions, including clarifying the scope of inheritable subjects, regulating network service agreements, establishing a virtual property valuation system, and coordinating conflicts between user privacy protection and inheritor inheritance rights.

Keywords: Virtual Property; Creditor's Rights Theory; Right of Inheritance; Right of Privacy; Standard Terms

1. Introduction

With the development of the Internet, social software like WeChat, QQ, Weibo, and Xiaohongshu, storage software like Baidu Netdisk and Quark Netdisk, game software like Honor of Kings, Genshin Impact, Identity V, and various other applications have emerged in abundance. Chat records, published posts and

photos in social software, files in storage software, as well as in-game equipment and virtual currency in game software are all intangible assets possessing both exchange value and use value. Undoubtedly, they legally constitute virtual property. Following this is the question of whether and how such virtual property can be inherited. Currently, China's legal provisions concerning virtual property are limited to Article 127 of the "Civil Code of the People's Republic of China" (hereinafter referred to as the Civil Code). Regarding the nature of virtual property, the scope of inheritable subjects, and other related content, there are currently no clear legal stipulations, and academic circles hold divergent views without a universally convincing unified standpoint. In judicial practice, the lack of unified and clear legal regulations makes it challenging for judicial personnel to handle such cases, which can easily lead to inconsistent judgments, i.e., "different judgments for similar cases".

This paper will analyze the nature of virtual property, elaborate on the feasibility of inheritance, and by explaining the current state and existing legal problems in virtual property inheritance, propose solutions to these issues.

2. The Nature of Virtual Property

Some scholars believe that academia reached an early consensus on the conclusion that "virtual property should be regulated and protected by law" [1]. Article 127 of China's Civil Code, "Where there are legal provisions for the protection of data and online virtual property, those provisions shall be followed," solidifies this consensus in legal form. There is also little doubt about whether virtual property constitutes property. Although there are few relevant legal regulations concerning virtual property, most judicial practices and academic viewpoints consider virtual property as property. A minority view holds that virtual property is not property but a type of civil right [2] or computer data [3]. To study the inheritance issues of virtual property, its nature must first be clarified.

Because Article 1122 of the Civil Code stipulates that estates which, according to law or their nature, are not inheritable shall not be inherited. In other words, the nature of virtual property also affects its inheritability. Currently, there is no definitive conclusion regarding the nature of virtual property. In terms of legal norms, various rights and interests related to virtual property have not been affirmatively stipulated. Article 127 of the Civil Code is merely a referral norm [4]. In judicial practice, courts mostly do not make judgments on the legal attributes of virtual property in their rulings [5]. In academia, although this is an almost unavoidable issue in virtual property research, a unified viewpoint has not yet been formed.

A minority view also holds that if only discussing the inheritance of virtual property, there is no need to specifically study its legal nature [6]. Because Article 124 of China's Civil Code stipulates that natural persons enjoy the right of inheritance according to law. Lawful private property of natural persons may be inherited according to law. From this legal provision, it seems that to discuss whether virtual property can be inherited, one only needs to determine whether virtual property constitutes lawful private property of a natural person, thereby bypassing the study of its nature.

However, considering Article 1122 of the Civil Code, this paper deems it necessary to study the nature of virtual property. Influenced by the traditional dichotomy of real rights and creditor's rights, the current mainstream academic views are the Real Right Theory and the Creditor's Rights Theory. Non-mainstream views include Intellectual Property Theory, New Type of Real Right Theory, Civil Interest Theory, Creditor's Right Real Right-ization Theory, Multi-Right Object Theory, Data Operation Permission Theory, Typology Theory, etc. [7]. This paper supports the Creditor's Rights Theory and will next focus on analyzing the two mainstream theories.

2.1 Real Right Theory

The reasons why academia considers virtual property as a real right can be mainly explained from three aspects. The first aspect is the essential attribute of real rights. Virtual property itself possesses specificity and independence, conforming to legal provisions regarding "things," and logically should be a real right.

The second aspect is the protection of real rights. China's legal regulations concerning real rights are relatively well-established. Defining virtual property as a "thing" would allow direct reference to relevant real right laws for better protection [6]. The third aspect is the attitude of the legislator. Article 102 of the revised draft and Article 104 of the first review draft of the "General Provisions of Civil Law (Draft)" directly stipulated online virtual property as an object of real rights. Article 102 of the first review draft's revised version listed network virtual property alongside income, savings, houses, daily necessities, production tools, investments, etc., as property rights protected by law [8]. Although due to opposition from some experts and scholars, the final "General Provisions of Civil Law" did not explicitly define the attribute of virtual property, many scholars believe the amendment process of the draft already reflects the legislator's inclination towards defining the attribute of virtual property [9].

