

Reflection on the Trend of Data Property Rights in China

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doi:10.56397/LE.2023.08.07

Abstract

In the digital age, traditional legal paradigms are facing challenges. The swift advancement of technology has given rise to numerous novel challenges. This article intends to elucidate the true essence of data property rights in the context of the interaction between law and technology, reflect upon the origins of the rise of property rights in China, and engage in a multi-faceted exploration from the perspectives of judicial practice, theoretical foundations, and the field of law and economics. In conclusion, we should prudently apply legal norms to new changes, and the resolution of issues and the establishment of a well-functioning market should not rely solely on the construction of digital property rights.

Keywords: digital age, technology, data property rights, judicial practice, law and economics

1. Introduction

1.1 The Interplay of Law and Technology

The choice of the topic of data property rights is not only because it reflects the intertwining of data privacy protection and data utilization, but also because it reflects the consideration of whether to solve problems through traditional methods or to focus on new approaches.

The certainty of law comes from an effort to understand the world in a rational manner. People desire to live in a society with reliable rules, which aligns with the spirit of natural law and is a clear demand of law.

However, some philosophical contemplation is highly necessary. As Ludwig Wittgenstein stated, language determines the way we understand the world and becomes a limitation in how we perceive the world (Wittgenstein, L, 1922). The certainty of law in this sense becomes an effort and desirable goal of the subjective world, rather than an expression of the objective world. The complexity of the world and the complexity research originating from the Santa Fe Institute both indicate that the rules of the world are not attainable through rationality alone; often, rationality is just one way for us to approach the chaotic world. Attempting to grasp the boundaries of law requires an understanding of the emerging trends in the world.

1.2 Pluralistic Regulatory Framework

Lessig's proposition of the four regulatory modes holds substantial enlightening significance in the contemporary context (Lessig, L, 2000), warranting adoption as a concrete mode of thinking. By centering on the subjects subject to regulation, Lessig presents four potential sources of influence: market, law, norms, and architecture. These four forces intertwine, potentially complementing or constraining each other.

What merits specific contemplation and reflection is Lessig's meticulous discourse on these four regulatory modes. Initially, Lessig draws from Mill's assertion in "On Liberty" that not only governmental actions but also social norms impose constraints. A vital premise here is that Mill solely focused on the subjects subject to regulation, namely freedom. Moreover, Lessig underscores that the four regulatory modes possess intricacies and interplay among them. Balancing the trade-offs between cost and benefit, efficiency and fairness, is imperative

when considering the interplay of distinct regulatory modes.

In the ensuing progression, Lessig explores the proactive role of law. He elaborates how law intervenes in the constituents of the market and taxation to alter its dynamics. Law also engenders changes in the physical “architecture” of real life; for instance, laws like the “Americans with Disabilities Act” mandate alterations in architectural design to safeguard affirmative rights. Law is also capable of modifying community norms by inculcating specific legal concepts to regulate group behavior.

Building on the impact of law on architecture, Lessig posits that law plays its role in two modes: directly by prescribing actions and indirectly by reshaping constraining structures. Upon entering the digital realm, this power to reshape architecture reaches its zenith. Subjective judgments indicate that while the efficacy of law and social norms hinges on individuals’ awareness, architecture exerts influence regardless of the subject’s awareness.

The insight from this passage is highly pragmatic, offering alternative factors to consider when contemplating the efficiency of legal intervention. It cautions against a “legal-centric” mode of thinking and emphasizes adhering to a certain reality-based logic. Moreover, it warrants further analysis of the profound influence of law in conjunction with architecture and the more comprehensible societal norms within the context of social networks.

Taking copyright law and digital rights management as examples, the influence of law on architecture must account for real-world factors and align with the logic of the digital economy. Equally significant is the fact that architecture’s establishment in the digital realm is nearly costless and embodies characteristics that must be adhered to once established. This aspect underpins the foundational logic of establishing electronic contracts between users and the digital realm. The roles played by architecture and technology must be duly acknowledged, considering both direct and indirect modes of legal regulation.

However, before delving further into the discussion, it is imperative to first clarify the fundamental meanings of data, typically distinguished between data resources and data products. (Wu Teng, 2023) Some scholars argue that controversial data for discussion includes, for instance, data lacking originality and thus ineligible for copyright protection (such as platform data). (Ding Xiaodong, 2023) In light of judicial practice and considering contentious issues, one of these debates revolves around whether corporations hold property rights over personal data collections. Due to the operational model of multi-sided platforms, platform operators are obliged to disclose more information within the platform, making it easily accessible to other companies. Thus, a fundamental conflict emerges: the platform operators’ demand for exclusive control over data versus other companies’ demand for open data sharing.

