EMERGING CONVERSATION SURROUNDING DAOs IN ASIA

DAO UTOKYO 2024 FEB. 6-7

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Hashed Open Dialogue for Law
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On February 6, 2024, Dr. Yongbeom Kim, President of Hashed Open Research, and Jin Kang, Head of Legal at Hashed, attended the DAO UTokyo conference for two days in Tokyo hosted by The University of Tokyo, Stanford Cyber Policy Center, and Decentralization Research Center. To better appreciate the status of DAO related developments around the world, the conference brought together a diverse group of experts, policymakers, and researchers to evaluate the potential of DAOs to reshape various aspects of human society ranging from economics to governance.

While the conference ended with a joint statement (reproduced below), the event featured insights worthy of sharing in greater detail, especially considering the third pillar of “continued education” as one of the more important outcomes of the event. While this summary report does not feature all of the presenters, it should suffice to deliver key concepts and considerations that contributed to the overall discussion within the global DAO landscape.

In particular, we would like to highlight the following recurring themes:

**Greater Legal and Regulatory Certainty**: There is a need to broaden the topics of discussion for the blockchain industry beyond that of US securities law concerns. While an important issue, it impedes the industry from identifying other important topics, such as the potential role of DAOs as a vehicle for new social movements, and impeding the industry from developing truly innovative applications in tackling global issues ranging from depopulation to deforestation. Expanding the conversation to include these broader implications can catalyze a more holistic development of blockchain applications and promote not just financial innovation, but also contribute to social and environmental improvements.
Recognition of Geopolitical Differences and Call for Enhanced Cooperation: Geopolitical realities in each jurisdiction impact its regulatory approach to the blockchain industry. For example, while Taiwan is focusing on developing a DLT enabled social infrastructure via Digital IDs (DIDs), Japan and Korea have traditionally focused on regulating cryptoassets from an investor protection perspective, which may curb rather than promote innovation. While these divergent approaches are understandable, there should be more of a focus on the borderless nature of blockchain technology. By encouraging cooperation among nations to see beyond local concerns, the industry can leverage the strengths of blockchain technology to address universal challenges such as economic inclusivity, access to social justice, and environmental security.

Interdisciplinary Approach to Decentralization: The complexity and novelty of blockchain technology and DAOs necessitate an interdisciplinary approach that combines insights from technology, law, economics, and social sciences. This approach is crucial for understanding the multifaceted impact of decentralization on governance structures, legal frameworks, economic models, and societal norms. By integrating diverse perspectives, stakeholders can develop more robust, equitable, and effective mechanisms that align with democratic principles and ensure accountability.

Furthermore, interdisciplinary collaboration can aid in identifying ethical standards to ensure that the deployment of blockchain technology promotes inclusivity and respects the rights of all participants. Such a holistic approach encourages the development of governance models that are not only technically efficient, but also socially responsive to the evolving needs of global communities.

JOINT STATEMENT

We, the participants of DAO UTokyo 2024, propose:

1. Intercultural comparisons among countries about DAOs and decentralization.
2. Interdisciplinary collaborations among scholars to study DAOs and co-create new knowledge.
3. Continued education of policymakers and legislators on the beneficial use cases of DAOs.
4. Clarification between confidentiality of private data and application of cryptography.
5. Support for and emphasis of diversity and equity in our communities and circles of influence.
Connor Spelliscy, the Executive Director of the Decentralization Research Center and Co-Founder of the Blockchain Association and Canadian Web3 Council, delivered the introductory speech.

He highlighted the lack of a clear definition for decentralization but emphasized its core concept: the transfer of power from a small authoritative group to a larger distributed network.

Spelliscy encouraged collaboration and innovation to promote decentralization due to legal ambiguities. He stressed the need for engaging with regulators and presenting compelling use cases to drive favorable views towards the crypto space.

Additionally, he noted the broader impact of DAO innovation beyond organizational structures by highlighting tools like governance and treasury management.