However, this theory has defects. Article 114 of China's Civil Code stipulates that a real right is the right of the right holder to directly dominate and exclude others from a specific thing according to law, including ownership, usufructuary rights, and security interests. If only considering the first part, virtual property seems to fit the definition of a real right. But according to the principle of *numerus clausus* (closed list) for real rights, legally recognized "things" should only include the three types listed in the latter part of Article 114: ownership, usufructuary rights, and security interests. Articles 124 and 323 of the Civil Code specify that the objects of ownership and usufructuary rights are limited to immovable or movable property. Both movables and immovables are undoubtedly tangible property, whereas virtual property is intangible. Therefore, it should not belong to either movables or immovables. Articles 386 and 387 of the Civil Code stipulate that security interests only arise when a debtor fails to perform matured obligations or upon the occurrence of conditions agreed upon by the parties for realizing the security interest. Clearly, virtual property does not fall into these categories.

Article 115 of the Civil Code also explicitly states that things include immovable and movable property. Where the law provides that rights serve as objects of real rights, such

provisions shall be followed. As discussed, virtual property is neither movable nor immovable property, and the law does not directly stipulate virtual property rights as an object of real rights. Under this premise, still classifying virtual property rights as real rights constitutes an expansive interpretation, breaking through the Civil Code's definition of things and the fundamental principle of *numerus clausus* for real rights [10], as well as exceeding the scope understandable and acceptable to the general public.

In summary, virtual property is not a thing, and virtual property rights are not real rights.

2.2 Creditor's Rights Theory

The main reason academia considers virtual property as creditor's rights is that network users enter into network service agreements with network operators when using software, and virtual property arises from these agreements as creditor's rights.

First, virtual property conforms to the definition of creditor's rights. According to Article 118 of the Civil Code, creditor's rights are rights arising from contracts, entitling the obligee to request a specific obligor to act or refrain from acting. A network service agreement is a contract between a network user and a network operator. Both parties can, when their rights and interests are infringed, request the specific obligor to act or refrain from acting based on this service agreement. For example, when an account is stolen, the network user has the right to request the infringer to return the account; when a network user violates usage rules, the network operator has the right to request the user to use their account in accordance with the regulations. Second, network service agreements conform to legal provisions on creditor's rights. These agreements often include clauses prohibiting account transfers by users, which aligns with the scenario in Article 545 of the Civil Code, "where the parties have agreed that the claim is not transferable" [9]. Third, recognizing virtual property rights as creditor's rights is more conducive to their protection. One reason some scholars support the Real Right Theory is its perceived benefit for protecting virtual property, but the Creditor's Rights Theory can achieve the same protective effect. Legislatively, China's legal provisions on creditor's rights are relatively well-established; judicially, there are significant cases and judgments concerning

creditor's rights for reference; theoretically, research on creditor's rights in China is already quite comprehensive and sufficient to constitute protection for virtual property.

In summary, virtual property is a type of debt, and virtual property rights are creditor's rights.

3. Classification of Virtual Property

Based on whether virtual property involves privacy to judge its inheritability, virtual property is divided into privacy-involved property (hereinafter referred to as PI property) and non-privacy-involved property (hereinafter referred to as NPI property).

3.1 Non-Privacy-Involved Property (NPI Property)

NPI property refers to virtual property that does not involve the personal privacy of network users. Such virtual property can undoubtedly be inherited. First, legal principles affirm that virtual property can be inherited. The essence of NPI property is property, sharing characteristics with traditional property and thus being inheritable. As creditor's rights, according to Article 124 of China's Civil Code, lawful private property of natural persons may be inherited according to law. That is, as long as the virtual property left behind by a network user is their lawful private property and does not involve other legal issues, it should logically be inheritable. Second, judicial practice also affirms that virtual property can be inherited. For example, in the "Zeng's Taobao Shop Inheritance Case," Mr. Zeng had registered and operated a "crown-level" shop on Taobao during his lifetime without leaving a will. After his death, his two children disputed the shop's inheritance. The judge conducted extensive mediation from emotional and legal perspectives, prompting the parties to reach a settlement agreement, ultimately allowing the plaintiff (the son) to inherit the Taobao shop. The court-mediated outcome shows judicial practice supports virtual property inheritance.

