

# Clocks, Watches and Timepieces: The Ace Bio-Political Tools

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## Abstract

“...it’s my hypothesis that the individual is not a pre-given entity which is seized on by the exercise of power. The individual, with his identity and characteristics, is the product of a relation of power exercised over bodies, multiplicities, movements, desires, forces.” Michel Foucault. All relations are power relations. The sources of power vary from divine (supernatural) to mundane. Every age remains obsessed with its own power relations. Scholars believe that the post-enlightenment age is obsessed with two main sources of power. The Marxists are obsessed with economic (material) power articulated through class domination in the form of relations of production and forces of production. The liberals are obsessed with the existence of power centres articulated through certain institutions, which in turn play a significant role in generating legitimacy to the state. Foucault, while disagreeing with these formulations, believed that the enlightenment movement brought in a major paradigm shift in the then existing power relations. Thereafter, the paradigm “Power is knowledge” was replaced by “Knowledge is power”. Foucault believed that, “Knowledge is not for knowing, knowledge is for cutting”. Cutting means constructing not only the narratives and discourses but also the reality itself. But, unlike the Marxists and the Liberals Foucault did not emphasised on the macro attributes like economic structure and state. For him the micro attributes (capillary, subterranean) of power were more important than the macro. Meaning thereby, the centre or focal point of power are less significant as compared to the “power at its’ extremities, in its ultimate destinations, with those points where it becomes capillary, that is, in its more regional and local forms and institutions”. Clocks, watches and time-pieces are some of these capillary powers that have become the ace tools in the age of bio-politics in controlling the life and its processes.

## Keywords

Bio-Politics; Biological Clock; Sociological Clock; Temporal Rationality; Inexatitudes; Unilateralism; Ontological Metamorphosis; Chronarchy

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## 1. Introduction

Humans are tool making animals said Benjamin Franklin. Tools are social artefacts, which means, making a tool by a solitary individual in the absence of past social experiences and present social networking is inconceivable. Making a tool is a dialectical process, meaning thereby, while making and using tools, humans also make themselves both as an individual and members of society. In other words, humans make tools and in the processes of making and using tools they also make themselves. Various researches have proved beyond doubts that human ability to make tools largely coincided with the dawn of human history. Over these centuries i.e. right from the dawn of history until the medieval period, human abilities to make and improvise the tools changed at a relatively slowly pace, dotted with seldom interruption by a major breakthrough separated from each other by a long gap. In other words, the technological breakthroughs were more like exceptions than rules for centuries. This slow pace of progress was jolted only with the onset of modernity. Thereafter, not only the human abilities to make and use tools increased with leaps and bounds, but it also increased their abilities to invent new tools more frequently. These changes were accompanied by yet another more significant technological breakthrough that had far reaching consequences. It was marked by transition from humans the tool making to humans the machine making animals.

All machines are tools but all tools are not machines. There are fundamental differences between the two. “The essential distinction between a machine and a tool lies in the degree of independence in the operation from the skill and motive power of operation. A tool lends itself to manipulation the machine to automatic action”. Moreover, a “machine emphasises specialisation of function, where as the tool indicates flexibility” (Mumford, 1955: p. 10). In other words, a tool is a machine in the human control and a machine is a tool which controls the human. The difference between the two is also in terms of the degree of specialisation and degree of impersonality. For centuries, humans made tools that worked for them but under modernity; the humans started working for machine. They were enslaved by machines. Therefore, a machine is a complex and absolute tool, which in turn constructs an absolute human being according to its own image. The process of human construction by machine is the hallmark of both modernity and capitalism, where all productions are carried through higher and incremental doses of machine inputs along with higher doses of well programmed energy slaves, i.e. the humans (Illich, 1975: p. 23). Under capitalism, characterised by universal and generalised extended commodity production, where, “production does not simply produce man as a commodity, the human commodity, man is the role of commodity; it produces him in keeping with this role as a mentally and physically dehumanised human being” (Marx, 1977: p. 82a). Consequently, the paradox as well as “the principal source of injustice in our epoch is political approval for their existence of tools that by their very nature restrict to a very few the liberty to use them in an autonomous way” (Illich, 1975: p. 57).