Finally, he highlighted his experiences in organizing similar conferences worldwide. With this being the first of its kind in Asia, Spelliscy noted that significant progress was underway, indicating a notable shift in the center of gravity towards Asia.
Socio-economic ramifications of DAOs and their distinctive capacity

Professor Soichiro Takagi, Professor at the University of Tokyo's interfaculty initiative in Information Studies and Director of the University's Blockchain Research Initiative, spoke about the significance of DAOs in various economic aspects - as new forms of organization, community, investment and even value circulation.

He cited examples of municipal governments in Japan exploring DAOs to incentivize community engagement and innovative ventures in real estate to showcase their diverse applications. Professor Takagi emphasized the socio-economic impact of DAOs and their unique ability to combine passions with incentives.
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Yen-Lin Huang, a web3 architect in Taiwan’s Ministry of Digital Affairs (MODA) Department, provided insights into the state of Web3 in Taiwan.

Huang, belonging to the Department of Democracy Networks, discussed the department’s young existence of only 18 months and its focus on DAO policy research. One of main focus areas for the department is the lack of standardized IDs in Taiwan that impedes infrastructural developments due to Taiwan’s unique geopolitical situation.

Huang was previously a contributor at GOV ZERO, a prominent Civictech community in Taiwan. The community showcased efforts in digital transformation and changes in governance styles through data analyses and open government projects. He emphasized the efficiency of social movements in Taiwan but noted the challenge of sustaining engagement once the movements subsided.

Addressing the design of structures supporting decentralized organizations and identities, he stressed the importance of legal structures and government resources.

He underscored the difficulty of conducting decentralized activities within centralized frameworks and expressed interest in exploring how decentralized entities could interact with centralized governments, particularly in the context of public-private partnerships.

In discussing the state of Web3 in Taiwan, Huang identified two avenues for government connection: cryptoassets and DLT. While the Financial Supervisory Committee manages the former, MODA focuses on DLT research such as exploring how to create digital public goods on blockchain infrastructures. He highlighted collaborations with the Frontier Foundation and pilot studies on DAOs, DLT, and retroactive public goods funding.
Huang delved into the legal recognition of DAOs in Taiwan by exploring the existing legal options such as companies, associations, non-profits, or cooperatives. Further, he observed that the challenge in formal recognition lay in the lengthy process of revising laws under Taiwan’s common law system.

Speaking of the concept of the Mixed Certificate Authority (XCA), Huang explained how DAOs could apply to be connected to the government and cited the first pilot study, which focused on aligning with the DAO model law drafted by COALA (Coalition of Automated Legal Applications).

The second pilot addressed decentralized identities utilizing Taiwan’s Digital Citizens card to issue verifiable credentials to Ethereum addresses with zk-proof encryption. Huang emphasized the importance of preserving privacy while proving identity.

The third pilot study focused on retroactive public good funding, navigating challenges related to funding resources including budget management within civic tech engineering.

Key findings from the pilots included the lack of infrastructural components of identity, which prompted plans for a digital identity wallet project in 2024. This wallet aims to serve as a large-scale digital infrastructure project connecting with other countries and DAOs. Huang expressed the importance of decentralized groups issuing identity cards expanding beyond national issuance.

While the crypto innovation scale in Taiwan is not as large as that of Japan or Korea, digital public goods ecosystems are growing rapidly. Taiwan’s cultural inclination towards working together and maintaining its sovereignty through social movements contributes to the flourishing digital public goods ecosystem which could surpass the growth of blockchain and crypto ecosystems in the region.
Hal Seki, representing the Japan Digital Agency, provided insights into the state of Web3 policy and business culture in Japan. Hal Seki’s involvement with the Agency’s web3 study group, which published a related report, showcased Japan’s efforts in fostering digital innovation. Additionally, he highlighted his role in organizing Code for Japan, an NPO promoting civic tech activities and serving as a grassroots community for over a decade.