3.2 Privacy-Involved Property (PI Property)

PI property refers to virtual property that involves the personal privacy of network users. Due to its connection to user privacy rights, the inheritability of such property cannot be directly determined.

Regarding the inheritability of PI property, academic views are divided into the Inheritable

Theory and the Non-Inheritable Theory. Proponents of the Inheritable Theory argue that, first, the essence of PI property is property, possessing property attributes, while its privacy attributes can be negligible, such as photos in a QQ album; second, protection of a deceased's personality interests adopts an indirect form, i.e., protecting the deceased's privacy by protecting the inheritor's inheritance rights. Proponents of the Non-Inheritable Theory believe that PI property differs from ordinary virtual property and should not be simply deemed inheritable [11].

This paper argues that PI property should be further divided into shared privacy and personal privacy, studying their inheritability separately.

3.2.1 Shared privacy

Shared privacy refers to virtual property for which two or more individuals jointly hold privacy rights. Regarding such PI property, this paper argues it can be inherited. During the deceased's lifetime, the privacy of the virtual property was jointly held by all aware parties. Once one party passes away, other aware parties already possess the knowledge without requiring inheritance or transfer steps. In this case, inheritance disputes are fewer. Moreover, if other aware parties knew the private content during the deceased's lifetime, they would possess the PI property even without inheritance, making inheritance a non-issue. Therefore, when one holder of PI property passes away, other aware parties should logically be able to inherit the virtual property.

3.2.2 Personal privacy

Personal privacy refers to virtual property for which a single network user holds privacy rights. This involves the issue of whether the deceased possesses personality rights.

Regarding whether the deceased has privacy rights, Chinese academia has not formed a unified view. Some scholars believe the deceased does not have privacy rights, and protecting the deceased's privacy interests actually safeguards the interests of their relatives. Article 13 of China's Civil Code stipulates that a natural person's capacity for civil rights begins at birth and ends at death, enjoying civil rights and assuming civil obligations according to law. From this legal provision, only living persons enjoy personality rights. The deceased lacks capacity for civil rights and does not enjoy personality rights; thus, the deceased's privacy rights are not

protected by law. However, Article 994 of the Civil Code states that if the privacy of a deceased person is infringed, their spouse, children, and parents have the right to request the actor to bear civil liability according to law; if the deceased has no spouse, children, and their parents are deceased, other close relatives have the right to request the actor to bear civil liability. From this provision, although the deceased lacks personality rights, their personality interests from life are still protected by law. The theoretical basis for protecting the deceased's personality interests lies in the existence of preliminary and extended interests distinct from personality rights before a civil subject's birth and after their demise. Protecting the extended interests of the deceased's personality rights aligns with the purpose of personality right protection, forming a unified whole. Therefore, the method of protecting the deceased's personality interests should be consistent with the protection method during their lifetime [11]. Although the deceased does not possess privacy rights, their privacy interests are still legally protected. In China, judicial interpretations and practices have recognized the protection of the deceased's privacy interests [12]. Therefore, virtual property involving personal privacy should not be inherited.

In summary, NPI property can be inherited by all heirs, virtual property involving shared privacy can be inherited by other aware parties, and virtual property involving personal privacy should not be inherited.

4. Feasibility Analysis of Virtual Property Inheritance

In practice, as cases related to virtual property inheritance increase, social demand for virtual property inheritance continues to grow. Undoubtedly, the inheritance of virtual property should be protected. However, the premise for protecting virtual property inheritance is that virtual property itself is inheritable. Next, this paper will elucidate the inheritability of virtual property from four perspectives: social demand, legal provisions, judicial practice, and academic theory.