It was mentioned before that capitalism is characterised by a transition from tools to machines. The machines have become so pervasive that capitalism is rightly used as synonymous to an age where machines produce more machines. In other words, under capitalism humans beings have become the medium through which machines produce more machines. According to Headrick Daniel R. “The real triumph of European civilisation has been that of vaccines and napalm, of ships and aircrafts, of electricity and radio, of plastics and printing press; in short, it has been a triumph of technology, not ideology. Western industrial technology has transformed the world more than any leader, religion, revolution, or war” (Headrick, 1981: p. 4). There are machines for doing everything big and small. Scholars have differentiated machines on the bases of their age, size, importance and functions etc. There are many who believe that the invention of the “Steam Engine” was the major watershed between the medieval and the modern times. But there are some who believe that “the clock; not the steam engine is the key machine of modern industrial age. For every phase of its development the clock is both the outstanding fact and the typical symbol of the machine: even today no other machine is so ubiquitous”. It is particularly true for the people adopting Western pattern of life, where “people are so thoroughly regimented by the clock that it is their second nature and they look upon its observance as a fact of nature” (Mumford, 1955: p. 16). This is also the theme of this article. It attempts to deconstruct the clocks, watches and time pieces etc. as the ace bio-political tools in modern times that are in operations for the colonisation of life and its processes.

## 2. Clocks, Watches and Timepieces: The Ace Bio-Political Tools

Marx once mentioned that, animals simply live in time without being conscious of it. Life for most of the ani-

mals is an unending saga of continuous adjustments and acclimatisation to the changing rhythms of nature (natural time); failing which, most of them are left with limited options other than total extinction. However, there are a few animals that either succeed in bringing about required modification (physiological as well as anatomical) within a given time or migrate to other regions thus, succeed in surviving. Unlike these, the human beings while, living in time, adjust and acclimatize to the given nature (environment) and its rhythm, but only temporarily. In the long run, the humans, while being a part of the nature “as one of her own force” (Marx, 1978: p. 173) and interact with it (environment, nature) and its numerous rhythms, distinguish themselves by gaining consciousness about the forces and processes of nature and work tirelessly for their transformation to suit their needs. Meaning thereby, the humans consciously and constantly interact with the nature (environment) for the transformation of both particularly their rhythms. Putting it differently, interactions by humans as conscious social beings with the environment are the distinguishing feature between the humans and other species. These are the conscious life activities that distinguish the “man immediately from animal life activity. It is just because of this that he is a species-being. Or it is only because he is a species-being that he is conscious beings, i.e. that his own life is an object for him. Only because of that is his activity free activity. Estranged labour reverses this relationships, so that it is just because man is a conscious being that he makes his life activity, his essential beings, a mere means to his existence” (Marx, 1977: p. 73). Once again, it is this particular ability to build a conscious dynamic transformative interaction with the nature and its various forces that has endowed humans as creator of their own history (Marx and Engels, 1978: p. 398). However, this does not mean that, the transformation is a unilateral process for the human beings. On the contrary, it is a dialectical process as depicted in the following **Diagram 1**.

