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THE IMPACT OF ORGANISATIONAL LAWS ON BLOCKCHAIN DEVELOPMENT: PRELIMINARY QUESTIONS FOR DEVELOPING COUNTRIES

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Abstract

Articles are published daily on the potential of Blockchain to improve quality of life and help us face global challenges including those related to poverty, prosperity and justice. Adopting an organizational perspective, the initial intention of the pioneers of blockchain was to create a decentralized organization model as an alternative to the present centralized and hierarchical organization model. Since blockchain emerged amidst the 2008 financial crisis, our starting point to assess the impact of organizational laws on blockchain development is the organizational laws of the financial intermediary. We considered human capital in our assessment and reached the conclusion that instead of developing blockchain in reaction to the positive laws regulating the present political order, blockchain developers should use natural laws as cornerstone and make a distinction between natural laws, positive laws and socialization. We recommend that blockchain development should aim at complementing the present political order by reducing the impact of negative drives which are inherent to social relations.

Keywords: Blockchain, Organization, Financial Intermediary, Human Capital, Law

INTRODUCTION

The financial services sector has been at the forefront of the application of information technology in business, by allowing the conversion of large stacks of paper into electronic data, information technology has played a key role in the development of modern financial services sector on a global basis. One of these developments has been, for example, the emergence of investment platforms. An investment platform is an online service that allows investments to be traded online; it connects all players in the securities market under one roof and trading can be made on a 24/7 basis. Though investment platforms are powered by information technology, the legal constitution and organization of these service providers are in the form of a limited liability company, the concept of a limited liability company was introduced well before the advent of information technology; in the United Kingdom the concept was introduced by the *Limited Liability Act 1855* that first allowed limited liability for corporations that could be established by the general public. While the internet has not disrupted, but rather developed pre-existing legal entities such as limited liability companies, blockchain has the ambition of creating a new form of organization, without middleman, for its pioneers trustless decentralized organizations operating through computer codes is the way for an improved future. After an introduction (I), the structure of the paper is based on the following architecture: a literature review (II), a research methodology upon which this concept paper had set its foundation (III) followed by clear and precise facts and findings (IV), and this paper will close with a conclusion coupled with some recommendations (V), and the way forward to enhance further study in this emerging field of the law(VI).

LITERATURE REVIEW

The organizational structure

Society has always been ruled and driven by centralized, hierarchical organizations. The characteristics of such organizations are a centralized source of authority, a formal hierarchy with clearly defined “roles”; and a “standardized operational systems and procedures dictated by that centralized authority/hierarchy. Regulatory models have been designed to support and sustain businesses organized in this way (Fenwick, Kaal, Vermeulen, 2018). Accordingly, in Mauritius, the structure being generally the same in developed and developing countries, a limited liability company is the standard-form for a legal entity authorized to become a financial intermediary. The limited liability company is owned by shareholders to which its board of directors is reportable. The company holds a license and is supervised a regulator which has been created by an act of parliament and is authorized to issue codes and regulations.

As bluntly remarked by Edward, First Baron of Thurlow, “did you ever expect a corporation to have a conscience when it has no soul to be damned and no body? Before Baron Thurlow’s time, ecclesiastical courts have imposed excommunication to corporate misbehavior. In the thirteenth century, Pope Innocent IV forbade the practice of excommunicating corporations on the unassailable logic that since a corporation has no soul, it cannot lose one (Coffee, 1981). Another reason is that such excommunication may involve the innocent with the guilty, only the persons guilty of the crime are to be excommunicated (Burn, 1775). Before granting a license to a limited liability company, a screening is made on the shareholders, directors and key personnel of the company by the regulator. The latter must be approved by the regulator and can be listed in sanction list if they behave contrary to accepted market practice.