4.1 Social Demand Requires Inheritance

With technological development, people's lives are inseparable from major virtual software. Virtual software not only provides spiritual value, such as satisfaction from posting and

receiving comments, emotional experiences from communicating via email; but also provides economic value, such as in-game equipment obtained through play, social media accounts with many followers that can circulate in the market. Nowadays, the spiritual and economic values provided by virtual software are often mixed and difficult to separate. For example, WeChat friends may be chat partners providing emotional value or clients providing income sources. Generally, virtual property possesses both personal and property attributes [13]. What heirs inherit is not the virtual property itself but the spiritual and economic value it represents. In contemporary society, people increasingly value their personal spiritual world. Various inheritance cases involving virtual accounts carrying rich spiritual worlds, like the "QQ Account Inheritance Case," emerge endlessly; economic sources show a trend of diversification, with emerging industries like "professional gaming" and "professional self-media" flourishing. These phenomena signify that virtual property now plays a crucial role in people's lives. Allowing virtual property inheritance adapts to the changed objective reality.

4.2 Chinese Legal Provisions Support Inheritance

First, Chinese law does not prohibit virtual property inheritance. Article 124 of the Civil Code, "Lawful private property of natural persons may be inherited according to law," is essentially a general provision. If virtual property constitutes lawful private property, it can also be an object of inheritance. Article 8 of the Civil Code states that in civil activities, civil subjects shall not violate laws or contravene public order and good morals. This article illustrates the concept of "what is not prohibited by law is permissible" from a negative prohibition perspective. "Shall not violate laws" is the legality principle; "shall not contravene public order and good morals" is the public order and good morals principle. Virtual property inheritance itself does not contravene public order, good morals, or explicit legal prohibitions.

Second, creditor's rights can be inherited. Recognizing virtual property as creditor's rights, according to Article 545 of the Civil Code stipulating "the obligee may transfer the claim in whole or in part to a third party," creditor's

rights are transferable. Inheritance is essentially a form of transfer; therefore, virtual property as creditor's rights can be inherited.

Third, virtual property qualifies as lawful estate. Article 124 of China's Civil Code stipulates that natural persons enjoy the right of inheritance according to law. Lawful private property of natural persons may be inherited according to law. Article 1122 states that an estate is the lawful property left by a natural person at the time of death. Combining these articles, the characteristics of an estate are: property nature, private nature, and legality.

Regarding property nature. Some scholars believe that the Civil Code lists data and online virtual property as independent objects of civil rights, acknowledging their property attributes [14]. First, some may question whether digital heritage constitutes property, but throughout historical development, property has never referred solely to tangible objects. Its connotation and extension are not static; the meaning and scope of property are results of social demand and interaction. Property law in the modern sense has become "wealth law," and digital heritage naturally is important wealth in network society [15]. Second, property in law includes things, creditor's rights, and other composite rights. Recognizing virtual property as creditor's rights gives it a property nature. Finally, virtual property like social network accounts can satisfy users' communication needs and spiritual needs for online life recording and sharing, possessing use value; restrictive agreements on social network account transactions in user service agreements and real-life trading events prove social network accounts possess exchange value [16]. Possessing both use value and exchange value simultaneously [17] conforms to the definition of property.

Regarding private nature. Virtual property arises from service agreements between network operators and users. Although academia debates whether the subject is the operator or the user, virtual property is undoubtedly private property, possessing a private nature. Some scholars believe that since the concept of "virtual property" emerged, its nature as "personal property" has gained widespread recognition [18].

Regarding legality. Currency in user virtual accounts, game equipment, emails in electronic mailboxes, etc., if obtained through legitimate

means involving money, time, and labor invested by the user, naturally possess legality. Therefore, virtual property conforms to all characteristics of an estate and can be inherited as such.

4.3 Chinese Judicial Practice Supports Inheritance

First, courts support virtual property inheritance. Searching the keyword "virtual property" on the China Judgments Online website reveals that most Chinese courts' adjudication approaches in cases involving virtual property transfer or inheritance are roughly: first, determine virtual property as property; then, based on Article 124 of the Civil Code and other legal provisions, determine that virtual property can be transferred or inherited. Examples include earlier typical cases like the "QQ Account Inheritance Case" and "Taobao Shop Inheritance Case," as well as more recent cases mentioned later, such as "Niu Jianxue v. Beijing Yinfu Kechuang Cultural Communication Co., Ltd. Labor Dispute Case" and "Han Xiaodong, Jinhua Bochun Network Technology Co., Ltd. Intermediary Contract Dispute Case," etc. From court judgments, most courts support virtual property inheritance.

Second, notarization authorities support virtual property inheritance. From current notary practice, besides traditional property-related notarization, they also handle virtual property inheritance-related notarization services. For example, the Nanjing Notary Office successfully handled a Taobao shop inheritance notarization as early as May 2015.

