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Democracy Through Web 3: Co-creating the Future with Tensegrity

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Abstract: Amartya Sen defined development as freedom and choices in his landmark book almost 20+ years back. Now, with the advancement of technology, it is important to enhance choices and develop a society with diversity. In this paper, we argue for multi verse society, where multiple and highly individualized worlds in which free relationships and individuality live. This is possible through the development of Web 3 technology, which focuses on diversity, decentralization and user ownership. It is important to the voices of minorities and provide them space for expressing and having their own choices. Through link to the theoretical physics and informatics, we propose "performance point indicators" (identified as "pp"), and the concept of diversity (DSN: Dynamic Semantic Network) and universality (HACS: Hierarchical Autopoiesis Classing System). The key argument of the paper lies in the combination of HACS and DSN to develop a system of tensegrity (a term often used in architecture as tensional integrity), which provides democratic value of choices both majority and minority in the community. Currently, blockchain and non-substitutional token schemes are gaining worldwide attention as a result of the massive accumulation of data on the Internet and the expansion of digital assets. Web 3 promotes multi-verse society where diversities of communities are maintained and valued. This process can enable in breaking down the non-connected attributes between communities, and therefore, Web 3 would make democracy a reality.

Keywords: Democracy, Web 3, Co-creation, Tensegrity, Value System, Multi-verse Society

1. Introduction

With the development of increasing secondary use of data stored in the internet, there has been a lot of attention paid to "Post-truth", "Marketing 5.0", "Metaverse", and "Web 3". Capitalism was a call for full democracy from the perspective of everyone, standing in the decision-making process. Therefore, the trend of new digital-centered lifestyles is to acknowledge the current situation of all people and to explore the possibility of flatly connecting with each other based on the premise of each individual's situation.

The roots of the idea that access to information is the key to development and broadening people's choices can be found in Sen's groundbreaking book, "Development as Freedom" [1]. Sen explains that poverty is characterized by at least one freedom, such as political freedom, rights, and choice, which makes people "vulnerable to coercive relationships and exclusion from economic choice and protection" [2]. His argument is that development is not measured by basic income,

but needs to incorporate ethical values, including providing choices in decision-making.

"Equality of autonomy" is also considered as a relevant political philosophy. In a highly subordinated community, by the unilateral judgments of those in power, the "physiological needs" and "need for security" as indicated by Maslow's Five Stages of Needs theory become unstable, making it difficult to build medium- to long-term relationships with an eye on the future, and creating an environment of vulnerability next to crime [3]. Minorities always belong to subordinate communities where they are not given free choice. And their desires are often not based on free will, but on rebellion and resistance to the environment when look back objectively. In today's capitalist world, the gap between the rich and the poor is widening. The world's 500 richest people became $1 trillion asset holder in the year 2021 [4]. The article argues that

according to Bloomberg, the combined net worth of the 500 people in its billionaire index now exceeds $8.4 trillion. That is more than the gross domestic product of any single country on the planet except the United States and China. In community, the "third place" is considered as the social surrounding, which is different from the first place, which is home, and second place, which is office or workplace. The "third place" can be church, café, community places, libraries etc. This is gradually getting popular among the youth groups as the core environment of informal public life. "Third place" has become a place where people can meet and interact with each other, where they can learn about each other's lives, and where they can learn about the world around them. This "Third Place" is made possible through technology development in Web 3. Sen argues that "the ability and means to choose our life course should be spread as equally as possible throughout society," [1] which is linked to the empowerment of all in the decision-making process [5]. This is also referred to as distributive justice [6]. The state is expected to intervene in people's lives to promote their self-creation, not their income or living conditions.

In the post-capitalism that will be realized by information and internationalization, this paper discusses how to create an environment where people can pursue their "desire for self-fulfillment" in the community of their choice and be given the freedom to move between communities. Kelly pointed out that "Technology is shaped by a triad of forces. The primary driver is preordained development—what technology wants [7]. The second driver is the influence of technological history, the gravity of the past. The third force is society's collective free will in shaping the *technium*, or our choices." However, our paper here is not a discussion of society from the perspective of complexity science, as in the work of Arthur [8]. and his colleagues, or of the organic evolution of technology, as in the work of Kelly [7].