While one can assimilate the organizational law constituting limited liability companies as a standard contract among different parties engaged in the enterprise, in substance, the essential role this organizational law is to provide for the creation of a pattern of creditors' rights; a form of asset segregation between the owners, managers and creditors that could not practicably be established by contract alone or otherwise (Hansmann, Kraakman, 2000). Asset segregation between the financial intermediary’s assets and its client assets is an essential element of client protection. Once duly incorporated and licensed, the limited liability company is authorized to conduct business and as a regulated financial intermediary it is considered as a trusted third party. In addition to the conditions of its license, the directors have duties under the company laws such as solvency and integrity requirements.

The regulator forms part of the administrative arm of Government. In every democracy, Government is constituted of the political party which obtained the majority of votes following the tenure of a general election. General elections are held periodically, in line with the constitution of the democracy. The idea of a dichotomy between politics and administration has been tentatively put forward by Woodrow Wilson (Wilson ,1887) politics was concerned with the ‘‘role of public opinion, the activities of political parties, the function of legislative bodies . . . the clash of opinion and the conflict of values’’ (Waldo,1968) and Administration was regarded as the neutral implementation of policy by bureaucrats in a non-partisan, technical fashion (Cameron, 2003). But literature shows that there is no known example of an administrative system in a democratic government where the head of the executive branch of government is practically excluded from the legislative and the judiciary functions of government. For example, in their analysis of the tripartite separation of power in South Africa Venter and Landsberg, argued that the executive, as provided in the present constitution, had both judicial and legislative powers and was not systemically separated from the legislature (Venter and Landsberg, 2007). The same findings were reached by the analysis in some selected Organization for Economic

Cooperation and Development countries, such as Sweden and the Netherlands. In these countries, the “political and civil service elite have retained their grip and the ‘politically led’ state is still seen as a major socially integrating force to be reckoned with” (Pollitt & Bouckaert, 2000).

Aristotle, in his well-known statement, argued that “the city belongs among the things that exist by nature and that man is by nature a political animal” By “man is a political animal by nature”, Aristotle meant that human beings can only live the good life if they live and interact in a political organization (Heywood, 2002)

The apparent absence of a possible dichotomy between administration and politics have pushed some authors to discuss the concept of “organizational politics.” Organizational politics can be defined as “actions not officially approved by an organization that are taken to influence others to meet not organizational objectives but one’s personal and selfish goals within the organization; organizational politics is an inescapable and intrinsic reality in policy implementation (Greenberg and Baron, 2000). Others even suggested that that the executive development programmes of tomorrow should rank “organizational politics” as important a discipline as “marketing, finance, and human resources” (Butcher and Clarke, 1999).

Since politics and administration are not dissociable in practice, scholars came forward with the concept of “politics-administration complementarity” as a conceptual framework that included differentiation with interactions (Svara, 2001) too much politics could be as dangerous as lack of politics in the business government (Cameron, 2003). The danger of a totally politicised administration is that it can lead to bureaucratic corruption and maladministration (Cameron, 2003) while the over-reliance on expert judgment and scientific knowledge can create a government in which the elected politicians had little role in decision-making and bureaucrats can become too loyal to the profession rather than to the public (Waldo, 1948) or be more concerned to pursue their own interests, empire building being a common goal (Cameron, 2003). the best way to avoid the undesirable outcomes of a totally politicized and totally depoliticized public service was to strike a balance or to find a middle way between the politics and administration.

The appointment of individuals in the administrative arm of Government has also been the subject of literature and a balance between political appointment and merits was found to be the best option. It was noted that appointed persons elected by patronage (spoils system) are more likely to be disposed towards the programme of a political party in power than the supposed neutral appointees of a merit system who may be apathetic, if not hostile to that programme (Cameron, 2003) a committed bureaucracy requires that political appointees be selected for a combination of political disposition and administrative talent (Peters,1989).

The US financial crisis of 2008- catalyst for change

The causes of the 2008 Financial Crisis have been analyzed by scholars and many have come to different conclusions as to which cause is at the core of the crisis and one of the factors which was identified as having played a crucial role is deregulation. Deregulation began in the 1960s because there was a new wave of bankers who had not experienced the Great Depression and wanted more competition, especially from foreign banks, and innovation (Bhide, 2009).The large banks led the way towards "aggressiveness and risk taking "and "began pressing at the boundaries of allowable activities" because the "rules to limit 'ruinous' competition were also relaxed" (Bhide, 2009).