He emphasized the importance of visualizing contributor activities within civic tech organizations by enabling recognition and rewards for valuable contributions. He noted Japan’s regulatory response to the Mt. Gox hack in 2014, which led to stringent regulations on Virtual Asset Service Providers (VASPs), negatively impacting technology development and industry innovation for several years.

However, recent years have seen a shift with startups vocalizing concerns about Japan’s lack of innovation in web3. This prompted legislators to initiate discussions on supporting web3 companies, and led to the formation of the Digital Agency study group to allocate resources effectively. Hal Seki highlighted ongoing discussions on creating new legal entities using DAOs with private individuals collaborating with regulators to establish regulatory frameworks.

In terms of the business culture surrounding web3 in Japan, he noted that startups are developing new services for local regions and organizations.

However, these projects remain small in scale due to limited investment. Despite these hurdles, larger companies are exploring ways to leverage web3 technology to recognize its potential for mass adoption despite current user experience limitations.
Jong-Goo Yi, representing Kim & Chang LLP and a member of the Korea Blockchain Association, brought legal expertise to the discussion. With experience in regulatory compliance issues related to crypto and having served a tenure as the Commissioner of the Financial Services Commission (FSC) in Korea, he provided valuable insights into the evolving landscape.

He expressed his fascination with smart contracts amid his background in securitization and structured finance transactions. He contextualized smart contracts and DAOs within the broader history of financial innovation and highlighted their role in bridging the online and offline worlds.

In discussing the state of web3 policy in Korea, he outlined the government’s split personality, particularly its cautious approach towards crypto businesses despite acknowledging the importance of blockchain technology.

He explained how concerns over potential losses among the active crypto trading population have prompted policymakers to prioritize consumer protection over financial or technological innovation.

While the government remains supportive of blockchain projects, particularly in areas like voting registration and public notarization systems, comprehensive regulations akin to the EU-MiCA or Japan have yet to materialize.

Regarding DAOs, he noted the absence of significant regulatory discussions in Korea, although some private actors have been active in the space. In terms of business culture surrounding web3, Yi highlighted two significant developments: the gaming industry’s focus on play-to-earn business models, which faces legal restrictions domestically but finds opportunities globally, and the growing interest in Security Token Offerings (STOs) following government guidelines issued last year.

Despite regulatory challenges and criticisms, Yi expressed optimism about the potential growth of STOs and urged the government to nurture the environment around native crypto and underlying technology.
The Emergence of DAOs

Moderator: Oguz Genc (Doctoral Student, The University of Tokyo)
Panelists: Eric Alston (Professor, University of Colorado); David Kerr (Head of Research, Decentralization Research Center); and Ken O’Friel (CEO & Co-Founder, Toku)

During the panel discussion on the emergence of DAOs, Eric Alston, David Kerr, and Ken O’Friel offered their perspectives and insights by bringing their respective experiences and expertise to the table:

Eric began by sharing his background, including his involvement in the blockchain space since 2013, and how he began thinking about crypto. Given his background in institutional and organizational research, Eric recognized blockchain technology as a novel means of coordinating human endeavors more productively. Notably, one of his early publications delved into the intersection of blockchain and governance titled "Constitutions and Blockchains: Competitive Governance of Fundamental Rule Sets."

David, having spent his career at EY in advisory and accounting roles, ventured into the blockchain space after leaving the firm. His expertise in tax liability and entity structuring positioned him well to contribute to discussions around the challenges and solutions related to domestic entity structuring, particularly from a tax perspective.

