TAEJAE ACADEMY ISSUE BRIEF

How Blockchain Will Change Future Societies

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Presentation I **Moon Yeong-hun, CEO of Isosphere**
Edited by I **Ahn Solbee, Taejae Academy researcher**

Growth in cryptocurrency markets has spurred rising interest in blockchain technology and Web 3.0. Blockchain technology first began to gain attention with the advent of Bitcoin in 2009, and holds the potential to bring about change not only in economics and investment, but also in the political and social structures of the future with its unique decentralized and horizontal structure. On November 10, the Taejae Academy invited Isosphere CEO Moon Yeong-hun (former joint CEO of Nonce) to host a seminar exploring the impact that blockchain technology will have on future societies. Mr. Moon explained that blockchain is not just a simple investment concept but a 'medium of media' with great political and social utility and value in resolving the global crises facing humanity in this era. In particular, he stressed the importance of research and policy proposals to chart a direction that enables new technologies with great power to be used in the right way to expand communities and promote public interest.

1. Blockchain & New order

■ **Blockchain is fundamentally understood as a proof of work or a database, but in some sense it is also a 'medium of media'**

○ If we understand the media as an extension of our sense organs and cognition, blockchain is the most advanced recording system to date and has the potential to cause permanent social change akin to how Gutenberg printing technology paved the way for a new era of Reformation and Enlightenment.

■ Humankind currently faces crises and challenges that transcend national borders

○ Artificial intelligence, social media, surveillance capitalism and the democracy crisis

- The danger of algorithms: Replacing recognition processes, exacerbating confirmation bias and extremism

○ The struggle for global hegemony, war, inflation and instability in monetary systems

- Excessive reliance on algorithms leads to instability including hegemonic struggles, wars and inflation
- Those working in the crypto space believe that blockchain can improve the way inflation feedback works

○ Climate change and the ecological crisis

- Blockchain can serve as a crucial recording system that transcends national borders on macro issues related to the global environment, and experiments in this area are taking place at breathtaking pace. e.g. Tokenization of carbon credits

■ One feature of blockchain is universal verifiability

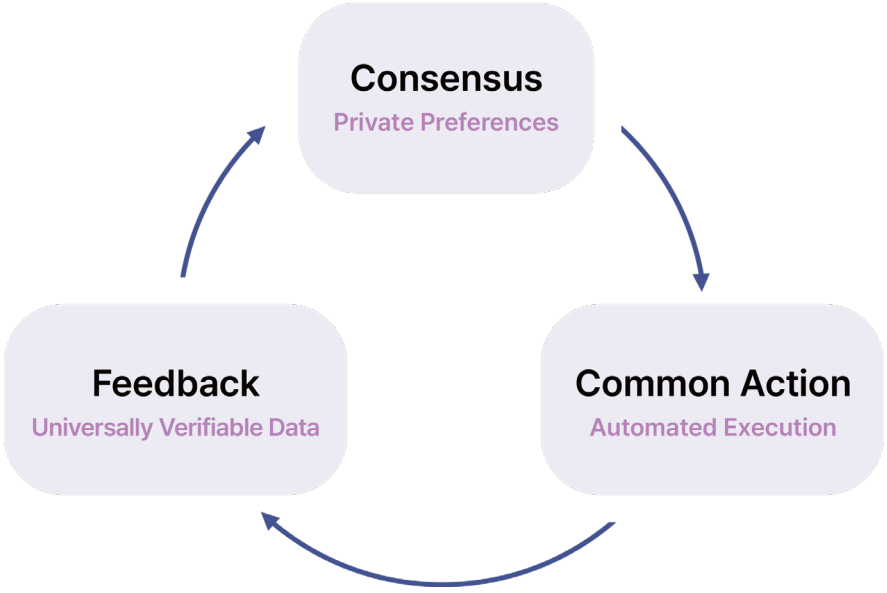
○ The Web 2.0 internet was controlled through servers, and people outside of server organizations had no way of verifying the authenticity of data. In contrast, blockchain data is universally verifiable by everyone

○ The marked reduction in the cost of credibility enables individuals to adopt a direct permission-less approach to credibility and recording systems that go beyond the national level

- Public key encryption and cypherpunk began in the 1980s, and there were numerous attempts to protect individual privacy in defiance of the state. Bitcoin is the first of these attempts to succeed, enabling individuals to carry out activities that previously only states could perform

○ In blockchain, the global crises we currently face are viewed as a coordination failure

<Figure 1> Political Activity Processes



○ **Looking at the political activity processes in <Figure 1>, blockchain is capable of mediating the verifiability of very small, capillary-like pieces of data in each process.**

- The private preferences of each individual are recorded in the consensus process, common action is automatically executed through smart contracts, and real-time auditing and feedback is made possible by universally verifiable data.