The original reasons for regulations of banks were to protect depositors and consumers, maintain monetary stability, and provide an efficient and competitive financial system (Spong, 1994). Depositors take on "the role of bank creditors and become linked with the fortunes of the bank" (Spong, 1994). Regulations are put in place to protect the depositors because of this complex system that would be too costly and difficult for depositors to make judgments about (Spong, 1994). The one deregulation law that is constantly discussed and associated with the crisis is the Gramm-Leach-Bliley Act because it repealed regulations that were put in place by the Glass-Steagall Act a few years following the Great Depression. The *Glass-Steagall Act* of 1933 prohibited commercial banks from being involved with investment banks. Creating the separation between commercial banks and investment banks keeps the riskier transactions of investment banks from disrupting the deposits at commercial banks and therefore provides monetary stability because "their deposit obligations make them the major issuers of money in the economy" (Spong, 1994).

Striving to find a consensus

During the 2008 financial crisis, the insolvencies of regulated financial intermediaries of high repute confirmed that, while solvency and integrity requirements generally enhance investor protection and stability, they cannot protect securities holders against intermediary risk. The failures and misuse of legal instruments have pushed public decision-makers to come up with new regulations to sanction negative market dynamics.

In order to restore confidence in the financial industry; public decision makers in developed countries have through the legal arm, tried to better harness financial intermediaries through extensive limitations imposed on the freedom of markets such as the Markets in Financial Instruments Directives and EU General Data Protection Regulation. Sanction for non-compliance can give way to public and private law remedies against the service providers (Busch D, 2016). As a result transaction costs such as compliance costs and legal risks have

increased, For example, in compliance with Anti Money Laundering regulations, regulated financial intermediaries are required to review the transaction of their clients and report any suspicious transaction to the lawful authority of the country in which they are regulated without "tipping off" the concerned clients, review can only be done through documentary methods by manually processing the data of the clients and an improper data processing can lead to an action for breach of contract and defamation against the financial intermediary (*Lonsdale v National Westminster Bank Plc, 2018*).

However despite that one may qualify this stance by public-decision makers as strong, according to the Global Regulatory Outlook 2018 survey; only 51% of the participants expected financial services regulation to increase market stability, 29% of the participants said that regulation has no effect on stability and 10% of the participants said it makes it worse. Only a few believe regulatory changes in recent years have adequately safeguarded against a future crash: only 13% of the participants say they have, while 28% of the participants say they haven't. The majority, 57%, say the risks have been only partly addressed (Duff and Phelps, 2018).

Blockchain Technology and the Financial Intermediary

In the midst of this inability to find a generally accepted solution to address the inherent limits of the market infrastructure by players in the market themselves, Blockchain Technology emerged and a decade after the publication of "Bitcoin" (Satoshi Nakamoto, 2008), Blockchain which is the technology behind Bitcoin has become a central topic for public decision-makers and is considered to be full of promises to address our present issues, especially with regards to the integrity of shared documents and information (Berryhill J, Bourgery T, Hanson A, 2018).

The Bitcoin whitepaper published by Satoshi Nakamoto is critical of any centralized solution for digital currencies, by adopting this approach, Satoshi Nakamoto followed the path of the pioneers of decentralized crypto currencies for whom the "trusted third party is a nice sounding synonym for a wide-open security hole that a designer chooses to overlook." (Szabo. 2001, 2004, 2005).

The ability of Blockchain Technology to accommodate self-executing digital contracts (smart contracts) and intelligent assets that can be controlled over the Internet (smart property), connect people and allow transaction without the need for a trusted third party has led many to compare the impact of blockchain to that of the internet, with accompanying predictions that this technology will shift the balance of power away from centralized authorities and create a new set of laws which some term *Lex Cryptographia* i.e. rules administered through self-executing

smart contracts and create new form of legal person the Decentralized Autonomous Organizations (Wright & de Filippi, 2015).

