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UNDERSTANDING THE LAW OF THE CYBER SPACE

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"We are approaching the new era with 21st century technologies, with 20th century governing processes and 19th century governance structures"

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Introduction

Cyber Space - a term coined by Novelist William Gibson - denotes a place without physical walls or even physical dimensions has connected the globe in the shortest span of time to the extent no technology has done before in human history. It will be news to many that Internet - the nervous system of the body called cyber space is almost three decades old. Its origins in 1968 and 1969 with the initiative of the British Physical Laboratories and with the United States military project called the Advanced Research Projects Agency. The basic idea of the project was to connect the defence network computers to safeguard it from attacks on the physical telephone network. The leading Universities which assisted the network later formed a sister network on the same lines, which was sponsored by the National Science Foundation, called as the NSFnet. The students involved in such development

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had a closed user group, as the navigation of such network is a complicated one and needed special skills. It was only in 1993, it became a tool of the masses with the invention of a browser called "Mosaic". This browser is a simple tool, which allowed even those who did not have computer knowledge to share information. Today the Internet connects almost 200 million people- people from 195 countries- approximately 3% of the world population and back home the connectivity is estimated to grow around 125% annually over the next three years.

The moot point is what does it mean to people? Can Internet provide water or food or will it eradicate AIDS? Will it stop crime or wars? Do we need legislations to promote the phenomenon or we need legislations to control and regulate it? Or simply it should be let off without any legislations? The answers are much complex than the cyber revolution itself. For optimists the cyber revolution holds a new path of prosperity, connectivity, exchange of information, trade and business and for those who are skeptical it will create digital divide with the division of knows and know-nots slicing through the haves and have-nots. If these are extreme viewpoints there is a huge shade of gray area in which cyber space operates and in such polarization of views emerges the cyber jurisprudence, which is chasing the speeding technology on the information highway to formulate the traffic regulations.

As the traffic systems are varied and chaotic depending on the country you drive, the same is true for the cyber laws of the respective environment you operate in. The following chapter will deal with the questions of how to define cyber space? What relevance or impact it has on the subject of 'Law'? Do we need to formulate and study a new segment called 'cyber laws'? If so what will be the basic ingredients of such study?

Understanding Cyber Space

In tune with the emergence of new and radical technologies necessitated by War, the history of Internet dates back to 1968. In the backdrop of cold war, UK and USA on both sides of Atlantic attempted to construct a large-scale network that could provide safe transmission of information. The telephone network, which allows point-to-point information, was considered unsafe and vulnerable to physical networks. Unlike the fixed pathways of the telephone network the attempt was to create a network of computers, which will send information as "packets" and these packets "bounced" over these networks. Even if a particular pathway is destroyed the "packets" will search for alternate pathways and will reach their desired destinations safely.

This experiment was a collaboration of the military establishment and some leading Universities and called as the Advanced Research Projects Agency (ARPANET).

The initial experiments of this technology were based on incompatible operating systems of the various universities and the military establishment. This could be possible only with the confidentiality and trust among the collaborating partners – a popular concept among the net called as "netiquette"- based on appropriate social behaviour of using Internet. In due course of time Universities established their own sister network called as the 'NSFnet" with the help of the National Foundation of Science, USA for using the technology for research and educational purpose. The students involved in the project took this technology along with them to their new employers heralding the corporate use of this technology.

In 1972 the first electronic mail programme was born to be distributed in the ARPANET and a year later the mail became international with connections established with UK and Norway. Soon a commercial network TELNET emerged online in 1973. These ventures were backed by software developments of which Transmission Control Programme (TCP) was a breakthrough. In 1984 'Domain name servers came into existence. In 1989 the 'World Wide Web' – a protocol in Internet made its appearance raising hopes of wider use of this technology. In 1993 Hyper Text Transfer Protocol (HTTP) emerged along with software back up in the form of HTML-Hyper Text Marked Language. In 1993, software called 'Mosaic' was invented which is the first web browser. Mosaic and its successors Netscape, Internet Explorer heralded the Internet Revolution – the phase of human history where technology could become part of everyone directly or indirectly. This allowed mind-boggling amount of information to be stored, visited and exchanged and was aided by the development of the search engines like Google, Altavista, Infoseek and others.

Internet today is a technology used by millions of surfers connecting millions of computer worldwide; the rate of growth of this technology is quantitatively and qualitatively different than its predecessors like telephone, radio or television. Internet is a single platform where all the others can converge- information; speech and visual combined as digital information. Unlike the other technologies often referred as 'push technologies' where the process is one-way from those who produce to those who consume, Internet is referred as 'push and pull technology' offering interactive process.

Nevertheless, the social behaviour of 'netiquette' of the early group of users based on mutual trust and conditioning will also change in the various stages of the history of Internet. The contemporary understanding of this 'free space of the commons' is often debated on themes like 'cyber terrorism' and 'cyber crime' marking the new jurisprudence of 'cyber laws' and the great debate of 'freedom vs. regulation'.