Generally, the approach to constructing property rights emphasizes the lateral flow of data, categorizing data hierarchically, and delineating a binary division between users and enterprises. However, it’s worth noting that over the past two decades of the “illicit rise” of the internet, a distinctive type of data processing entity, the platform, has emerged. The uniqueness of platforms lies in their connection to various data-collecting enterprises and has resulted in a monopolistic internet economy pattern dominated by multiple platforms. As a result, a necessary shift in perspective is required regarding the distinct requirements for data circulation between platforms and ordinary data collectors. Scholars have also proposed the concept of architecture property rights in response to this. (Hu Ling, 2021)

The specific details of this aspect will be differentiated and explored in the section discussing corporate subjects.

1.3 The Origin of the Concept of Data Property Rights

The trend of data property rights was also inspired by the American scholar Lessig. He further argues that establishing property rights can create a negotiating atmosphere. Regarding the allocation of property rights, Lessig believes that data property rights should be assigned to users. He analyzes this from a cost-benefit perspective, suggesting that if property rights are allocated to operators, users would incur higher costs in discovering whether their information is being collected. In terms of implementation, there are two methods: the contractual path, where data collectors must sign contracts and obtain explicit consent from users, including compensation for data use, and the infringement path, which empowers data subjects to pursue legal action against data collectors for infringement. The key point is that recognizing users’ data property rights forces data users to actively negotiate and balance bargaining power with data subjects, while also meeting different individuals’ privacy needs to the greatest extent.

However, this idea has limitations. It focuses mainly on users and employs a simplistic economic analysis method limited to the relationship between users and network operators. Granting property rights to users overlooks the demands of the most powerful drivers in this industry during the future development of the Internet economy. It should be noted that Lessig’s proposal was made in the early stages of data economy development. Therefore, this theory has both foresight and limitations.

2. Reflection on Data Property Rights

2.1 *The Current Research Status in China*

Returning to the initial point of the question, regarding the ultimate orientation of the construction of property rights, there are two main directions. One is the possibility of integration with the existing system of rights, creating a comprehensive legal framework that harmonizes with the traditional structure of rights. (Xu Ke, 2023) The other direction involves responding to the establishment of data markets, arising in the aftermath of two decades of the illicit proliferation of the internet (Hu Ling, 2021), furthermore, guided by policies, laws, and regulations, this direction contemplates what constitutes a rational and effective market. The first approach progresses through an exclusivity-based rights confirmation phase, moving towards a multi-scenario processing model and the Rights Block Theory founded upon the three-tiered rights framework proposed by the Data Twenty Articles. This approach shares common ground with the contemporary “behavioralism” theory in recognizing the complexity of data processing scenarios and the involvement of multiple stakeholders. However, disparities emerge in terms of institutional selection. When viewed from the perspective of law and economics, the focus shifts to addressing the efficiency of property rights establishment, evaluating the extent to which the construction of property rights can respond to the issue, and assessing whether the adverse effects incurred are outweighed by the benefits they bring.

2.2 *Viewpoints from Europe*

When introducing a new measure, the integration with existing systems must be considered. A common argument against adopting property rights is that it may have limited additional value within the current legal framework of privacy and data protection in the European Union. The focus here is on the argument of suitability, suggesting that the proposed measure may not achieve its intended goals. Moreover, the current center of development in the internet economy is more platform-oriented. Another point to be cautious about is the potential harm it may bring. The use of property rights rhetoric does not necessarily change individuals’ bargaining power, and it implies the commodification of personal data, which some argue undermines people’s fundamental rights.

The key reason for this is that the construction of property rights relies on a clear understanding of the unique attributes of certain complex data. It seems that the legal certainty is failing in this regard. First, the diversity of modern life scenarios goes beyond our interactions with platforms, as our data is transmitted to the cloud and involved with various smart devices in our daily lives. Without being able to engage in a comprehensive normative reflection, the only feasible approach is to consider data ownership and profit distribution issues within specific scenarios or focus on certain domains.