Third, wills support virtual property inheritance. In recent years, cases determining virtual property inheritance and protection through wills have increased. The validity of such wills is also legally recognized. For example, one of the "Top Ten Typical Cases in 2023" released by the China Will Registration Center on January 10, 2024: the "Million-Follower UP Owner Makes Will for Virtual Property" case. In early 2023, a post-90s "Bilibili UP owner" with millions of followers came to the China Will Registration Center to make a will, planning to leave his million-follower account to a friend for operation after his death and bequeath virtual assets worth 3 million RMB under his name to his parents.

4.4 Chinese Academic Theory Supports

Inheritance

Chinese academia is divided on whether virtual property can be inherited into inheritable and non-inheritable viewpoints, but the mainstream view holds that "legal acts transferring network virtual property through sale, gift, etc., in principle, should be deemed valid when conforming to Article 143 of the General Provisions of Civil Law" [19].

First, many legal experts and scholars support virtual property inheritance, such as Chinese scholars Zhang Mingkai, Lin Xuxia, etc., who believe virtual property can be transferred and inherited. They argue that virtual property possesses actual spiritual and economic value and should be regarded as inheritable property. With the development of the times, the importance of virtual property continues to increase, and the legal system needs corresponding adjustments to protect inheritors' rights. Some academic papers have conducted in-depth research and analysis on virtual property inheritance, proposing relevant theoretical frameworks and legal practice suggestions. These academic viewpoints and the existence of such papers indicate academia's support and emphasis on virtual property inheritance. Second, judicial cases provide practical basis for academic theoretical research. China has seen numerous virtual property inheritance cases, such as the "High-Value Mobile Number Auction Case" and "Taobao Shop Inheritance Notarization Case", written into papers for analysis and research. Disputes and judgments in these cases provide practical case study materials for academia. By analyzing these cases, academia can deepen understanding of virtual property inheritance and form viewpoints on it.

In summary, virtual property, as a type of property, possesses inheritability.

5. Legal Issues in Virtual Property Inheritance

5.1 Unclear Scope of Subjects for Virtual Property Inheritance

Regarding the subject of virtual property, academic debate mainly centers on network users versus network operators. The relationship between operators and users is established based on network service agreements signed by both parties. According to Article 76 of China's Cybersecurity Law, a network operator refers to

the owner, manager, and network service provider of a network, such as Tencent operating QQ and WeChat, ByteDance operating Douyin, etc. A network user refers to a user of the network, such as QQ users, WeChat users, Douyin users, etc.

Chinese law does not explicitly stipulate the subject of virtual property, and judicial practice rarely addresses it. Scholars supporting the operator as the subject argue that the attribute of virtual property should align with the Real Right Theory, where the operator enjoys ownership and the user enjoys the right to use, fitting the logic of the Real Right Theory. Scholars supporting the user as the subject argue that the operator is completely separate from the virtual property, only serving storage and intermediary roles; under this premise, naturally, the user becomes the subject [20].

The subject issue also affects the validity of clauses in network service agreements excluding user inheritance rights, which will be discussed below.

5.2 Standard Terms Excluding Network Users' Inheritance Rights

Domestically, all software pop up a network service agreement requiring users to read and agree before use. Operators often stipulate in these agreements that account ownership belongs to the operator, usage rights belong to the user, and accounts cannot be transferred or inherited. For example, Article 5 of the "Weibo Community Convention" states that users enjoy the right to use their Weibo account and nickname, and this right cannot be sold or transferred privately in any way. Clause 2.3 of the "Xiaohongshu User Service Agreement" states that since your account is associated with your personal information and Xiaohongshu platform commercial information, your account is limited to your personal use. Directly or indirectly authorizing a third party to use your account or obtain information under your account without Xiaohongshu Company's consent is invalid. Similar regulations exist abroad: "Nearly every virtual world also has a clause in its end-user license agreement (EULA) requiring players to assign all rights in properties created in the game to the world's developer [21]." However, even if operators explicitly regulate virtual property attribution, such stipulations may not necessarily have legal effect. Reasons are as follows:

First, standard terms excluding user inheritance rights lack legal basis. Firstly, Chinese law does not stipulate virtual property attribution or user inheritability; thus, such terms lack legal basis. Secondly, if operators assign ownership and usage rights to themselves and users respectively, it implies they consider virtual property as a thing and virtual property rights as real rights. But Chinese law does not stipulate the rights attribute of virtual property, so such terms lack legal basis.