It is evident from the above diagram indicating dialectics of human nature interaction that, while, interacting with the Natural Environment and consciously working for its transformation, human beings too get transformed from a raw and primitive communitarian individuals to a highly socialised, interdependent, differentiated social and cultural entity. Humans, in creating a world of objects by their practical activities, through their work upon inorganic nature and prove themselves as conscious species—beings, i.e. as beings that treat the species as their own essential beings, or that treats themselves as species—beings. As opposed to this, animals only produce (at least there are some) what they immediately need for themselves or their young ones. Animals produce one-sided, while humans produce universally. They produce even when they are free from physical needs and only truly produce in freedom there from. Human freedom to choose work and select objects to work on gets totally distorted in a society divided into classes, which reached its climax under capitalism. Under this system, workers produce wealth, commodities and values, but “the more values he creates the more valueless, the more unworthy he becomes; the better formed his products, the more deformed becomes the worker; the more civilised his objects, the more barbarous becomes the worker” (Marx, 1977a: pp. 69-70). So, production is a complex and multidimensional process, which in turn creates conditions for the emergence of two important attributes that are specific to human beings i.e. the relations for production and the forces of production (Marx, 1977a: p. 20)<sup>1</sup>. But, above all these, human beings also succeed in not accepting the “Time” as given, which is the condition most common among the other living beings. Human, ingenuity lies in constructing time as social artefacts, which in turn are used as tools to transform the nature, society, culture and ultimately life and its processes (Butola, 2011: pp. 61-75).

Social time is an abstraction. Like any other concept or idea, the “Time” in every age was/is nothing but the time constructed, defined and determined by the ruling classes. It is primarily so because, “The class which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal has control at the same time over the means of material production” (Marx, 1977b: p. 47) and time as a concept and praxis is no exception to this. In this article attempts have been made to critically analyse the ruling class concepts of Time under different spatial and temporal contexts and the way it has been used as the ace tools to construct the ‘others’ in general i.e. nature, human beings, organisms etc. and lives and its processes in particular.

<sup>1</sup>Animals interact with the other members of the animal and plant kingdom through the production of relation. But, human beings interact with other members of the society through the relations of production, which are independent of their will. “In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production, appropriate to a given stage in the development of their material forces of production”. Marx (1977a): A Contribution to the Critique of Political Economy, Progress Publishers, Moscow, p. 20.

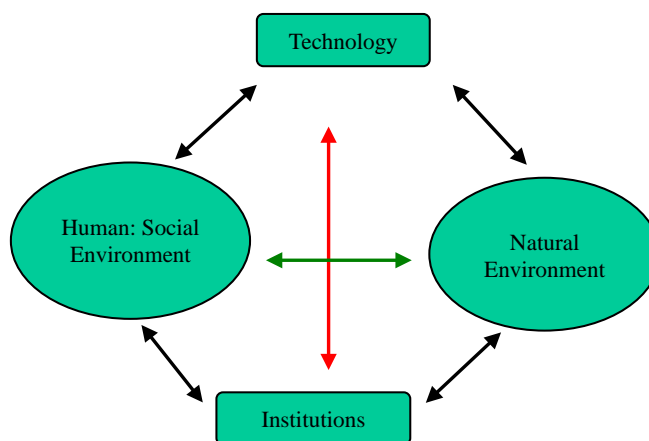


Diagram 1. Dialectics of human nature interaction.

### 3. Time as a Social Artefact cum Bio-Political Tool

Human ability to create an alternative social rhythm, by altering the natural rhythms (biological rhythms) forms an important basis of difference between them and other living beings or between the social and the natural worlds. Or, putting it differently, other living beings have no option but to accept and comply with the natural rhythms (natural clocks) like meek or passive entities. The essence of human beings lies in their ability to refuse to accept the “Time” as preordained, unchangeable and given destiny (Shakespeare, 1623)<sup>2</sup>. On the contrary, they ceaselessly work to transform the Time form being a simple and routine phenomenon like any other natural processes (rhythms) such as the sun rise and sun set or change of seasons etc. to social artefacts like seconds, minutes, hours, days, weeks, months, years, anniversaries<sup>3</sup>, jubilees, decades, centenaries, ages, epochs and periods etc. of human achievements characterised by specific types of social relations, tools, technologies and institutions particularly the relations and forces of production. But, to succeed in transforming the Time from a simple natural phenomenon or the biological rhythms<sup>4</sup> to an artefact of human activities, is not the end of human endeavour and quest. Human ingenuity lies in using the Time as a universal tool, technique and ideology for controlling, dominating and ultimately constructing the environments (social as well as physical) to suit their interests. Thus, in their efforts to carry forward their goals, the humans have evolve a set of social rhythms, which ultimately get epitomised in the form of numerous social time keeping machines and institutions like: knockers, bells, clocks, watches, siren and gongs etc. Initially, these social rhythms were evolved by imitating the natural rhythms and biological clocks and trying to create near perfect harmony with the rhythms of nature or biological clocks<sup>5</sup>. But, with the graduation of humans from simple to complex communities or social groups based of con-