As Web 3 is defined as the next generation internet which focuses on decentralization and user ownership, this concept and technology can address the issue discussed above. What we will do is to discuss how to bring together diverse groups, values, and consciousnesses, and loosely superimpose and develop multiple communities with unique cultural attributes, if there were a Social Networks in which all people were treated flatly.

2. Performance Point Indicators and Co-creative Agreement

In theoretical physics, the existence of multiple universes is called multiverse [9]. If we assume that each person sees the world differently, then we must assume that society is a collection of multiple spaces. A multiverse society is a society in which there are multiple highly individualized worlds in which free relationships and individuality live. This begins by defining the point where the needs and seeds of the community coincide, that is, the equilibrium point where the "internal consciousness" and the "external consciousness" as seen from other communities overlap, as the performance point indicator (henceforth termed as "pp"). A pp is generated incidentally by the overlap of needs and seeds. Once the pp is determined, a system of graded incentives, in which goals are gradually rubbed together in light of individual circumstances, to create a common goal and language for those with different evaluation criteria and cultures, and to stimulate discussion of the content. Intermediate goals, such as POD (Points-of-Difference and POP (Points-of-Parity), can be clarified, and it will be possible to set gradual goals and incentives in light of individual situations [10].

We define "Premart" as a value exchange where a flat and equal exchange takes place. Premart records the will of the people and encourages economic activity based on free will. Table 1 shows the contrasting characters of the existing economies, and our proposed democratic economy (henceforth called a "Premart"). In the Premart world, the money-stock increases when the credit currency is issued in a distributed manner according to its influence in the pp.

Table 1. Contrasting character of existing economy and proposed democratic economy.

	Existing economy (Capitalistic economy)	Democracy Economy (Premart)
Market principles	1. Capital input is used to solve social problems and resolve individual issues. 2. Majority rule determines market price and effectiveness, and there is constant competition among producers.	1. The value and volume of currency in circulation are democratically controlled, and social resources are optimized. 2. Individuals are treated as separate entities, and prices are determined on a case-by-case basis.
Social utility	1. Helps to provide living resources at reasonable prices. 2. It fosters a highly social existence and allowed the establishment of highly civilized nations at a high speed.	1. Helps to refine the information circulating in the world. 2. The economic value of minority opinions and creative activities will increase, and the concept of money will expand.
Impact on people	Affirmation of existence that can produce results Social status becomes credibility.	Affirmation of individual growth and development Credibility is an asset
Keywords that work well together	Global, centralized, international standards, efficiency, media, etc.	SDGs, decentralized, social welfare, empathy, sharing, etc.

In business, workflows are proposed to decipher the patterns of transition and development of pp and to actively control communities. Some examples are SECI model in organizational operations, "The Pyramid Principle" in logical thinking, and "evolutionary thinking" in design thinking [11-13]. The SECI model considers knowledge creation as a dynamic process, in which the continuous dialog between tacit and explicit knowledge generates new knowledge and amplifies it across different ontological levels (individual, organizational, inter-organizational). Thus, it is known as one of the best models

of knowledge creation in an organization. Pyramid principle helps in communicating ideas concisely and articulately to clients, colleagues or to the management board, and is considered as one of the key factors in determining your personal business success. Evolutionary thinking is a completely new way of thinking that unravels creativity from the evolution of living things. It is increasingly being called the world's strongest innovation method by innovation experts.

The "pp" is always at a point where needs and seeds are in balance, and when a keyword is created that concentrates these points, various interpretations occur starting from the keyword, and a local collective consciousness = teams is formed that tries to apply it to change. A world where teams work together to conceptualize co-creative agreements with pp as the starting point will lead to enhanced psychographic segments and a deeper understanding of users' psychological insights. This is because market structure is something that is created by the resources of all participants, and a team that is always looking out for pp requires the act of uncovering consensus according to the intrinsic and instinctive desires (insights) that govern the behavior of consumers and providers. Premart's mechanism for creating sustained and dominant collective knowledge based on transparency, fairness, and

democratic decision-making will also be useful for EBPM (Evidence-Based Policy Making), which aims for an infinite cycle of data analysis and policy making.