Second, standard terms excluding user inheritance rights lack theoretical basis. Defining virtual account ownership directly relates to balancing personality right protection and data openness/sharing, as well as user personal rights protection and platform rights protection, to better promote the healthy development of the digital economy and network society. Before a theoretical consensus forms on this issue, operators directly assigning virtual account ownership to themselves in agreements lacks corresponding theoretical foundation.

Third, the stipulations excluding user inheritance rights in standard terms are inherently invalid. Network service agreements are standard contracts pre-drafted by operators based on advantageous positions and to avoid repetition. Chinese law itself regulates the validity of standard contracts.

The first scenario is formal violation of legal provisions leading to invalidity. According to Article 496 of the Civil Code, when concluding a contract with standard terms... the party providing the standard terms shall call the other party's attention to the terms that exempt or limit its liability and other terms having material interest to the other party, and explain such terms upon request by the other party. If the party providing the standard terms fails to perform its duty to call attention or give explanation, causing the other party to fail to notice or understand the terms having material interest to it, the other party may claim that such terms are not part of the contract. Based on the location and method of concluding the standard terms, they can be divided into offline and online. An offline example is a standard contract signed between a bank and a client. Typically, bank staff and clients sign paper standard contracts face-to-face, with highlighted parts in bold black and enlarged font, and staff answer questions in person. An online example is the

network service agreement checked before using virtual software. Typically, highlighted parts are also in bold black and enlarged font. However, since most software only require checking a box, it cannot be ensured users truly read it upon clicking, nor can it be ensured they notice special parts. Due to the large number of users, operators cannot answer questions face-to-face. If users disagree, they cannot use the software. Therefore, even with questions, most users check "agree" to use the software. In this case, the alert function of standard terms is hardly guaranteed.

The second scenario is substantive violation of legal provisions leading to invalidity. Firstly, parts of standard terms excluding user primary rights are invalid. According to Article 497 of the Civil Code, standard terms are invalid under any of the following circumstances: ... (3) The party providing the standard terms excludes the other party's primary rights. In virtual software, large amounts of user personal information, privacy, and other data are stored. When accounts are directly linked to specific civil subjects, they constitute part of user personal information. Therefore, such personal information and privacy data, as important components of user personality interests, should clearly belong to the user. If specific information within an account cannot be separated from the account itself, and operators unilaterally declare account ownership belongs to themselves in service agreements, such terms essentially deprive users of their basic personality rights over personal information and privacy. This constitutes an unfair standard term excluding the user's core rights as an information subject. Operators should respect user ownership of personal information and privacy, avoiding such unreasonable terms in agreements [19]. Such standard terms should be deemed invalid.

Secondly, operator exemption clauses are invalid. Most operators include liability limitation and exemption clauses in service agreements, many of which are unreasonable. For example, Clause 6.4 "Service Modification, Interruption, Termination" of the "Xiaohongshu User Service Agreement" states: "Xiaohongshu Company may choose to terminate, interrupt, or terminate part or all of the Xiaohongshu platform services due to its own business decisions, government actions, force majeure, etc.... We shall not bear any losses caused to you

thereby." Own business decisions should be foreseeable risks for operators, not belonging to legally stipulated exemption grounds, and should not be exemption clauses. Yet many software list such reasons as exemptions, transferring potential risks to users, violating legal provisions. Such exemption clauses should be invalid.

In judicial practice, court attitudes also lean towards standard terms being invalid and virtual property being inheritable. For example, in the *Niu Jianxue v. Beijing Yinfu Kechuang Labor Dispute* case, the court directly deemed the standard term invalid; in the *Han Xiaodong, Jinhua Bochun Intermediary Contract Dispute* case, the court recognized the user's right to transfer the game account, etc.

In summary, standard terms shall not exclude user inheritance rights, and terms excluding such rights are invalid.