<sup>2</sup>“The time is out of joint: O cursed spite, That ever I was born to set it right!” Hamlet, The Prince of Denmark, Act-I, Scene-V, Shakespeare (1623): The Complete Works of William Shakespeare, Collins Clear-Type Press, London.

<sup>3</sup>1 year is a paper anniversary, 2 years is a cotton anniversary, 3 years is a leather anniversary, 4 years is a linen anniversary, 5 years is a wood anniversary, 6 years is an iron anniversary, 7 years is a wool anniversary, 8 years is a bronze anniversary, 9 years is a copper anniversary, 10 years is a tin/aluminum anniversary, 11 years is a steel anniversary, 12 years is a silk anniversary, 13 years is a lace anniversary, 14 years is an ivory anniversary, 15 years is a crystal anniversary, 17 years is a turquoise anniversary, 20 years is a china (porcelain) anniversary, 25 years is a Silver Jubilee or silver wedding anniversary, 30 years is a pearl anniversary, 35 years is a coral (or jade) anniversary, 40 years is a ruby anniversary, 45 years is a sapphire anniversary, 50 years is a Golden Jubilee (it should not be confused with the golden birthday, which is celebrated not at a fixed age), 55 years is an emerald anniversary, 60 years is a Diamond Jubilee, 65 years is a blue sapphire anniversary, 70 years is a Platinum Jubilee, 75 years is a Diamond Jubilee or diamond wedding anniversary, 80 years is an oak wedding anniversary and 100 years is a centenary.

<sup>4</sup>A biological rhythm is a sub-set of natural rhythms. Biological rhythm is a biological event internal to the body mechanism that is repeated through time in the same order, interval and frequency: such as sleepwalk cycle, body temperature rhythm and minstrel cycle etc. It is different from the natural or environmental rhythms like the cycle of day and night, rise and fall of tides, phases of the moon etc. which are largely regulated through the various forces (centripetal, centrifugal and force of inertia) along with rotation and revolutions (in case of the satellites and planets) etc. that are at works in maintaining the dynamic equilibrium in the universe.

<sup>5</sup>Biological clocks are self-sustaining systems that are constantly trying to adjust the biological system to the ever-changing environment that surrounds it. Two processes generate biological rhythms: endogenous and exogenous. It is believed that Pineal Gland located deep in the brain of species such as fish and birds etc. acts like extra ocular receptor also known as the third eye that regulates the biological clocks in these species. In case of the mammals, humans included, it is regulated by the Hypothalamic Lesions, which is a paired nuclei known as Suprachiasmatic Nuclei (SCN). The SCN in turn is linked to Pineal gland, which produce melatonin hormone that regulates the biological rhythms in the mammals.

tinuous refinements in the social division of labour, these epitomes of social time were/are used as effective tools and technologies of socio-biological control or bio-political tools (Thapar, 1995). The circadian rhythm of day and night and its near perfect harmony with sleepwalk daily cycle, phases of moon, the menstrual cycle (among females) etc. are ideal examples of such harmonies, which are still followed by most of the communities all over the world. However, there are significant differences between the way these were observed by the primitive humans and in the modern society. In fact, these have registered significant changes from one stage of social development to another. In its latest incarnation the time has come before us as an important attribute of governmentality and biopolitics.