3. Diversity and Universality: Cultivating Existence for Total Harmony

The collective consciousness created by the persistence of a community can be understood as environmental factors of diversity and universality. In this section, we will explain how pp can become a social norm and a relationship of trust, and how it can work with the environmental factors and individual free will of the community to achieve overall harmony.

3.1. Diversity

When we hear the word "Apple," some people think of a cut-up piece of dessert, while others think of a large tree in nature. The occurrence of pp means that there is an environment in which we can expect to be able to recall common images that overlap with those of others, even if the active subject (termed as "Obj") has different thought patterns (known as DSN: Dynamic Semantic Network, Figure 1).
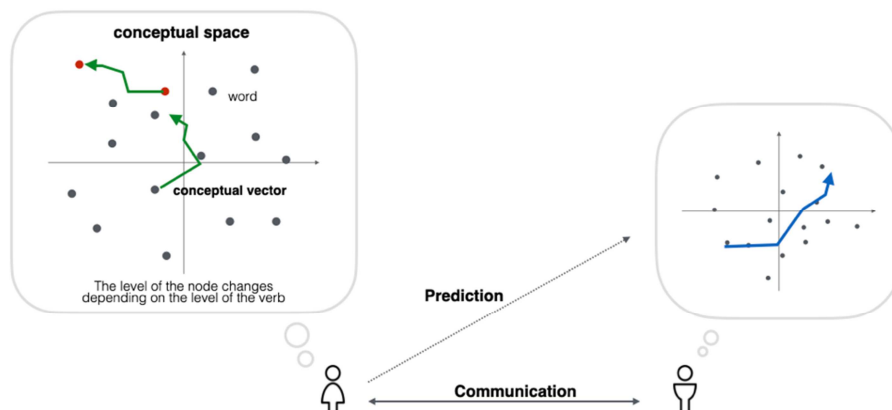

Figure 1. A mental system that interprets the meaning of information.

The ideal state of such an environment, where concepts are shared, is By connecting all "pp" occurrences as local minima, the community will have a multilayer perceptron in person, a neural network with weighted hidden layers. The hidden layers are the Obj in the community, and the Obj's function as hidden parameters that transform the community.

Companies that want to mainstream into the community and influencers that want to have influence are aiming to become strong hidden layers. This is because the "Output Layer", which has a hidden layer, will be connected to the "Input Layer", and becomes recognized as an important hub for the community (Figure 2).
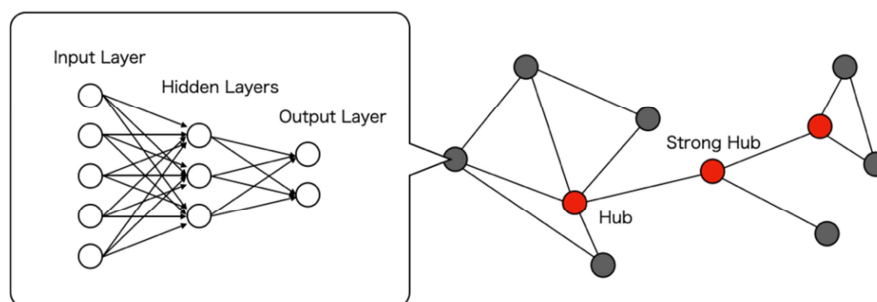

Figure 2. Left: Response to the environment happening within a particular pp. Right: Input and output are connected to form a network as a community.

In a community where diversity is important, this is the reason why those who are responsible for the Hub are in a situation where they can benefit from the network effect, because other entities can only connect with others through the Hub. However, ordinary people can also become Hubs by having an awareness that enhances universality.