While some argue that Blockchain Technology emerged sufficient potential to threaten the existence the intermediary itself by allowing people to transfer a unique piece of digital property or data to others, in a safe, secure, and immutable way by the operation of smart contracts, others argue that the rise of networking does not eliminate intermediaries, but rather change who they are (Wu, 2018). Legal persons are only able to act through people, according to DAO pioneers this presents two simple and fundamental problems; people do not always follow the rules and secondly people do not always agree what the rules actually require (Jentzsch, 2016). The objective of a DAO is to codify the rules and decision making of an organization, eliminating the need for documents and people in governing, creating a structure with decentralized control. smart contracts (programs) will run the organization. There is an initial funding period, in which people add funds to the DAO by purchasing tokens that represent ownership to give it the resources it needs, when the funding period is over; the DAO begins to operate and people then can make proposals to the DAO on how to spend the money, and the members who have bought in can vote to approve these proposals (Siegel, 2016).

In 2016, a DAO project created by Slock.it. on Ethereum to operate as a venture capital fund governed by the investors of the DAO. Funds raised from the investors, the token holders, are pooled and the investors can become contractors by submitting proposals for funding of their project by using the DAO funds. If a proposal is approved by a quorum of 20% of all tokens; the DAO automatically transfers “Ethers” to the smart contract that represents the proposal. There was a possibility that the minority would be suppressed by the majority. The DAO provided for a protection for the minority: The minority was able to retrieve their funds when a proposal they do not want to be a part of gets approved despite their objection. An equivalent of the appraisal right we see under the corporate law in some jurisdictions. The creators implemented this solution as an ability of a DAO to split in two. By submitting a special form of proposal, the minority, along with other token holder who voted for this second special proposal, could take their Ether into a new DAO, which is called the child DAO but has the same abilities and it is subjected to same restrictions that of the DAO it is divided from (Gucluturk, 2018).

A coder found a loophole in this procedure, whenever a split function is called, the code was written in a way to retrieve the Ether first and update the balance later. Additionally, no check was made on whether there was a recursive call or not, a recursive call is a function that calls himself, Recursion is a technique for repeatedly executing a command. The attacker was able to recursively call the split function and retrieved funds multiple times before getting to the

step where the code would check the balance. On 16 June 2016, the attacker managed to retrieve approximately 3.6 million Ethers from the DAO fund abusing this loophole, which is known as a “recursive call exploit” (Gucluturk, 2018).

The following day, someone who claimed himself to be the attacker published an open letter. In the open letter, the attacker claimed that the code controls everything regarding the DAO and what he did was allowed by the code, thus, his actions were legitimate. The attacker continued by saying that any remedy by the DAO would amount to seizure of his legitimate and rightful gain, claimed legally through the terms of a smart contract (Gucluturk, 2018). The DAO had three possible solutions to solve the problem:

- “No action.
- Exercising a soft work on the blockchain to destroy the child DAO with stolen ethers in it by adding a rule that is declaring all transactions making calls to reduce the fund in the child DAO invalid. This would not affect the validity of transactions took place until the fork.
- Exercising a hard fork on the Ethereum blockchain to overwrite the history and restore the stolen ethers. This would reverse the all transactions happened after the starting point of the work.” (Gucluturk, 2018)

All these options had supporters. Those in favour of the first option relied on the philosophical foundations of the blockchain, they argued that the code was the law and everything the code allowed was legitimate. Additionally, specifically against the hard fork option, they claimed that the data on the blockchain was immutable, it should be kept that way, and doing the contrary would harm the blockchain in the long term (Gucluturk, 2018) while this approach was in line with the initial blockchain philosophy, this approach would be ignoring the concept of natural laws.

On the other hand, the majority of the community was of the opinion that a remedial action should be undertaken, one can argue that natural laws or universal ideals had an influence in this decision. The development community proposed the soft fork. The hard fork remained the contested option for a while as it would destroy the immutability and integrity of the blockchain (Gucluturk, 2018).