Ken O’Friel shared his experiences as an equities trader and his journey into the crypto space. Drawing parallels between the use of equities by VCs in Silicon Valley decades ago to incentivize project contributors and the issuance of tokens by DAOs for compensation, Ken recognized the need for legal and compliant tools to facilitate token-based compensation. This realization prompted him to establish a company aimed at providing such services, especially in light of Japan's reluctance to amend tax and labor laws.
The panelists delved into significant updates on DAO legislation in their respective jurisdictions:

David discussed efforts in Wyoming to develop laws accommodating DAOs and emphasized the need to adapt existing laws to the technological functions of decentralized organizations. He highlighted Wyoming’s approach as a potential model for future regulatory frameworks. Eric also echoed the importance of regulatory intent in Wyoming and other jurisdictions. He noted that while Wyoming’s DAO law has faced criticism for its specificity, it represents an important step towards addressing regulatory uncertainty. Ken provided insights into Japan’s regulatory landscape in which the government is currently focusing on blockchain technology as a driver of growth. He discussed ongoing efforts to understand and engage with the community to drive regulatory change and highlighted Japan’s approach as proactive and collaborative.

The discussion covered various aspects of DAOs, including compliance issues and treasury management:

Compliance issues related to compensation in tokens were discussed, with an emphasis on tax implications and labor laws. The panelists highlighted the importance of ensuring compliance with regulatory requirements to avoid legal and financial risks. The significance of DAO treasuries was explored, with trends shifting towards more innovative uses beyond simply storing value. David noted the potential for DAO treasuries to serve as self-insurance funds and promote decentralized finance.

Concerns about anonymity in DAOs and its potential legal implications were also raised, particularly regarding tax evasion and security risks. The panelists discussed the need for greater transparency and accountability in DAO operations to address these concerns.

The panelists debated the concept of decentralization and its implications for organizational forms and articulated the need for checks and balances to ensure effective governance. They emphasized the importance of striking a balance between decentralization and centralized control to promote innovation and accountability.
LIGHTNING TALKS

INNOVATION AND OBSTACLES IN WEB3 POLICY AND DAOS

Jason Han
Adjunct Professor, KAIST School of Computing

Stakeholder DAO: Hacking Corporates with DAO

Miho Hirashita
Chief Compliance Officer, Crypto Garage

Harmonizing Token Transparency: A Unified Framework Proposal

Yongbeom Kim
CEO, Hashed Open Research

Exploring Innovative Local Revitalization by Leveraging NFT and DAO Initiatives

Jongsu Lee
Associate Professor, Seoul National University

Issues and Recommendations of Web3 Development in Korea
Stakeholder DAO: Hacking Corporates with DAO

Jason Han, Adjunct Professor from KAIST delivered a presentation on Stakeholder DAOs and their potential to revolutionize corporate structures. With a vast research ecosystem comprising over 270 labs and 5,000 researchers, predominantly focused on AI, he highlighted the critical role of community dynamics in fostering success. However, motivating researchers presents a challenge, with traditional methods like startup stock incentives proving inadequate due to researchers' non-employee status.

Identifying three key challenges—legal structure, community organization, and contribution measurement—Jason proposed Stakeholder DAO as a solution. These DAOs would transparently organize researchers, rewarding them with stock instead of tokens. The aim is to create autonomous organizational stakeholders operating independently and facilitated by hybrid governance structures and transparent reward systems.

Utilizing smart contracts for contribution measurement and internal tokens, Professor Han emphasized that Stakeholder DAOs do not intend to list tokens on exchanges and will eventually convert contribution tokens into tangible assets. Opting for a Special Purpose Vehicle (SPV) for legal structuring, the DAO's dependence on target companies distinguishes it from traditional DAOs since it would operate without cryptocurrency and maintain transparency.

The official launch of Stakeholder DAOs in Q2 will be accompanied by open-sourcing all processes and outputs. Professor Han highlighted potential applications beyond corporate contexts and suggested startups and even non-profits could adopt Stakeholder DAOs to bridge the gap between DAOs and Web2 technologies. Korean startups have shown interest, indicating broader applicability across diverse sectors, including charitable organizations.
Harmonizing Token Transparency: A Unified Framework Proposal

Miho Hirashita, Head of Legal Compliance at Crypto Garage, addressed crucial considerations surrounding the regulatory framework and ethical advancements in the crypto realm. Despite Bitcoin prices remaining volatile, she emphasized the importance of viewing tokens as immune from manipulation or conflicts of interest and underscored the need to balance investor protection with ethical progress in web3.