3.2. Universality

People live with multiple "social roles," such as "fatherhood" and "working life". This occurs when we are conscious of our contribution to a particular community and try to become one role (pp) in that community. The Obj who participates in the Co-Creative Agreement needs to find a theory of self-organization by directing the attention to find the code propagated from the autopoiesis system one level higher, using the feedback from the environment as a hint for the activities. In other words, mastering the way is synonymous with the act of focusing one's attention on the field and becoming one with the higher community. This is depicted in the HACS (Hierarchical Autopoiesis Classing System), which states that when one's attention is on the community, other Objs exist as fellow human beings with the same goal. Research and critique are the act of observing bounces in the environment and trying to find common explanations within the community. In a field such as finance, where "pp" is easily shifted, it is easy for new theories to emerge. However, the theory is only valid in the same community (Figure 3). We define "multiverse society" as combination of HACS, where people with different choices and stances gather and loosely connect with each other. This is also related to democratic value system.
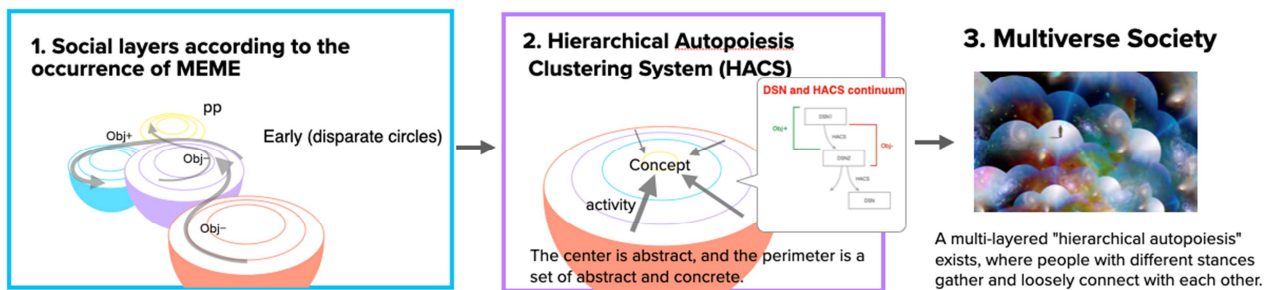

Figure 3. *pp between individually generated communities, resulting to multiverse.*

3.3. Combining Diversity and Universality to Achieve Tensegrity

The existence of such social norms (DSN) and rules (HACS) makes us aware of our self-desires and reciprocal altruism at the same time, and gives us guidelines on how we, as individuals and part of a group, should live and how we should protect and nurture our culture. Especially for children who are still in the growth stage, it is important to understand the tensegrity structure as a chain of HACS and DSN, as the points at which each person is connected to society. It is required to know what scale and what kind of network structure they have, and to let them control the tension and relaxation while refining their individuality. This is known as cultivating existence for total harmony. Let us explain this with some analogy.

For example, after a disaster, the affected areas are full of problems that need to be solved. The first target is restoration, which is the process of bringing the original situation back. However, the target is not just to bring the community back to the situation which was there before the disaster, it needs to go beyond that, which is known as "build back better". This is the target of the recovery process. However, recovery cannot be achieved by solving problems alone. It is about making the town a pleasant and resilient place to live. At the beginning, we think about the recovery process from a 360-degree viewpoint, where many things need to start from zero, since for many people this is the first experience of a major disaster. However, as the recovery progresses, it will change in the midst of change, so it must be redefined as a set of new initiatives. At that time, the important thing is to analyze the balance between diversity and universality shared by this community and to create a new DSN and HACS decision-making system.

A combination of HACS and DSN is known as "tensegrity" which is tensional integrity. That means that the system can be stretched based on the needs, but without disturbing the integrity of the system. During recovery, if a project does not turn profitable, we decide to withdraw from the project, and when we do not achieve the goal, we discuss a new project at the same time. In the social experimentation of recovery process, first step is usually vague, and when people gain experience through action learning, the real meaning of recovery process is understood. While it is necessary for accepting change in the society, and disasters are always a tipping point of that change, it does not come spontaneously. There are support as well as resistance for the change. A combination of both gives the harmony of the society, and thereby a metaverse society is created.

If one is only involved in society for one's own enjoyment, to gain benefits such as money or social status, either HACS or DSN is sufficient. However, if you are trying to give back to the community important knowledge that only you know, or to share with the outside world the wonderful culture that is lodged in the community, it is important to make a decision

based on the intertwined tensegrity of both HACS and DSN. By being prepared to live in a community, to live for the community, and to moralize about the pp that stand there, we can deal with the following issues. Developing the ability to evoke the pp necessary for life is a true freedom to be free in the community while being free to choose a new community.