After the cancellation of the soft work due to security reasons, the hard fork proposal was adopted and was completed on 20 July 2016 and the funds were returned to the investors. Ironically, victims of the hack were able to get their funds back since the so-called immutability was not absolute (Gucluturk, 2018). The DAO hack of 2016 demonstrates that blockchain is a tool with great potential, but it will be unable to prevent a future crash if left unregulated.

The possibility that blockchain boost might be tempered with fuller consideration of the human side of business transactions (Grimmelmann & Narayanan, 2016) and the consideration of social and relational contexts as being essential considerations for the development of smart contracts have been suggested by scholars (Levy, 2018). Some methodologies for achieving this objective have also been proposed for example the classification of strong and weak smart contracts. Strong smart contracts were to have prohibitive costs of revocation and modification, while weak smart contracts would not. This means that if a court of law is able to alter a contract after it has been executed with relative ease, then it will be defined as a weak smart contract. If there is some large cost to altering the contract in a way that it would not make sense for a court to do so, then the contract will be defined as strong (Raskin, 2017).

It is trite law that the veil of incorporation of a company can be lifted under certain circumstances and the people operating behind the corporate veil be put into cause, the question one may legitimately ask is whether the developers of smart contracts can be prosecuted with the existence of legal disclaimers (Leung, 2019) e.g. Augur's FAQ: "Augur is not a prediction market, it is a protocol for cryptocurrency users to create their own prediction markets." (Augur). In the United States, it has been hinted that where code developers could reasonably foresee, at the time they created the code, that it would likely be used by U.S. persons in a manner violative of Commodity and Futures Trading Commission regulations. And no effort was made to preclude its availability to U.S. persons, the developers may be prosecuted (Quintenz, 2018).

Despite the will to regulate and adapt blockchain technology to human nature and our present regulatory institutions difficulties may arise with regards to sanction of misbehavior if the gap between blockchain philosophy and blockchain technology is not filled; paradoxes which emerged following the DAO attack in 2016 may become legion;

- "The hacker stole the funding of The DAO project by using the vulnerability of smart contracts. On the one hand, from the final result, the hacker indeed stole the tokens from The DAO project in an illegal way, which is a bad behavior; On the other hand, from the process, the hacker just only used the recursive function (i.e., splitDAO) to get the tokens, where all the implementation properly accords to the rules of smart contracts, without any illegal behavior. So, the process to get the tokens can be seen as a legal labor of implementing smart contracts. As such, it will be slander to say that the hacker stole the tokens" (Zhao, 2017).
- "The project developers should froze the hacker's account. On the one hand, ethically, the behavior that the hacker stole the tokens from The DAO project violated the morality, so, the developers should froze the hacker's account; On the other hand, from the

> character of “decentralization” of blockchain, the developers should not froze anyone’s account like a centralized organization, without the agreement of all the community members”(Zhao, 2017).

If the code was the only rule, then the hacker would have been right in his proposition that no action should be done against him. The rules would be at hand, scientific, in a fixed and final form, and cases were to be fitted to the rules, the striking example of this state of affairs would be roman law at its decadence, the Valentinian "law of citations" made a selection of jurisconsults of the past and allowed their writings only to be cited. It confined the judge, when questions of law were in issue, to the purely mechanical task of counting and of determining the numerical preponderance of authority (Pound, 1908). Principles were no longer resorted to in order to make rules to fit cases. The tendency of the lawyer to regard artificiality in law as an end, to hold science something to be pursued for its own sake, to forget in this pursuit the purpose of law and hence of scientific law’ and to judge rules and doctrines by their conformity to a supposed science and not by the results to which they lead has been noted by scholars. It was further noted that in periods of growth and expansion, this tendency is repressed. In periods of maturity and stability, when the opportunity for constructive work is largely eliminated, it becomes very marked (Pound, 1908). When such rigidity becomes a nuisance in society, the legislator intervenes through legislation, it was interesting to note that for the DAO hack, equity intervened through consensus of the community which mooted the question before reaching to a decision, a constructive work of the individuals involved.