Hirashita advocated for embracing a disclosure framework akin to traditional filings and drew parallels between American and Japanese security disclosure laws. In Japan, tokens are categorized into five distinct categories with security tokens subject to security disclosure frameworks. While virtual assets (VAs) lack explicit statutory regulations for disclosure, Japan's regulatory authority indirectly oversees the framework through organizations like JVCEA and facilitates discussions among member exchanges to establish disclosure standards since 2018.

Looking ahead, discussions on disclosure frameworks for stablecoins are set to commence with preparations for the implementation of a stablecoin legal framework underway by June. However, challenges persist as regulators sometimes disregard private sector perspectives without fully grasping operational complexities.

In the crypto space, issues arise concerning token information provision, legal status clarification, and enforcement of privileges, particularly in DAO projects. The anonymous nature of projects further complicates matters and makes it challenging to address conflicts of interest or establish trust points.

Hirashita cautioned against premature stress on the need for regulation in the absence of consensus and urged the private sector to proactively establish best practices and the value of a bottom-up approach. She envisioned cyberspace governance as shaped by regulations, nodes, the market, and tech architecture, and stressed the importance of robustly reshaping web3 development through improved market practices.
Dr. YB Kim, President of Hashed Open Research, provided updates on initiatives currently under discussion with local ministries in Korea, with a particular focus on combating rural depopulation. Drawing from his experience in government and his concerns about rural depopulation in Japan and Korea, Dr. Kim highlighted the accelerating demographic crisis in South Korea with the projected fertility rate dropping to a concerning 0.6 by 2023.

Identifying 89 local municipalities in Korea as depopulated areas in 2022, Dr. Kim emphasized the urgency of addressing the plight of South Korea’s rural neighborhoods. He found inspiration in Japan’s progress, particularly its adoption of a relational concept to combat rural depopulation. This approach fosters connections with regions through non-residential engagements such as visitation, consumption, and cultural participation, and thereby encourages stronger and direct ties with communities.

Over the past two years, Dr. Kim noted efforts from local governments in Japan to harness NFTs and DAOs as innovative solutions to the rural depopulation problem from nearly 160 projects introduced. These forward-thinking initiatives challenge the traditional perception of local governments as cautious and slow to act and showcase their willingness to embrace innovation. For example, the Yamakoshi DAO project introduced the issuance of an NFT as a digital ID for community revitalization, with the Village DAO hosting 1,600 digital IDs which doubled the village’s original population of 800.

Dr. Kim highlighted Japan’s success as a basis for Korea to conduct more research and actively engage in serving as catalysts for regional revitalization. Currently, Hashed Open Research is in discussions with three local bodies to establish a pilot program to consider a proactive approach towards addressing rural depopulation and fostering community development.
Issues and Recommendations of Web3 Development in Korea

Professor Jongsub Lee provided insights into the current landscape of blockchain and tokenization in Korea by emphasizing the growing importance of oracle keepers in executing smart contracts, particularly in the context of tokenization.

Professor Lee highlighted Korea’s concentration on centralized exchanges as the main business model and efforts to open up possibilities for Security Token Offerings (STOs) focusing on non-conventional assets such as IP rights on K-pop or art. On the regulatory front, Korea is working to concretize the execution of the Virtual Assets Consumer Protection Act introduced in 2023, which aims to cover virtual assets excluding NFTs and stablecoins.

Traditional financial securities, when tokenized, are expected to be governed by the existing securities law framework though amendments are required to accommodate certain technical aspects of using DLT.