4. Discussion

Community can be interpreted as a probabilistic treatment of the flow of common consciousness of Obj. Typical of this is the time axis. Within the same Colony, a relationship is established in which the movements of each Obj harmonize and expand as they deepen their consciousness toward the future. On the other hand, the fact that Obj is always based on interaction with the community means that any traces of Obj that becomes a minority will disappear. In a real world, this is related to urban rural connectivity. While urban areas are now the focus of population and resource concentration, technology innovation, rural areas are increasingly facing different demographic challenges, including population, health care, business opportunities. Many smaller towns or villages are gradually at the verge of disappearance, Our concept of "Premart economy" should focus on urban rural connectivity, and equal opportunities and choices in both urban and rural areas in a harmony way. Ortiz-Moya et al. term this as CES (Circulating and Ecological Sphere), which can enhance the future growth to a sustainable, resilient and decentralized future [14]. This is a concept elaborated in the Fifth Basic Environment Plan of 2018 of Government of Japan to address resource circulation for achieving SDGs. The CES provides a framework for a new paradigm in sustainable development bringing together existing approaches, namely, rural–urban linkages, ecosystem-based solutions, de-carbonisation, and resource circulation.

The current discussion in Sustainable Development Goals (SDGs) is also relevant in this aspect, with a target of inclusive growth, where nobody is left behind. In a community where a common understanding is created based on outcome indicators, a collective consciousness that seeks diversity and universality will naturally arise as a primitive phenomenon of life. This process is equally relevant for both the real and online / virtual community. By preparing a multiverse society that integrates a high level of people's mutually beneficial altruistic behavior and self-desires, people will be motivated to be good senders and participants and will be able to form a positive community that looks forward to a common future.

We must not forget that in the modern age of globalization and information technology, it is common place that the rules of thumb accumulated by each individual cannot be applied. Without a place where each individual's thoughts and feelings about the future connect with each other, and where even creativity is renewed, communities will be disconnected by conceptual system. Thus, the opportunity to communicate the inner reality between highly dependent communities will be lost. The ideology of increasing creativity and challenging the future alone cannot change a society that is fraught with

vulnerability. A multiverse society is a collection of communities that have created their own conceptual forms. The question is, "How do we perceive the same object?" This is the considered as the "state of mind" of each individual. In this context, micro-level analysis of the market has advanced, and the act of pursuing value for society as a whole itself is given economic value. People will be free to choose their own communities and create new value with their peers, which is considered as Premart. In an age where individuals play an active role, we need networks that spotlight the inner workings of the individual mind, and a grand design that assumes multiversality, where all people are proven to be on the cutting edge of social evolution.

In his pathbreaking book "The world is flat", Friedman describes a metaphor for viewing the world as a level playing field in terms of commerce, wherein all competitors, have an equal opportunity [15]. Illustrated "Banker to the Poor" and Noble Laureate Professor Muhammed Yunis described the concept of "A world of three zeros", where he argued for zero poverty, zero unemployment, and zero net carbon emission [16]. This can only be possible when we have shared responsibility, and a flat world, which is open to social innovation. Web 3 can make this possible, with asset sharing among the users, which is quite in contrast to Web 2, where large companies capture most of the monetary values. Web 3 promotes multi-verse where diversities of communities are maintained and valued.

Rapidly advancing information and communication technologies have had a profound impact on democracy around the world. They have provided new platforms for civic mobilization and the dissemination of news and commentary, but they are also subject to censorship, surveillance, and exploitation by antidemocratic forces. We tried to argue in this paper that a true democracy in the business sector and innovation can be achieved through establishment of Premart, which can be facilitated through co-creative agreement, where minority has its voice and space.

5. Conclusion

Currently, blockchain and non-substitutional token schemes are gaining worldwide attention as a result of the massive accumulation of data on the Internet and the expansion of digital assets. The digital assets dealt here refer to all consensus building in any community that is coded in general. Therefore, defining "pp" that encourages constant interaction to understand and transform value, expanding the definition of "labor productivity" not only to people but also to all life activities such as traditional crafts, teams, and services, and enabling "value translation." This process can enable in breaking down the non-connected attributes between communities, and therefore, Web 3 would make democracy a reality.

Acknowledgements

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