Human Capital

Human Capital is the knowledge, ability, judgment power and skill of workers it is imperative since it is a wellspring of advancement (Chadha, 2017). Human capital theory argues that education increases productivity, and wages rise as a result (Becker, 1964 and Mincer, 1974). Signaling theory posits that higher wages reflect the correlation between education and unobserved ability (Arteaga, 2016). Human Capital in the financial sector has been under scrutiny following the 2008 financial crisis, the high wages in finance have received attention, specially the persistence of high wages in this sector after the crisis, this prompted the question of whether social returns are dwarfed by private returns to workers in finance. This question has been the subject of many studies and financial deregulation was identified as the most important factor driving up wages in finance and one major concern about high wages in finance is that they attract skilled workers from other parts of the economy, where they may be more productive socially (Boustanifar, Grant, and Reshef, 2016). While high wages can be an attractive magnetic pull to attract workers in the financial sector, other studies identified different

forces as well which will affect employee motivations by 2020 such as the desire to work for socially conscious organizations; talents will readily switch from one organization to another which is more aligned to their values, or if their experience of working for the organization does not line up to the initial promise (PwC, 2016). One can deduct from this study by PwC that natural laws, new moral conditions or ideals will be a factor to be considered by future employers in order to be competitive on the labour market.

Blockchain Technology like all technological advances will change the nature of work and the demand for skills. It has been argued that human capital is positively correlated with the overall level of adoption of advanced technologies. Individuals with stronger human capital reap higher economic returns from new technologies. By contrast, when technological disruptions are met with inadequate human capital, the existing social order may be undermined (World Bank, 2019), distrust in public institutions has increased, especially for individuals who have lost out because of changes in labor markets (Bussolo, Davalos, Peragine, Sundaram, 2018). While advances in technology are reducing the demand for work that is intensive in routine tasks (Autor and Dorn 2013), the demand is rising for skills that cannot be replaced by robots; general cognitive skills such as critical thinking and socio behavioral skills such as managing and recognizing emotions that enhance teamwork (World Bank, 2019). The adjustment of Universities to these changes is essential for the development of Human Capital, a reform at Universidad de los Andes Columbia, which reduced the amount of coursework required to earn degrees in economics and business had an impact on wages. The time to complete a degree decreased from 4.5 to 4 years, and this was accomplished by dropping 12 courses in economics and 6 in business, which was equivalent to a reduction in credits of 20% and 14%, respectively. The number of students, the average high school exit exam scores, and graduation rates were not touched by the reform, indicating that the quantity and quality of students remained the same. Therefore, the reform decreased the human capital that students graduate with, while holding the value of the education signal constant. It was found that following the reform that wages fell by approximately 16% in economics and 12% in business. (Arteaga, 2016). While a decrease in Human Capital may negatively affect wages or employability, the inclusion and central of ethics in the syllabus is seen as an essential component for the viability of capital markets as unethical conduct from market participants, investment professionals, and those who service investors can damage investor trust and thereby impair the sustainability of the global capital markets as a whole. (CFA institute, 2017).

Natural laws

Greek philosophers drew a line between natural law and the political or positive laws of states. According to Aristotle, legal or conventional justice is a component of positive laws of states as well as natural laws. Aristotle argued that natural laws have the same force everywhere while positive laws can differ according to geographical location. While natural laws are universal and have to do with the enjoining or forbidding of actions which are evidently not morally 'indifferent' when considered from a moral point of view, legal or conventional justice has to do with actions which are 'originally indifferent' when considered from the moral point of view, no moral necessity to dictate either that the actions in question ought to be performed, or that they ought not to be performed (Burns, 1998). In his commentary on the ethics of Aristotle towards the latter's attitude towards the principle that 'a prisoner's ransom shall be a mina' St Thomas Aquinas was of the view that; "It is natural justice that a citizen who is oppressed without fault on his part should be aided, and consequently that a prisoner should be ransomed, but the fixing of the price pertains to legal justice, which proceeds from natural justice without error."