5.3 Conflict between Virtual Property Inheritance Rights and Privacy Rights

If virtual property is PI property, inheritance also involves user privacy rights. In life, many netizens have joked that before an unexpected death, they must clear all chat and search records. This shows contemporary users' emphasis on privacy rights and their inclination not to leave PI property for inheritance. Foreign scholars have surveyed family relationships in the internet era, involving virtual property inheritance. When asked, "Are you willing to let your parents inherit your online virtual property?" 68% of respondents opposed, while only 22% agreed [22]. PI virtual property, i.e., privacy-involving property like Weibo accounts, WeChat chat records, Xiaohongshu accounts, etc., may lack property value, or their personality value far exceeds property value. Their inheritance requires consideration of user privacy protection. Besides users, PI property may sometimes involve others' privacy, like WeChat chat records involving both parties' privacy [23].

5.4 Unclear Valuation System for Virtual Property

One reason for virtual property inheritance issues and disputes is the unclear valuation system. First, Chinese law has no provisions on virtual property valuation. Second, in practice, virtual property like game equipment, virtual currency, etc., lacking official trading platforms,

often trades on secondary markets with unsystematic prices, including "bargain hunting" phenomena. Finally, trading risks for virtual currencies like Bitcoin are high, and transaction safety is debatable.

6. Paths to Resolve the Legal Dilemma of Virtual Property Inheritance

6.1 Clarify the Scope of Inheritance Subjects

Subjects of virtual property include network operators and users. Operators often use their advantageous position to sign standard contracts with users, which typically exclude user ownership, transfer rights, inheritance rights, etc. If users do not check the agreement acknowledging these terms, they cannot use the platform. Regarding standard terms excluding user inheritance rights, they essentially lack legal and theoretical basis, and the terms themselves may even be invalid.

The subject of virtual property should be the network user. First, operators typically assign ownership to themselves via service agreements, but such agreements lack basis, and their validity is questionable. Second, recognizing the user as the subject is more conducive to virtual property protection and inheritance. Operators are specific and singular, while users are unspecified and dispersed. For example, for a game, the operator is a specific company, and users are millions of players. Due to large numbers and individual differences, the company can only protect most players' interests, inevitably neglecting or sacrificing minority interests. Each player, acting in self-interest, will strive to protect their own interests. When a player dies, as the subject, their heirs should logically inherit the game account. Therefore, recognizing the network user as the subject of virtual property is more conducive to its protection and inheritance.

China can clarify inheritance subjects through laws promulgated by the Legislature or judicial interpretations issued by the Supreme People's Court, stipulating that operators shall not exclude user inheritance rights via standard terms and vest virtual property inheritance rights in users.

6.2 Regulate and Supervise Network Service Agreements

Operators often set clauses in contracts favoring their own rights while restricting user rights. In

the contractual relationship between operators and users, due to the operator's strong position, users often lack room for negotiation, making it difficult to effectively discuss or adjust these terms [24].

The legal validity of these network service agreements is questionable. In judicial practice, courts have already ruled such agreements invalid.

Thus, although currently almost all network platforms require users to sign service agreements beforehand, the effectiveness and legality of agreement content need regulation at the legal level in China.

First, compel users to read network service agreements. Typically, platforms require users to "sign" Privacy Policies and Network Service Agreements upon first login, only allowing software use after checking the box. However, due to the complexity of standard terms, many users check without reading. Therefore, in most cases, standard terms fail to serve their intended alert function. Some software now require users to click on agreement content and read for a certain duration before checking, upon first login. Other platforms can adopt this to increase user reading likelihood.

Second, simplify network service agreement content. To avoid risks, operators' standard contracts are usually drafted by professionals, with formal, specialized language, lengthy and dense text, not conforming to general reading habits. Many users lack patience to read the entire contract or cannot fully understand its content. Operators can, besides the traditional standard contract, offer simplified, easy-to-understand versions covering key points.

Third, regulatory authorities should supervise and regulate network service agreements. Currently, China's Civil Code already defines standard terms, stipulates invalid scenarios, and provides interpretation rules. The Supreme People's Court has issued relevant judicial interpretations. Regulatory authorities can issue departmental regulations based on relevant laws and interpretations to supervise operators, regulate service agreements, and avoid "invalid standard terms" scenarios.