In the current market summary, Professor Lee pointed out the dominance of centralized finance (CeFi) businesses, which offer both protection for traders and consumers but may limit innovation compared to decentralized approaches. He highlighted heavy government control, which could slow market development, and the lack of defined ecosystems for decentralized applications. Regulators are focused on protecting retail investors from speculation over altcoins due to growing negative perceptions and scandals, which exacerbates the knowledge gap among regulators and stakeholders.

He emphasized the need for close collaboration between the private sector and the broader blockchain community, including global communities, to address these challenges and develop decentralized financial services and applications. He also noted the strong government-driven banking traditions in Asia, which may hinder progress towards decentralized solutions. Overall, achieving a robust decentralized ecosystem in Korea will require concerted efforts from both the private and public sectors.
DAO DEVELOPMENT

Eric Alston
Professor, University of Colorado
Litigating the Ledger: Civil Liability for DAO Controllers

Yepeng Ding
Researcher, Japan Society for the Promotion of Science
Revisiting Security in DAOS: Challenges and Opportunities

Oguz Genc
Doctoral Student, The University of Tokyo
Looking Beyond “Full-Decentralization”: Policy Considerations for DeFi

Soichiro Takagi
Professor, The University of Tokyo
DAO 1.0 to 3.0: Changing Nature and Application of Technologies
Litigating the Ledger: Civil Liability for DAO Controllers

Eric explored the nuanced legal implications faced by individuals exercising material control over DAO assets or decisions. He emphasized that DAOs, if not explicitly organized, may still have organizational forms applied depending on the jurisdictions they operate out of, especially in cases where civil claims are raised against the DAO. He shed light on the often-underappreciated civil liability risks inherent in utilizing other people’s assets for revenue generation in a competitive environment within the Web3 space. While courts typically defer to business decisions under the business judgment rule, there remain certain exceptions.

These exceptions include:
- Negligent failure to act, which could manifest in the general inactivity of the treasury over a prolonged period, especially if the market cap of the token falls below the value held in the DAO treasury.
- Self-dealing - where DAO controllers might vote themselves generous salaries through proposals clearly in their own interest, such as allocating unclaimed tokens from earlier issuances to founders and managers directly;
- Potential breaches of fiduciary duties, such as overtly illegal actions;
- Violations of AML/KYC compliance;
- Gross negligence; and
- Transactions outside the ordinary course of business.

To mitigate these risks, Eric stressed the importance of consulting legal counsel and potentially choosing an organizational form to delineate fiduciary duties. He emphasized that each treasury decision within a DAO should be made with meticulous attention to these legal considerations, and recognized the potential legal ramifications involved in the absence of appropriate safeguards.
Yepeng Ding
Researcher @ Japan Society for the Promotion of Science

Revisiting Security in DAOs: Challenges and Opportunities

Yepeng provided a comprehensive examination built upon the backdrop of security concerns following the notorious 2016 DAO hack. His analysis underscored the persistent nature of security issues within the DAO ecosystem, which continued to manifest with alarming frequency and resulted in significant financial losses totaling over USD$6 billion by December 2023. This staggering figure served as a testament to the critical need for robust security measures within the decentralized finance (DeFi) space.

Yepeng elucidated the multifaceted nature of vulnerabilities plaguing DAOs and categorized them into six distinct types based on their root causes. These vulnerabilities encompassed a range of issues, including business logic flaws, reentrancy vulnerabilities reminiscent of the 2016 DAO hack, price oracle manipulation, insufficient validation mechanisms, access control flow discrepancies, and unexpected external calls. Notably, he highlighted that while the latter three vulnerabilities are not exclusive to DAOs or DeFi, they present pervasive challenges across smart contracts in general, underscoring the broader implications of security concerns within the blockchain ecosystem.

He delved into existing methodologies for identifying and mitigating vulnerabilities with a particular emphasis on formal specification and verification techniques. Formal specification involves abstracting smart contracts into formal models, while formal verification entails formulating properties and conducting mathematical proofs to detect vulnerabilities. These techniques offer a systematic approach to assessing the security posture of smart contracts, enabling researchers and developers to proactively identify and address potential vulnerabilities before deployment on the blockchain.