Interface of Technology and Law

Human history in a sense is a story of technology from flint stones to that of genetic clones. The tribulations and triumph of such a journey, which will continue in the future, has one aspect, constant at its core – "the laws that govern them". Technology - if defined as 'set of refined processes' resulting in 'various application of daily use' in our lives seems to be harmless, marvel in its basic construct and explanation. A deeper understanding and implications of 'technology' could lead us to other scary construct. Leading such a thought is the 'nuclear technology' perfected to the core and yet a debate on how to 'deconstruct' the same. After 9/11 incident the focus of debate is on 'Bio-war fare technology'. Hence the inevitable intervention of 'law' on shaping, banning and encouraging 'technology' remains a constant. 'Law' as instrument of 'governance of human behaviour' closely shadows 'technology'. To understand a broader perspective of the interface of 'technology and law' the following construct by Professor Harold A.Linstone of Portland University of Oregon.

" The pace of growth of technology and governance are not compatible raising a series of serious problems. The combination of explosive population growth and rapidly evolving technology is in effect shrinking the earth to a global village. The earth's 5.77 billion in 1996 may swell to 9.4 billion by 2050. At the same time the widening gap between technological and organizational rates of change is producing a growing mismatch: we are approaching the new era with 21st century technologies, 20th century governance processes, and 19th century governance structures. Some view this mismatch as one between physical and social technologies. The combination of shortsightedness, irresponsibility, gullibility, human greed, and fear of change is impeding homeostatic evolution of a knowledge society. Demographics are playing a significant role in the widening gap in the developed world. Youth have galvanized the information technology revolution: the personal computer or PC is the creation of startling young computer hackers and entrepreneurs (e.g. Steve Jobs and Apple and Bill Gates and Microsoft). On the other hand, the aging of the population as well as the damage to youth caused by deteriorating education and brains impaired by the drug epidemic and poverty-bred malnutrition raise the barriers to effective social change. Technology is serving, molding and insulating the elite, while diverting or narcotizing the masses with entertainment, and marginalizing the poor. The uncontrolled exacerbation of such patterns portends serious societal tensions and fractures, accompanied by governance dysfunction and systematic instability. These effects will impact both advanced and developing countries. It is by no means assured that democracy can survive the resulting turbulence and resist the lure of say, a majority based "friendly fascism".

The urge to minimize the yawning technology-organization chasm suggests two possibilities:

Path 1- SLOWING DOWN THE TECHNOLOGICAL PACE OF CHANGE - This scenario is unthinkable for most people, particularly scientists and engineers. The technological pace appears unstoppable. A new Dark Age is as inconceivable as it must have seemed to the forecasters in the Golden Age of Imperial Rome.

Path 2- ACCELERATING THE ORGANIZATION PACE OF CHANGE - There is little question that information, communication and transportation technologies permit dramatic and profound changes in organizations and governance. Industry is already showing us new forms of organization, such as downsized, "virtual", decentralized and global corporations. Taking just one example, we see today that information technology makes possible as never before SIMULTANEOUS localization and globalization, fragmentation and integration, decentralization and centralization, in many societal aspects. Organizational innovation based on coordination-intensive structures is one consequence.

The Evolution of Complex Systems: A Metaphor

It is interesting to observe that complex system evolution generally appears to proceed by periodic swings between centralization and decentralization. One metaphor to gain insight about the evolution of complex systems is their depiction as alternating processes of separation and combination. A simple hierarchical system, say a tribe or a small company, grows until it can no longer be effectively managed or controlled centrally. Then it separates into smaller units with considerable autonomy. When there is too much decentralization and the system is no longer effective, reunification occurs, usually at a higher level of complexity than existed previously. In other words, successful evolution proceeds to increasing system complexity by periodic restructuring that oscillates between differentiation and integration.

Lessons from the Past

History provides fascinating clues on centralization and decentralization. The vast Roman Empire could only operate with considerable decentralization, even though it had outstanding communications for its time. It was physically impossible to exercise centralized day-to-day control. It worked as follows. Great care was taken at the Centre to appoint a provincial governor or military commander. He was highly trained in the way the Roman system operated and Roman policies were deeply ingrained in him. He had to hold high office in Rome before being appointed

to a distant post. Thus coordination between the provinces and Rome was assured. The fall of Rome led to decentralization and an attempt by the Catholic Church to affect a new centralized form of governance. The Holy Roman Empire was a temporary compromise. The power struggle between religious centralized and secular decentralized control bled Europe for centuries in the Middle Ages until the latter won out. The information technology revolution triggered by the printing press played a crucial role. A challenge for the third century is to create, in Madison's words, a new " happy combination", balancing global/regional, national and local governance levels in a way appropriate to the shrunken global village and the coordination-intensive structure made possible by today's information technology based revolution.

