From Information Provision to Trust Provision: The Transformation Path of Mainstream Media from Blockchain Technology (Postprint)

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Abstract

In the era of mass communication, mainstream media operated primarily under the model of 'information provision + trust intermediary.' Entering the internet era, mainstream media has faced challenges in both its information provision capacity and the functioning of its trust intermediary role. The emergence of the 'next-generation internet' —the 'Internet of Value' —as heralded by blockchain technology, suggests a pathway for the transformation of mainstream media in China, namely a shift from a model centered on 'information provision + trust intermediary' to one focused on 'information provision + trust provision.'

Full Text

From Information Supply to Credit Supply: A Path for Mainstream Media Transformation Through Blockchain Technology

Abstract: In the mass communication era, mainstream media operated primarily under an "information supply + credit intermediary" model. Entering the internet era, mainstream media has faced challenges in both information supply capacity and the functioning of its credit intermediary role. The emergence of blockchain technology, heralding the "next-generation internet" —the "Value Internet" —suggests a path for the transformation of China' s mainstream media: shifting from a focus on "information supply + credit intermediary" to "information supply + credit supply."

Keywords: mainstream media transformation; blockchain; credit supply

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While the news industry and general public view the fundamental function of news media as information provision, academic research—beginning with Lazarsfeld and Merton, expanded by Schudson, James Carey, and others, along with studies in the sociology of news—has gradually revealed a more complex dimension of news media in social operation. The social functions of media extend far beyond mere information supply. With the rise of industrial civilization, increased literacy rates, and enhanced knowledge levels, news in modern life has become not only a topic of casual conversation or a basis for political and economic decision-making, but also an indispensable cultural phenomenon. As a key institution supporting this cultural phenomenon, news media bears responsibilities that go beyond information supply; more critically, it fulfills a value transmission function. The intermediation and supply of credit constitute one aspect of how news media practices this value transmission function.

Current research on the credit intermediary and supply functions of news media has largely been conducted under the theme of "media credibility." However, these functions are not without foundation. Both Lasswell' s concept of the "social coordination function" of communication and Schramm' s identification of the general social functions of mass communication point to the inherent social coordination function of news media. Credit intermediary is essentially a component of society' s systematic trust mechanism and simultaneously a part of its value formation mechanism. The impact of the internet environment on news media today extends beyond the immediately visible intensification of news timeliness and challenges to media business models; more crucially, it involves the transformation of human interaction patterns, which in turn leads to adjustments in the value formation mechanism. Indeed, the challenges currently faced by mainstream media in building credibility in cyberspace stem precisely from this transformation.

In recent years, with the promotion of Bitcoin, blockchain—as the underlying technology of Bitcoin—has gradually entered public view. While articles and books exploring blockchain' s impact on e-commerce, financial systems, and social life from a technical perspective have become popular, for the transformation and development of mainstream media, blockchain technology holds more significant meaning in its key role in constructing the "next-generation internet"—the "Value Internet." By integrating information models with value models, mainstream media may find a new path to successfully migrate and consolidate the credibility accumulated during the mass communication era into the internet environment.

1. Operation of the Social Credit System

Before examining the social functions of mainstream media and the construction of the "Value Internet" underlying blockchain technology, it is necessary to systematically review the operation of the social credit system.

According to sociologist Niklas Luhmann, trust becomes a problem because it

is essentially a matter of complexity reduction. That is, as social structures become increasingly complex, certain simplification mechanisms are needed to enhance the efficiency of actions among social members. Trust can save substantial resources and time during interactions among social members, thereby achieving high efficiency in action. For instance, once trust is established within a group, exchanges between groups no longer require additional restrictive conditions, allowing different groups to conserve resources previously used to constrain each other' s actions.

The resolution of trust problems depends on institutions or organizations capable of accumulating trust. The existence of large public institutions such as central banks, governments, and trust agencies can provide a foundation for mutual trust among individuals, because these institutions supply the information individuals need for action—information that has been strictly verified and thus serves as a basis for individual action.

Although in everyday usage "credit" is more often associated with economics and finance, this type of "credit" represents a form of capital— "credit capital" —that is recognized as tradable based on certain individual characteristics, essentially a variant of monetary value. From a broader social science perspective, however, credit can also be understood as a special form of capital: social capital, which emerges from the interactions and associations among individuals in a society. This concept of credit is grounded in collective-oriented and behavior-oriented social science perspectives. Under this logic, the generation of credit involves not only individuals but also influences at the group and societal levels; the overall social credit system represents cooperative behavior among various units within the social structure.

In this group cooperative behavior, although credit exists throughout the entire social structure, like other forms of social capital such as relational capital, credit requires not only "supply" by certain individuals or organizations but also "intermediation" by individuals or organizations, ultimately materializing in "consumption." In this cycle, trust accumulated by single individuals or organizations gradually expands to the entire society, becoming "credit" in the form of social capital.

2. Mainstream Media as Credit Intermediary

The report of the 19th National Congress of the Communist Party of China identifies enhancing communication capacity, guidance, influence, and credibility as crucial elements for firmly grasping ideological leadership. Improving these "four capacities" represents an essential path for Party newspapers to achieve transformation and development under the new era' s national conditions, Party conditions, and new media ecology. Among them, credibility serves as the bottom line for China' s mainstream media in carrying out all their work.