Innovatively, Yepeng proposed a novel approach termed "formal implementation" and advocated for the creation of formal verified models and specifications prior to contract implementation. This strategy aims to preemptively mitigate vulnerabilities by addressing them at the design stage and thereby enhancing the overall security and resilience of DAOs. By adopting a reverse engineering process that prioritizes security from the outset, Yepeng’s framework seeks to instill confidence in the integrity and reliability of decentralized financial systems.
Oğuz Genç’s exploration of "full-decentralization" in his paper seeks to address the policy considerations surrounding DeFi protocols, particularly in light of regulatory developments such as MiCA in the EU. He highlighted the ambiguity surrounding the concept of full decentralization, as exemplified by MiCA’s exemption of fully decentralized protocols without a clear definition of what constitutes full decentralization. This lack of clarity extended to regulatory bodies like ESMA, which admitted uncertainty regarding the term’s definition and its application on a case-by-case basis.

Genç identified research gaps in understanding non-technical factors of decentralization and the absence of connections between technical and practical aspects of DeFi. He delineated different interpretations of decentralization, ranging from technical considerations to protocol-level analyses and broader political-economic perspectives.

Drawing on examples from Ethereum-based protocols like Maker and Liquity, Genç illustrated the nuanced nature of decentralization and emphasized the need for context-specific evaluations rather than blanket policy prescriptions. Moreover, he challenged the notion that centralization is inherently negative and suggested that alignment of incentives among stakeholders may be more crucial for successful protocol governance.

Genç also highlighted trends such as stablecoin issuers investing in US treasuries and underscored the evolving landscape of decentralized finance and its intersections with traditional financial markets. Through his nuanced analysis, Genç underscored the complexities and policy implications inherent in navigating the decentralized finance ecosystem amidst regulatory uncertainties.
Professor Soichiro Takagi delved into the evolving landscape of DAOs and traced their transformation from inception to their current iteration. He framed this evolution within the context of the destruction of existing frameworks by emphasizing three key elements: dissolution and reintegration, specific optimization, and individualization. Professor Takagi viewed DAOs as emblematic of the broader movement towards individualization to enable economic actors to tailor their activities to their own interests and resources.

Defined as systems facilitating self-coordination and governance through self-executing rules on public blockchains, Professor Takagi noted that DAOs have undergone significant changes since their inception. His earlier work in 2019 explored the decentralization potential of blockchain technology and highlighted the trade-offs between marketization efficiency and centralization efficiency.

He hypothesized that the success of DAOs would hinge on the effective coding of tasks to minimize uncertainty with each iteration reflecting advancements in task validation and expanded business applications.

In Japan, the emergence of DAOs 3.0 has involved the integration of tokens or NFTs for community voting rights, thereby democratizing participation. Professor Takagi cited examples like the Digital Village DAO which facilitates community resilience and digital citizenship in localities. Moreover, he underscored the importance of supportive tools like Discord in fostering DAO participation and predicted a broader trend towards decentralized organizational structures in contemporary society.
SOCIAL, REPUTATIONAL, AND COMMUNITY FABRIC OF WEB3

Eri Kawai
Community Manager, Paramita, Inc.

Decentralized Science as Decentralized Innovation Commons

Shunsuke Takagi
Founder, DeCartography

How Blockchain Technology Helps to Build Credibility and Neutrality for AI

Florence G’sell
Visiting Professor, Stanford Cyber Policy Center

Liabilities of DAO Members
Decentralized Science as Decentralized Innovation Commons

Eri Kawai introduced NFT SINRA, a regenerative NFT product developed by her company, which aims to address pressing climate change issues while supporting local communities. SINRA represents a novel approach to leveraging blockchain technology for environmental sustainability. Kawai emphasized the growing severity of climate change and mentioned its broader implications beyond just CO2 emissions to encompass biodiversity preservation. SINRA focuses on restoring and maintaining ecological balance while simultaneously supporting local communities.