Rethinking Governance Coordination –intensive structures can help to develop effective new arrangements. There is a growing recognition that governance is possible without formal government. Social institutions and informal organizations can be created to deal collectively with specific issues, developing rules of the game and settling conflicts. There are physical and biological systems that lie outside the jurisdiction of any one national government, such as Antarctica, the oceans, the electromagnetic spectrum, and the global climate system. Such "International commons" may be managed by regional or global forms of governance. A characteristic of this restructuring is maximum flexibility and coordination: an aim is UNITY IN DIVERSITY. An overhaul and streamlining of governance is an essential task in adapting the society to the fluid information-intensive environment of the 21st century. Technology now offers us individually and collectively a remarkably powerful prosthesis of human brain. It makes "unity in diversity" and well-being in the global village realizable objectives, but their achievement demands innovative leadership and unprecedented institutional flexibility."

The above excerpt will give one interesting perspective on the interface of technology and governance and the link to laws, which are instruments of regulating, and directing to such desired goals. The subject of 'technology' has been audited from various perspectives - appropriate technology vs. technology for the chosen few, dangerous technologies vs. useful ones, technology as a trading tool in the division of haves and have-nots vs. people oriented and people owned technologies- the debate goes on. Information Technology has added a new dimension of a new matrix of haves and have-nots combined with know and know-nots often termed as digital divide.

These debates underline one important, inevitable inescapable fact that technology is there to stay and most importantly method and manner of its regulation through

law will be the crux of the issue. Technology and Law in the last few decades dominates the substantive and procedural part of the evolution of legal system. Technology impacts Law and in turn Law shapes up the contours of future technologies and their appropriate use in the society.

Defining Cyber Laws

The term Cyber Laws has gained a wide recognition often spoke about in seminars, workshops and symposiums. Literature has been published using words Cyber Laws, Law of the Internet, Law relating to Computers. In Academic settings, there are centers for Computer and the Law, Cyber Law and research and so for and so forth. The important question is whether these terms are used to denote a specific branch of study, or just a popular usage without coming to grips with what exactly is this branch of law, is it still evolving or it is a generic usage of dealing with varied existing laws on a glamorous pre-fix or suffix?

The fact is that it has gained currency and popularity in usage, yet an uncharted territory without clear consensus on the boundaries, overlaps and interfaces it has with conventional branches of law. To understand this first one needs to question what exactly necessitates the segregation of a separate branch of study –the cyber laws? This will lead us to the question if computers and Internet are mere technological processes like many in the history of technologies, what is the need of segregating a special branch of law? It is a fact that in the evolution of technologies, some have impacted the human life with their reach and applications leading to new sets of laws like - Press laws, broadcasting laws, telecommunication laws. In these developments the laws enacted took into account how these processes affected human behaviour and evolved the rules of the game where the various stakeholders will benefit by them and also the methods by which conflicts can be resolved. It is in the same breadth the need for comprehensive sets of Laws called as those who support such a branch advocate 'cyber laws'. The votaries also argue that unlike other technologies like radio, telephone or television the impact of the Internet is phenomenal not just in numbers but the complexity in which it has impacted the society and human behviour.

One such argument also rests on the fundamental challenge to the way hitherto functioning of the legal systems. Various legal systems in the world finally operate through the prism of territory. It is thus referred as the 'law of the land'. The legal system operates in the matrix of the sovereignty, customary norms evolved in such territory and has a finality about them decided by the justice delivery system accepted as part of the constitution of the country. In this context the breakthrough technologies of the past are relatively easier to regulate and operated on national and international

boundaries. In the case of the Cyber space, the fundamental concept itself is one that of a character of international presence and not distinguishable as national and international operations. The underlying utility and its construct itself is such that it has to be global to be called as cyber space and at the same time the challenge is to regulate on the basis of the 'law of the land'. It is a catch 22 situation where one wants keep the cake and eat it too.

In such scenario it can be concluded that the branch of "cyber laws" is an evolving one which interfaces with all the constitutional provisions, various statutes of other traditional branches of law, various other cases involving individuals, corporates and institutions who transact through the 'Internet' using the emerging technology of hardware and software. Such a sketch will include interfacing technology processes like telecom, Internet services, educational services, cable & broadcasting services, media services, regulatory services, law & order agencies, intelligence services, entertainment services, health services, financial services, judicial services and others which may become part of this future revolution. In short it encompasses all services and players of such services who use and consume 'internet'.

Having widened the scope of subject matter of "cyber laws" it is essential to concentrate on core issues in the immediate vicinity of its operation. Such core areas of focus can grouped as: a. Jurisdiction in cyberspace b. Contracts in cyber age c. Intellectual Property Rights regime in cyber space d. E-commerce & Taxation issues in cyber space and e. Cyber Crimes. There is no hard and fast rule of the above demarcation or chronology of its importance but just an entry point to cover some areas due to the importance based on the current usage of Internet in certain focused areas and keeping in view of this short term course and its time frame in tune with the syllabi prepared. Learners are encouraged to go beyond this coverage and specialize an area of their choice of this expanding field of study and its unchartered territory and legal issues involved in them.