2.3 *Judicial Practice Approach*

A vivid example is the legal dispute between HIQ and LinkedIn¹. This case can be described as a series of twists and turns, spanning across the Northern District Court, the Ninth Circuit Court of Appeals, and ultimately reaching the Supreme Court, culminating in a settlement between the two parties. Even though the Supreme Court’s reversal of the Ninth Circuit’s decision was based on differing interpretations of the Computer Fraud and Abuse Act (CFAA), with each adopting a broad and narrow interpretation respectively, it should be noted that the Ninth Circuit Court of Appeals emphasized that the publicly available data in question should be considered the property interest of users.

Some scholars argue that the most significant distinction between this case and the *Dianping vs. Baidu* case lies in the differing viewpoints contributed by distinct contexts. They have summarized fundamental patterns and approaches based on these variations. (Bao Xiaoli, 2022) However, a more profound implication in this case is that the judges’ opinions implicitly factor in considerations of public interest. The court’s decision suggests that LinkedIn’s argument based on public interest and safeguarding user rights is untenable. The deliberations about maintaining the injunction and the consideration of user public interests encompass an essence that revolves around fostering a fair competitive market.

When distinguishing between platforms and accessing enterprises, it becomes evident that LinkedIn is an already advantaged platform enterprise. As noted by the district court, both parties in this case claimed that their stance contributes to maximizing the free flow of information on the internet for the benefit of the public interest. HIQ contends that data scraping is a common method of information gathering used by search engines, academic researchers, and numerous others. HIQ asserts that allowing companies with substantial user data sets to decide who can scrape data from websites that should inherently be public would grant these companies excessive control, determining how this data might be used. The Ninth Circuit Court of Appeals also concurred with the district court’s opinion, emphasizing that companies like LinkedIn should not be permitted to unilaterally determine who can collect and use data, as these companies do not possess this data, which should be made publicly available to users.

A similar case is the unfair competition dispute between Tencent and JukeTong Technology. Similar to the aforementioned case, one party is a platform with a substantial user base, while the other is a smaller enterprise. However, in this case, the plaintiff emphasized the defendant's threat to the security of the WeChat platform and how the behavior did not necessarily enhance the overall efficiency of the market. The court's ruling clearly indicated that "innovation and efficiency" are core values in the internet economy, with the ultimate pursuit being the enhancement of consumer welfare. Furthermore, it highlighted that if a competitive behavior in the digital realm has a more disruptive impact than constructive effects on competition, it is not conducive to long-term development and the overall enhancement of interests, even if it might bring short-term and individual benefits. In essence, the core principles guiding the construction of the WeChat platform and qualities valued by consumers are simplicity and security. The defendant's actions violated China's Network Security Law and jeopardized the secure operation of the WeChat platform.

It's worth noting that the undermining of platform-wide security, as emphasized in this case, is also a key point raised by LinkedIn. However, a common factor in both cases is that the court's judgment criteria are centered around the overall interests of consumers. Anchoring on this criterion, it is imperative to further explore models that facilitate the enhancement of consumer welfare within the context of the digital economy.

Before delving deeper into this line of thought, it's crucial to recognize the case of Alibaba vs. Nanjing Zhuma Technology. In this case, the court's decision not only assessed the damages suffered by the plaintiffs due to Zhuma's actions and whether the actions were indeed unfair competition, but it also examined the characteristics of the data object when considering unfair competition behaviors. The court introduced the notion that when judging whether the defendant violated the principles of good faith and recognized business ethics, a comprehensive assessment is necessary. It also noted that there are issues with the argument that the actions are conducive to market efficiency and social benefits. Firstly, the court questioned whether Zhuma had the capacity to objectively evaluate businesses impartially, and secondly, it acknowledged Zhuma's intention to address information asymmetry. The court's concluding remarks pointed out the lack of market testing, which prevented the discussion on whether the actions benefitted social efficiency and interests.

The problem lies in the dichotomy between two standpoints. On one hand, the court highlighted the plaintiff's two decades of operation, the millions of business users operating stores on the 1688 website, and the accumulation of significant enterprise data on this platform. It unequivocally pointed out that controlling the flow of traffic is a necessity for internet platforms and highlighted the strenuous efforts invested in preserving and amassing this traffic. On the other hand, there's a question about the capability of Zhuma. The perspective in the first argument still resonates with the efforts businesses expend in the real economy for the purpose of buying and selling, yet as mentioned earlier, the reality of the internet platform landscape is a monopolistic state led by a few major players due to their first-mover advantage. In terms of promoting market benefits, the court's description actually reflects the state of strong platforms and weaker emerging enterprises, without offering substantial advancement. If the purpose of the Anti-Unfair Competition Law is to uphold a fair competitive market order and foster free competition, then the discussion should not merely revolve around the two parties involved but rather be situated within the market. In the era of the digital economy, the more valuable objective should be the enhancement of user interests and a transformation of the unbalanced platform landscape.