According to Cicero, in De Legibus, justice and law originate from what nature has given to humanity, from what the human mind embraces, from the function of humanity, and from what serves to unite humanity. For him, natural laws obligeus to contribute to the general good of the larger society (Barham, 1982) The purpose of positive laws is to provide for "the safety of citizens, the preservation of states, and the tranquility and happiness of human life." In this view, "wicked and unjust statutes" are "anything but 'laws,'" because "in the very definition of the term 'law' there inheres the idea and principle of choosing what is just and true. Law, for Cicero, "ought to be a reformer of vice and an incentive to virtue." Cicero expressed the view that "the virtues which we ought to cultivate, always tend to our own happiness, and that the best means of promoting them consists in living with men in that perfect union and charity which are cemented by mutual benefits (Barham, 1842). In De Re Publica, Cicero further writes, "There is indeed a law, right reason, which is in accordance with nature; existing in all, unchangeable, eternal. Commanding us to do what is right, forbidding us to do what is wrong. It has dominion over good men but possesses no influence over bad ones. No other law can be substituted for it, no part of it can be taken away, nor can it be abrogated altogether. Neither the people nor the senate can absolve from it. It is not one thing at Rome, and another thing at Athens: one thing to-day, and another thing tomorrow; but it is eternal and immutable for all nations and for all time."

In jurisprudence, one of the doctrines to which natural laws can refer to is that just laws are immanent in nature, that is, they can be discovered or found but never created (Drenner, 2019). However true this statement can be, it says nothing on the need to have sources of

authority which lies above the individual to make them normatively obligatory, normative arguments derive their obligatory force from a tension between freedom and coercion which is strictly immanent and exist only in the spheres of human actions which is regulated by the law (Chenillo, 2013). According to Rousseau, the general will of the people is the only and true source of all law and there is no fundamental law which cannot be changed within the state. Rousseau noted that the first bonds of society are constituted of the needs of people which pull them together while the passions which animate people divide them. The tension between unfulfilled universal ideals and actual social practices that restrict, alienate or contravene them is central to the functioning of modern society newly conception of universal equality would create a new repression, universal ideals are a real part of social life just like inequality and repression (Chenillo, 2013). While universal ideals are to be considered for thinking about binding normative obligations, in the absence of traditional transcendental ground, such as religions, to uphold universalistic claims the question would be whether and how to reinstate them on purely immanent grounds intrinsically at the level of each individual (Chenillo, 2013) and blockchain, through its decentralized philosophy can be the platform to fill this void.

Shifting from ego-system to eco-system economics

According to Dr. Otto Scharmer, the world has entered a period of renewal, the old civilization is dying as the present organized structure is creating results that nobody wants. The way forward is for people to shift from an ego-system awareness of maximum “me” and maximum material consumption to an eco-system awareness where people are concerned about the planet, other people and more connected with themselves. According to him, what is being born, following the present disruption, is less clear but in no way less significant. It is not just about replacing one mindset or political party that no longer serves us with another. It is a future that requires human beings to tap into a deeper level of humanity.

When operating with eco-system awareness, human beings will be driven by the concerns and intentions of their essential self that is, by a concern that is informed by the well-being of the whole. The prefix eco- comes from the Greek “oikos” and concerns the “whole house.” The word economy can be traced back to this same root. In the old civilization, people used to learn one profession and practice it throughout their working lives while today people face rapidly changing environments that increasingly require them to reinvent themselves. According to Dr. Scharmer the present situation is constituted of three “divides”: what he called the ecological divide, the social divide, and the spiritual-cultural divide (Scharmer and Kaufer, 2013).