6.3 Establish a Virtual Property Valuation System

Chinese law lacks provisions for virtual property valuation. Correspondingly, virtual

property transactions, transfers, inheritance, etc., are becoming more common, urgently requiring the establishment of a sound virtual property valuation system through laws from the NPC, judicial interpretations from the SPC, and market regulation by authorities, especially for virtual currencies. First, learn from traditional property valuation systems. The essential attribute of virtual property is property; traditional property valuation mechanisms are well-established and can provide useful experience. Second, utilize third-party valuation agencies. Currently, virtual property value is mainly determined by party negotiation. If parties cannot agree, judicial personnel still face difficulties determining value, especially for virtual currency. Currently, few property valuation agencies in China offer virtual property valuation services. Specialized third-party agencies could not only reduce judicial pressure and save resources but also provide more professional valuation solutions. Third, utilize market prices. Some virtual property, like game skins, is influenced by market supply and demand, with significant price fluctuations over time. Determining price requires heavy reference to market prices. Fourth, operators self-regulate virtual property transactions. For example, NetEase Games launched the official secondary trading platform "Treasure Pavilion," where players can buy/sell game accounts, equipment, etc., for NetEase games under platform supervision with a commission fee. Other operators can establish similar platforms. A transparent, open-price secondary trading platform can reduce transaction chaos and increase platform revenue.

6.4 Coordinate Conflicts between User Privacy Protection and Inheritor Inheritance Rights

6.4.1 Network users have the right to determine the scope of inheritance for PI property. Virtual property inheritance should follow the "Deceased's Intentions First" principle [25]. According to Article 1123 of China's Civil Code, testamentary succession takes precedence over statutory succession. As long as a user leaves a will, disputes over whether PI virtual property can be inherited can be avoided. Virtual property is the user's creditor's right; thus, the user inherently has the right to decide inheritance matters for PI property. Therefore, users can decide during their lifetime whether

and to what extent PI property can be inherited, reducing inheritance disputes.

First, operators assist users in handling inheritance matters. Operators can require users to voluntarily sign inheritance agreements upon software use, using standard terms to clarify the scope and objects of inheritable virtual property. These terms can serve as a will after the user's death. For example, Google's Inactive Account Manager allows users to set how account information is handled after death or prolonged inactivity, including sending data to "legacy" recipients or deleting information.

Second, users go to notary institutions to decide PI property inheritance. Currently, Chinese notary institutions have handled cases like online shop inheritance. From recent practice, notarizable types for virtual property inheritance include traditional inheritance right notarization, declaration of waiver of inheritance notarization, inheritance declaration notarization, kinship notarization, etc. [26]. However, as virtual property inheritance is a recent development, notary departments lack standardized, institutionalized procedures. Therefore, notary departments should accelerate establishing sound notarization systems for virtual property inheritance, using typical cases for publicity to expand influence.

Third, legislation promotes legal basis for user virtual property testamentary inheritance. For example, Japan has specialized will service companies. According to Japan's Civil Code on testamentary succession, users pay service fees, submit account names, passwords, etc., draft a legally compliant will for family, and after death, family can obtain account information from the service company with the will [27].

6.4.2 Weighing the conflict between user privacy rights and inheritance rights

Virtual property possesses both privacy and property attributes. If all privacy-involving virtual property is deemed PI property, classifying based on privacy loses meaning. When the property attribute far exceeds the privacy attribute, it can be deemed NPI property; when privacy far exceeds property, it can be deemed PI property; when both are comparable, parties can agree or judicial organs can decide.

Due to the variety of virtual property and continuous emergence of new types, it's difficult for law to directly stipulate attribute levels. Widely used typical virtual property like games,

WeChat, etc., can be directly regulated by law, but most require judicial personnel to judge based on experience in practice.

7. Conclusion

Globally, only a few countries and regions have provisions for virtual property inheritance, such as Ukraine explicitly prohibiting it. In China, although virtual property inheritance is not legally stipulated, academia has conducted relatively rich research, and many cases have emerged in judicial practice in recent years.

This paper, through comparative analysis of mainstream views on virtual property attributes, concludes that virtual property should be categorized as creditor's rights; based on this creditor's rights attribute, affirms its inheritability; identifies existing problems based on the current state of virtual property inheritance; and proposes respective solutions.

However, as virtual property is a new phenomenon flourishing in recent years, more problems will likely emerge with more cases. Currently, the Civil Code has confirmed in legal form that virtual property should be protected. In the future, keeping legal provisions updated is crucial. If legal professionals can consider judicial practice case judgments and academic theoretical research when amending laws, adding relevant provisions for virtual property inheritance, then the Supreme People's Court can issue judicial interpretations based on legal provisions, and various regulatory authorities can release opinions and suggestions accordingly, thereby perfecting the legal system for virtual property inheritance.

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