Considering the three exemplary cases mentioned earlier and the guiding thought towards enhancing consumer interests, it is essential to realize that a significant number of users are already path-dependent on major platforms, leading to data confinement within these platforms. This contributes to a monopolistic landscape. To promote data circulation and diversified industry development, and to improve platform dynamics, the orderly outward flow of data within platforms should be facilitated.

2.4 Theoretical Discussion Behind the System

2.4.1 Labor Theory of Value and First Occupancy Theory

Derived from Locke's labor theory of value, it is believed that labor provides legitimacy for exclusive property rights (John Locke, 1937). This argument encourages individuals to actively create, and Locke's labor theory of value can be seen as providing a certain foundation of legitimacy for individuals' pursuit of wealth. In the field of data research, the labor theory of value also implies that once relevant parties process and use data, they also have property rights over the data.

The related theory of first occupancy also suggests that capture rules can be applied to data, meaning that whoever first obtains the data owns it. However, Locke's theory assumes abundant natural conditions and considers labor as the primary source of property value. The theory of first occupancy also relies on resource abundance (Wendy J. Gordon, 1993). Moreover, in many cases, the party that first occupies the resources tends to be more capable and have greater social resources, leading to social injustice with the theory of appropriation.

2.4.2 Incentive Theory

There are three common counterarguments to incentive theory. First, even in the absence of a property rights system, relevant parties still have incentives to invest in, process, and add value to tangible and intangible assets. Different investors have different time preferences. Moreover, in reality, we can see that even without the establishment of a property rights system, relevant investors protect tangible and intangible property through self-defense measures.

Second, the tragedy of the commons is the most common problem. Data is non-depletable and can be reused, unlike traditional issues such as forests or pastures (Hu Ling, 2022). The rational utilization of data by multiple parties is highly beneficial for the construction of data property rights.

2.4.3 Information Cost Theory

The theory of information cost plays important roles in the property rights and commodification of new data, as they help reduce information costs and facilitate transactions in the data market. (Thomas W. Merrill & Henry E. Smith, 2001) It is important to note that these theories are applicable under the premise of scarce and non-reproducible resources. Additionally, a prerequisite for reducing information costs is that the property itself needs to have certain standardization. However, data itself is non-scarce and non-depletable. Furthermore, data property exhibits characteristics of context dependency and non-standardization. If data is to be effective, it not only requires specific data type requirements but also needs to be continuously updated. In data transactions, the relationship between parties is highly personalized and contextualized.

Furthermore, new data property has characteristics of contextual dependence and non-standardization. The commodification and rights protection of data may not necessarily promote transactions and certainly cannot form a high-frequency trading market with thick market characteristics.

3. Perspectives from Law and Economics

The fundamental approach of this chapter is to initiate a preliminary discussion on the general allocation of property rights from the perspective of law and economics. It also delves into the relationship between the regulatory modes proposed by Lessig and the intervention of law. In the context of law and economics, the discussion revolves around the feasibility of the liability protection model, primarily centered on the initial allocable shares to corporations. Additionally, there is a comprehensive consideration of the shortcomings associated with the liability rule.

In the typical perspective of law and economics, the approach involves examining the efficiency of existing systems, while for the allocation of data property rights, the analysis can start from scratch. (Xu Ke, 2018) Starting from scratch, the angle of consideration pertains to the necessity of establishing property rights over this resource. Professor Coase, drawing on the classic work of Demsetz (Harold Demsetz, 1967), contemplates this issue by asserting that property rights become necessary when internalized benefits exceed costs. Demsetz further introduces the concept of community internal preferences (Demsetz, H, 1967), illustrating how anthropological experiences aim to explain that assigning property rights is a way to address the “tragedy of the commons” or, in other words, dissipate rent-seeking behavior. However, some scholars have criticized this viewpoint, perceiving it as a bottom-up ideal model, where individuals can engage in communicative transactions. Reality, however, often adheres to a top-down model. Considering the perspectives of both scholars, one can infer that, in a broad sense, the establishment of property rights holds a degree of legitimacy.