- The Ecological Divide; the ecological divide is the depletion of earth's natural resources on a massive scale, using up more nonrenewable precious resources every year;
- The Social Divide; the social divide is an increasing polarization in society in which, the top 1 percent has a greater collective worth than the entire bottom 90 percent;
- The Spiritual-Cultural Divide; While the ecological divide is based on a disconnect between self and nature, and the social divide on a disconnect between and Self—Breathing Life into a Dying System that is, between one's current "self" and the emerging future "Self" that represents one's greatest potential. This divide is manifest in rapidly growing figures on burnout and depression, which represent the growing gap between our actions and who we really are. According to the World Health Organization (WHO), in 2000 more than twice as many people died from suicide as died in wars (Scharmer and Kaufer, 2013).

The four stages, logics, and paradigms of economic thought, each of which devises a different solution to the principal problem facing each modern economy are as follows:

- The state-centric model characterized by coordination through hierarchy and control in a single-sector society;
- The free-market model characterized by the rise of a second (private) sector and coordinated through the mechanisms of market and competition;
- The social-market model characterized by the rise of a third (NGO) sector and by negotiated coordination among organized interest groups; and
- The co-creative eco-system model characterized by the rise of a fourth sector that creates platforms and holds the space for cross sector innovation that engages stakeholders from all sectors.

As in evolutionary stages, the earlier stages continue to exist at the later stages, that is, all four coordination mechanisms are complementary; they are not substitutes for one another, but they cannot alone find the solution to current problems which they created. He goes further to say that the blind spot of our time is that we take mainstream economic thought for granted, as if it was a natural law while in reality according to this studies, economic laws begin to melt and morph into something else the moment one begin to change: the quality of awareness of the participants in the system (Scharmer and Kaufer, 2013) .

RESEARCH METHODOLOGY

The seeds of this paper lie in a confrontation with the antagonistic stance of the pioneers of blockchain against centralized hierarchical organizations. Through extensive study of literature

and the stance of public international organizations such as the International Monetary Fund and the World Bank towards blockchain, we aim to assess the impact of existing organizational laws on blockchain development.

FACTS AND FINDINGS

Studies demonstrate that there is a lack of consensus on the potential efficiency of the legal arm to correct negative market dynamics and fissures in the social contract is a concern. The misuse of financial instruments and the financial crisis have led to innovators, the first blockchain developers, to try to find an alternative to centralized organizations in which they no longer believe to be productive to society. The core of blockchain philosophy is decentralization. In parallel, researchers in organizational change also share the view that the present structure is dying, they believe that, in the diminishing influence of traditional transcendental forces to coerce people, such as religions, the future normative rules will be intrinsically related to human development on an individual basis.

At businesses level, it was noted that enterprises which will continue to be profitable tomorrow will have to consider the changing values in society and move towards socially conscious input in society. One can thus reasonably deduct that economies will gain if ethics and social consciousness are considered by the State as forming part of human capital and be implemented at educational level. An exposure to ethics, natural laws and philosophy at educational level for blockchain developers will play a positive role in guiding innovation towards improvement based on inclusion rather than a sterile structural revolution, the DAO attack of 2016 showed that without a shift to an ecosystem awareness, individuals will always try to beat the system to their own personal gain.

CONCLUSION AND RECOMMENDATIONS

We are of the view that developing blockchain in reaction to the positive laws regulating the present political order is less fruitful and less speedy than using principles of natural laws as cornerstone. Learning from legal evolution, developers should make a distinction between natural laws, positive laws and socialization. Blockchain has its own philosophy and this philosophy would extensively enrich itself by absorbing the right reason, made tangible, in the known principles of natural laws such as human rights. Human rights are implemented and deployed by the present central hierarchical organizational structure through the prevailing rule of law and the political order. Blockchain, in its deterministic approach, should aim to complement and improve the present rule of law and political order by reducing the space for the negative drives which are inherent to social relations.

THE WAY FORWARD

In order to render implementation of blockchain in developing countries more cost and time efficient, future research can focus on the relationship between blockchain and natural laws. Future research is also encouraged on the impact of the philosophy of blockchain and its deterministic nature on positive laws of States.

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