What many researchers overlook is that the operation of China' s mainstream media differs significantly from news media in Western societies. In the Chinese

context, mainstream media bears not only the social responsibility of information supply but, more importantly, the political responsibility of public opinion guidance and grasping ideological leadership. Therefore, mainstream media cannot be equated with general market-oriented newspapers.

There are also differences between China and Western societies in their approaches to solving trust problems. As some researchers have noted, if the West relies primarily on commercial credit organizations in constructing its social credit system, then in the Chinese context, the Party and government typically serve as the dominant force in building the credit system. In other words, the Party and government are the traditional trust suppliers in Chinese society. Under this premise, an important duty of Party newspapers is to "transmit" the systematic trust accumulated by the Party and government. Therefore, we can say that Party newspapers serve as a supplementary credit intermediary function for the Party and government in specific domains.

Furthermore, in addition to performing the information supply role like Western media, China's mainstream media more critically fulfills a credit supply function. This is also the source of credibility for Party newspapers: relying on the credit intermediary of the Party and government.

3. Internet' s Challenge to Mainstream Media' s Credit Intermediary Function

Although on the surface, the internet' s challenge to mainstream media appears to primarily threaten their information supply capacity, more critically, the operation of the internet has prompted the formation of a new social credit system operation model—the "multi-centered credit supply + technologized credit intermediary" model—which has taken shape and become consolidated.

By tracing the development process of China' s internet, we can discover that due to historical reasons, China was unable to participate in the design of the internet' s overall architecture in terms of core concepts. Consequently, China' s internet construction has largely "copied" the Western model, relying more on de facto corporate organizations to achieve credit supply in cyberspace. To some extent, this has overlapped with, supplemented, and sometimes conflicted with the Party and government-led credit supply mechanism. In other words, in cyberspace, credit capital is supplied not only through corporate organizations but also through the involvement of the Party and government, which attempt to migrate offline accumulated credit into cyberspace. Meanwhile, the "credit intermediary" function that previously relied on organizations and individuals has been entirely realized through technological means, rendering the "credit intermediary" function of mainstream media in cyberspace unable to be exercised.

At the same time, the "value exclusion" characteristic of the internet has also exacerbated the aforementioned phenomenon. Of course, this "value exclusion"

results from the convergence of multiple factors including history, culture, society, politics, and economics. However, it is undeniable that this constitutes a primary reason why many scholars today characterize the current internet as an "information-model internet."

It should be recognized that with the continuous development of internet technology, the previous method of accumulating trust through institutions or organizations is no longer sufficient to address society' s level of complexity. Information verification requires more resources and time, which is an important reason for the proliferation of "fake news" and "post-truth" phenomena. From the perspective of specific applications, current blockchain technology can be categorized into three scales: storage model, transmission model, and intelligent service model (Zhou Ping & Tang Xiaodan, 2017). Regardless of which model, the information model (storage and transmission) must be closely associated with the value model to function effectively. In other words, the essence of blockchain technology is to reintegrate value issues into the construction of the internet, which offers some insights for solving the aforementioned problems.

4. Transformation Direction of Mainstream Media: From "Information Supply + Credit Intermediary" to "Information Supply + Credit Supply"

It is currently widely recognized that the concept of blockchain was first proposed by Satoshi Nakamoto in the paper "Bitcoin: A Peer-to-Peer Electronic Cash System," with Bitcoin being merely one specific application of blockchain technology. After Bitcoin, as an investment hotspot, experienced significant volatility, attention refocused on blockchain technology itself as the foundation of Bitcoin. Generally, blockchain is considered to include five technical features: distribution, trustlessness, timestamping, asymmetric encryption, and smart contracts (Li Lihui, 2016: VII). Among these many technical characteristics, the most important and most profoundly impactful on social operation is its "trustless" feature.

Of course, blockchain does not "perfectly" solve the trust problem in the strict sense; rather, through coordination with its other technical features, it provides an alternative solution to trust issues. In blockchain technology, the trust problem is formulated as the Byzantine Generals Problem. The typical Byzantine Generals Problem refers to generals guarding territory who, when deciding whether to take military action, rely not only on communication with individual generals but also on the coordination of the entire military system. In short, the solution to the trust problem here depends not merely on trust between individual actors but more fundamentally on the system itself. Consequently, in blockchain, the trust issue is not about information verification between individual data nodes but about consensus within the system.

Following this logic, to enhance the level of trust in a large-scale social system, consensus within the system must be improved. The logical distance from sys-

tematic trust to a credit society may be only one step, as the essence of a credit society refers to a substantial increase in credit levels across the entire society.

For mainstream media, on the one hand, in terms of "information supply," the distributed and trustless technical features provided by blockchain can help improve information supply capacity in multiple areas such as news source verification (especially on the internet), news fact-checking, and copyright protection. On the other hand, by introducing blockchain technology, mainstream media can form closer connections with online audiences. Audiences can not only assist in participating in the news production process but also avoid the troubles of trust violation in news dissemination, thereby becoming highly integrated into the value network constructed by mainstream media.

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Note: Figure translations are in progress. See original paper for figures.