The project tackles the declining state of natural resources, framing them as liabilities rather than assets. Kawai noted the detrimental effects of resource depletion such as the decline in timber supply in Japan leading to increased imports and economic losses for local communities. SINRA seeks to address these challenges by allowing individuals to purchase NFTs with the proceeds directed towards forest maintenance efforts.

SINRA’s innovative approach extends beyond financial contributions to include active participation in forest conservation and community engagement. NFT holders not only support forest maintenance, but also gain access to immersive experiences such as fieldwork, local festivals, and community events. Additionally, the project enables individuals to obtain carbon credits, thereby incentivizing environmental stewardship at the individual level. Through SINRA, Kawai aims to create a symbiotic relationship between ecological regeneration and community empowerment, demonstrating the potential of blockchain technology to drive positive environmental and social change.
How Blockchain Technology Helps to Build Credibility and Neutrality for AI

Shunsuke Takagi, a participant in the Frontier Foundation and a researcher specializing in DAOs, shed light on the intersection of blockchain technology and artificial intelligence (AI), particularly in building credibility and neutrality. His involvement with the Frontier Foundation led to extensive research across various topics, including DAOs, digital ID, retroactive public good funding, and web3 tech. Notably, his recent focus has been on studying DAOs in Taiwan over the past six months.

In his DAO study in Taiwan, Takagi has contributed to the development of a comprehensive framework that encompasses various aspects of DAOs, ranging from cultural and ethical considerations to legal and regulatory frameworks. This includes drafting a DAO model law. He sees DAOs as an emerging form of recursive public, capable of harnessing collective intelligence and fostering decentralized decision-making.

Moreover, Takagi is involved in a proof-of-concept (POC) project related to the DAO study, which explores the integration of DAO requirements with digital identity (ERC4824) standards. This project aims to establish a seamless linkage between DAOs and digital IDs, akin to the XCA Card, by utilizing tokens. These tokens serve as digital representations of physical identity cards and facilitate the verification and validation process within the DAO ecosystem.
Florence G’sell delved into the question of developer liability in the blockchain space, sparked by the aftermath of the 2016 DAO Hack. While some advocate for holding developers accountable for vulnerabilities in their code, others argue against this notion, emphasizing the voluntary nature of participation in blockchain networks and the inherent risks involved. Despite this debate within blockchain circles, the issue of developer liability continues to surface in various legal contexts.

Florence highlights a notable case involving Craig Wright, who lost his private key during a hack, resulting in significant losses. Wright’s company, Tulip, pursued legal action against developers, alleging their responsibility in helping recover the Bitcoin wallet or paying damages. The response from developers underscored the foundational principles of decentralization and autonomy within the Bitcoin network, challenging the notion of fiduciary duty to token owners.

However, a preliminary ruling by the UK Court of Appeal acknowledged the argument for developers’ fiduciary duty, indicating the legal complexity surrounding developer liability.

In the context of the Uniswap case however, developers maintained a hands-off approach to code usage by third parties, distancing themselves from potential liabilities. Meanwhile, the European Union (EU) is grappling with the question of developer liability, particularly concerning software products. The recent agreement on a new product liability directive extends coverage to software, including AI systems, introducing the possibility of holding developers liable for defects. However, defining defectiveness in software remains a challenge, as it hinges on the safety expectations of the public.

Florence underscores the need for caution, particularly regarding exemptions for free and open-source software developed outside commercial activities. While such exemptions may offer protection, many DAOs engage in commercial activities, raising concerns about potential liabilities. As regulatory frameworks evolve, the issue of developer liability in blockchain ecosystems remains complex and multifaceted, requiring careful consideration of legal and ethical implications.