A more in-depth approach involves exploring, within the framework established by Calabresi and Melamed (Calabresi, G., & Melamed, A. D, 1972), whether, under different protection modes, those best equipped to exploit this resource can obtain property rights. Generally, assigning initial property rights to individuals, protected under the property rules mode, is believed to lead to a “reverse tragedy of the commons”, contradicting the initial intent of rapid data circulation in the digital economy era.

Adopting the liability rule protection mode, platforms need to provide compensation to acquire property rights. However, determining the pricing mechanism for the liability rule poses certain challenges. While applying the liability rule might seem reasonable due to high transaction costs, it overlooks the cost of judicial valuation. With a large number of individual participants, this can lead to a situation of uniform or tiered pricing. Moreover, as platforms and users have established fixed interactive relationships, this protection mode could potentially lead to the phenomenon of “undervaluing data”.

When initial property rights are assigned to platforms, the property rule protection mode clearly falls short of expected goals. Adopting the liability rule protection mode contradicts the logic of digital economic development, and it might not ensure that individuals get access to the “whole” dataset. After all, data is distinct from tangible goods.

Indeed, single protection modes seem incapable of resolving the issue. Further contemplation can be guided by the “rule of liability” proposed by scholars (Ayres, I., & Balkin, J. M, 1996). The Calabresi-Melamed

Framework can be visualized as a fixed pyramid structure, ranging from the prohibition rule to the property rule and then to the liability rule. These rules are not inherently related, but the essence of the rule of liability lies in triggering events that manifest shifts in protection modes. This concept is typically categorized into classic liability, zero-order liability, simultaneous liability, and three-stage liability.

The significance of this approach lies in its capacity to establish connections between different legal domains, creating a coherent perspective across isolated legal fields. Our existing legal system already employs the rule of liability in various aspects. For instance, the fair use doctrine embodies simultaneous liability, and within different application scenarios, the same subject may embody both the property rule and the liability rule.

From this perspective, if assigning initial property rights to platforms exacerbates inequality, then in the scenario where initial property rights are assigned to individuals, the first point corresponds to the resolution of the “reverse tragedy of the commons”. The practical application of the three-stage liability rule can be seen in scenarios like land acquisition or inheritance.

The underlying logic is that the initial protection mode is the property rule, followed by switching to different modes based on the increasing or decreasing value of each individual’s resources. This reallocation allows another party to reclaim the protection mode of the property rule.

However, transition to the realm of data property rights allocation reveals a significant difference. The unique characteristic of data is its “generation upon entry”. Generally, users produce data through human-computer interaction facilitated by user agreements. Notably, data lacks significance in real life if there is no interaction with endpoints or specific machines. The fundamental challenge lies in individuals’ limited perception of data — we merely know that certain actions generate corresponding raw data, and our records and choices are uploaded to the cloud. The most intriguing aspect of the platform model is that individuals’ “lost data” eventually feedback to the subject themselves via recommendation pages. Furthermore, the primary function of data generated by individuals lies in “manufacturing consumers”. Hence, in this sense, empowering individual data property rights only serves functional significance.

The exploration of functional significance also necessitates considering its operational aspects. Returning to the perspective of applying the liability rule mentioned earlier, the remaining paths involve assigning initial property rights to individuals and toggling between the property rule protection mode and the liability rule protection mode. Transitioning from the property rule to the liability rule protection mode is more akin to the current user situation in the real context, and this liability rule protection mode might not even require any payment. The triggering event in this case is the criticized user agreements and informed consent clauses.

This line of thinking, however, provides an important insight into refining triggering events and the aforementioned property rights protection mode. Under the circumstance of assigning initial property rights to individuals, the protection mode of property rights must possess genuine significance. The logic concerning data generation and its relationship with platforms, as indicated earlier, suggests that this discussion is not something law can fundamentally alter. The only avenue for change lies in the approach of “leaving technical issues to technology”. It’s worth noting that some platforms have attempted to redefine the relationship between individuals and platforms, thereby offering a path for discussing individual property rights that could be followed.

Another approach involves transition from the liability rule to the property rule. More accurately, this mode, when combined with the real context, resembles the “fencing-in rule” within the liability rule. Through the “informed consent” clauses in user agreements, individuals implicitly grant platforms the right to use their data without compensation. In reality, the status of this data has always remained ambiguous. The question arises whether individuals can acquire certain permissions through their actions. For instance, the construction of individual access rights is based on platforms already having extensive control. By applying the simultaneous liability rule protection mode, individuals can distinguish different usage scenarios. This scenario widely appears in the practical context of individuals’ requests for access to their involved data.