■ **Blockchain is expected to function as a mediating mechanism that outperforms existing systems**

○ Agility: Swift reactions to changes are made possible by enabling each individual to voluntarily carry out activities that fit with the community's core values after considering a multitude of factors

○ Scalability: The decision-making process is automated through smart contracts, thereby reducing the procedural and legal inefficiencies of organizations and increasing flexibility of employment

○ Individual-Centric: Personal privacy and decentralized horizontal consensus are core blockchain values

○ Transparency: A high level of transparency in the decision-making process leads to greater trust, boosting participation and the likelihood of collaboration

■ **If blockchain is applied across society, we will see a new order emerge**

○ Currency: Cryptocurrencies such as Bitcoin and Ethereum are gradually replacing legal tender

○ Finance: The decentralized finance (DeFi) protocol brings innovation to traditional hierarchical financial systems controlled by governments and central banks

○ Law: Smart contract platforms such as Ethereum replace traditional legal systems, forming and controlling digital legal jurisdictions that transcend borders through encryption and economics instead of force

○ Territory: An era of metaverses and culture wars is coming, increasing the importance of cultural territory and high moral and ethical standards

○ Social Economy: DAO serves as a substitute for listed companies, overcoming the limitations of neoliberalism and shareholder capitalism

■ **Concept of the Network State (Balaji Srinivasan)**

○ What will happen if popular online communities, often with more users than the population of some countries, introduce their own currency systems and legal systems? The Network State theory begins from this hypothesis

○ "A network state is a highly aligned online community with a capacity for collective action that crowdfunds territory around the world and eventually gains diplomatic recognition from pre-existing states." (emphasis added by author)

2. Challenges

■ **Side Effects: Ideological bias toward anarchy and libertarianism, fragmentation, and the extinction of publicness**

○ Encryption-based asymmetric defense mechanisms: Blockchain is technology innately biased toward anarchy and libertarianism due to its structures and values that enable individual defense against powerful offenders such as states

○ Blockchain and cryptoeconomics grant full authorization to individuals, lacking a sense of community and making joint coordination nearly impossible

■ **South Korea currently has many resources that can be leveraged in terms of blockchain technology**

○ ▲High level of social trust capital ▲High level of receptivity and familiarity with technology ▲Experience with compressed growth and rapid changes in social systems

▲An understanding of the US and Chinese political systems (advantageous for convergence between eastern and western ideology)

■ **If we separate the elements that make up a society into laws, technology, morals and markets, blockchain can be viewed as an attempt to use morals and technology to solve problems that we previously sought to resolve with laws and markets**

○ What is important and necessary right now is research, policies and charting a course such that blockchain technology can be used to emphasize community and promote public interest

COMMENTARY

■ Blockchain may appear to be inefficient if it is viewed as a recording system (such as a database) or a security tool that uses hash functions. If considered as a cloud substitute, it is indeed inefficient, but it is a different story if one considers the capacity to execute contracts. Blockchain is far more efficient when the costs that go into law enforcement or maintaining the finance system are considered.

■ All technology has its own merits and side effects. Instead of this approach, it is more important to take the perspective 'How can we solve the problems of our era?' Considering the nature of transnational challenges we face today, blockchain is the only tool capable of warding off the existential crisis of humanity.

■ Blockchain could be an effective tool for political and social revolution. For example, the DAO structure could easily be adopted by political parties. If we summarize the role of political parties as setting a number of agendas, recruiting members and seeking unity and consensus among diversity, blockchain and DAO can boost transparency because all processes are recorded. As the concept of 'delegation' is more finely divided and adjusted, the appropriate exercise of influence becomes possible and trust between individuals builds up through data. This boosts credibility and participation and naturally cultivates loyalty. Simply the fact that it is possible to create such a feedback loop makes it very meaningful for political parties to adopt DAO.