The recent Tesla incident in China highlights the dispute between individuals and corporations regarding data ownership. Individuals argue that they should have property rights over data, while Tesla, the company, considers this data to involve trade secrets. However, the subsequent disclosures have led individuals to believe that the company violated their personal information. When individuals use Tesla vehicles, data is generated synchronously, and this data is also transmitted to the cloud. In reality, the company has already processed and analyzed the data in practical terms through user agreements to better allocate resources for subsequent production activities. Analyzing this fundamental condition, our discussion essentially revolves around the company’s already gained control over this data, which leads to discussions about initial property rights allocation and protection models. The trigger event for transition from a compensation principle to a property principle can be similar to the case at hand, where the individual has suffered significant harm, allowing them to

gain control over the data.

It's noteworthy that, through the above analysis, we understand that granting individuals property rights over data only makes sense from a functional perspective due to the nature of data being constantly in flux. Moreover, certain aggregated data already possesses predictive capabilities and value, and individuals regaining control over the data can only focus on a fixed moment. From the perspective of behavioral economics, many individuals aren't concerned about the flow of data; a considerable portion of the population hopes for data to be more precise when fed back to them. In a sense, this process of data being utilized by platforms aligns with what consumers aim to achieve.

The general perspective is that modern markets have formed a "human behavioral futures trading" (Thompson, C, 2023), but in this age of information explosion, accurately obtaining information aligned with one's preferences might be what consumers or users desire. Therefore, for users, the ability to access data from a specific fixed moment is crucial. In this case, we can observe that the individual's actual experience is the perception of brake failure, and they seek to prove it using data. However, Tesla provides fixed data from a specific time during the accident to demonstrate that brake failure wasn't the issue; it was the individual's negligence. Both sides wish to secure the data flow from that particular segment before the accident to ascertain the true situation, and this contemplation is crucial for the development of current legal studies.

However, it's evident that Tesla, as the entity closer to data and data processing, holds more practical control. The individual, faced with provided data, can only argue against the company's data manipulation. Considering this, the idea that Tesla has actual control over the data is more easily manageable, even if there's proof of encryption technology, though experts have pointed out vulnerabilities. At this point, if we introduce property rights allocation thinking, the individual can argue for property rights over the fixed data before the accident. Still, the source remains Tesla's organization and extraction, as regardless of the transition from property principles to liability rule or the reverse logic, the company's control over the data and the individual's inability to handle data determine that the property rights allocation issue cannot solve this aspect of the problem.

From the case, we can discern that the fundamental issue revolves around our lack of fixed capabilities and direct access to data transmission and flow. Adopting a perspective informed by Lawrence Lessig's framework, we can explore a multifaceted view beyond direct legal regulation, encompassing technological, market, and societal norms. It's observable that Tesla has already contemplated the establishment of a vehicle owner data-sharing platform. Scholars have also proposed utilizing blockchain technology to upload information, thereby ensuring data integrity. However, it has been pointed out that this "on-chain" approach incurs substantial costs and entails demanding technological requirements. Nevertheless, it is conceivable that such a technological shift in the dynamics between individuals and platforms effectively encourages passive participation by individuals in data sharing activities. In terms of market effects, Tesla's response strategy can enhance its reputation, reinforce its brand influence, and progressively attract a growing number of consumers to make choices.

Furthermore, this approach of constructing a data-sharing platform presents an opportunity for national intervention as a third-party independent supervisory body. In light of the foregoing analysis, considering that individuals might not be able to obtain control over fixed data in advance, and considering recent analyses of trust crises faced by platforms in the near and foreseeable future, an effective means to address suspicions of platform data manipulation is through the involvement of third-party independent entities. This intervention serves to ensure a balance of interests between the involved parties.

Consequently, it becomes evident that within the context of the Lessig framework and the application of liability rule, specific empowerment schemes may not suffice to resolve the fundamental issue. Importantly, when deliberating upon the personal data property rights, one should recognize the fragmentary nature of the relationships between individuals and multiple platforms in practical life. This undoubtedly increases the complexity of the discourse. A viable approach is to rely on the diverse regulatory approach within the Lessig framework. More precisely, in the current stage's specific scenarios, individuals might not be able to exert effective control over such fixed data. Instead, relying on technology, market dynamics, or gradually forming industry norms could more effectively address specific legal issues.

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¹ HIQ Labs, Inc. v. LinkedIn Corp., 31 F.4th 1180 (9th Cir. 2022).

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