#### 4. Time as Governmentality

The human like many other animals followed their twenty-four hour sleepwalk cycle in a perfect harmony with the rise and setting of the sun. It is believed that the first modification in this rhythm was brought in by the discovery of fire, which helped them to extend the limits of their wakeful activities beyond the normal time of the sun set into the time that was otherwise part of the night. Thus, the use of fire did not only help the humans to cook their food so that it becomes easy to digest and reduces the efforts and energy required to consume the same, but it also gave them relatively longer hours to continue their wakeful activities<sup>6</sup>. This was perhaps the major breakthrough in the human history on more than one count namely: hereafter, the fire proved to be the most potent tool and weapon against most of the dangers, particularly from the beasts and wild animals. Moreover, roasted, cooked and treated foods helped the humans to spend less time and energy in procuring, consuming and digesting their foods, hence it saved extra energy and time which that they could use for other activities. And most importantly, availability of artificial light (one form of fire) gifted them an extra territory in terms of time to extend their wakeful activities. This was the yet another important frontier (Melbin, 1978: pp. 3-22), which they ventured to conquer in the days that followed. It was yet another type of migration from the realm of wakeful activity time into the time that was available for leisure, socio-cultural activities and also for performing night rituals. It was also a type of colonisation, though without involving the conquest of a geographical territory yet, had all the ingredients and the potentials of profit maximisation and surplus generation by simply extending the wakeful activities into night hours. Hereafter, the intensity of appropriating nights as frontiers continued to increase with the improvisation of method of ignition and transportation of fire. For example, the discovery of Davy's Safety Lamp in the early 19<sup>th</sup> century (Sir Davy Humphrey, 1815)<sup>7</sup> made it possible to continue working in the dark provinces of deep mines with considerable reduction in the risk and accidents due to fire and explosion. However, the invention of electricity in the 18<sup>th</sup> century (Franklin, 1752)<sup>8</sup> proved to be a major watershed in the colonisation of the night hours and extension of wakeful activities into the realms of dark territories of the night, which further necessitated the suppression of the biological rhythms by the new social rhythms. Electricity, owing to its versatile utilities was proved to be a greater boon particularly to the dwellers in the temperate zones like the Europeans<sup>9</sup>. Hereafter, with the use of electricity (for light, central heating systems and air conditioners etc. (McCarthy, 1999)<sup>10</sup>, it was possible to work not only in the long and cold winter nights at sub-zero temperature but also the work could be conducted successfully deep in the mines and under the water at the bottom of oceans and lakes with considerably reduced risks involved in the operations. This brought in a paradigm shift in the concept of day and night. Electricity changed the conventional equation of daylight = working day. It was replaced by working day  $\geq$  daylight, which was ultimately replaced by making working time independent of daylight. Recent advances in the field of optics<sup>11</sup> have not only made the working time independent of visible

<sup>6</sup>This could be one of the possible reasons for restricting wars to day time activities, while night times were reserved for rest and socialization during the Great Mahabharata War fought between the cousins i.e. the Pandavas and the Kauravas.

<sup>7</sup>It was special type of safety lamp invented by Sir Humphrey Davy in 1815, for the use of workers in coal mines in order to reduce the explosions and accidents due to the presence of inflammable gases like methane (also known as firedamp or minedamp) etc.

<sup>8</sup>Knowledge about Electricity remained merely an intellectual exercise among scientists and philosophers until Benjamin Franklin in 1752 proved through his experiments with kite under thunder and lightning that "lightening is electricity". Research in the field of electricity was further pushed up with the valuable contributions of Nikola Tesla, Thomas Elva Edison, George Westinghouse, Ernst Werner von Siemens, Elexander Graham Bell and Lord Kelvin etc. This was the beginning of Second Industrial Revolution.

<sup>9</sup>Electricity can be successfully transformed in to the six important uses: light, heat, refrigeration, air, magnetism and power.

<sup>10</sup>Terry McCarthy (1999): Lee Kuan Yew, the Prime Minister of Singapore Lee's penchant for control extends to his own physical environment. He admits to being very sensitive to heat and humidity, has hailed the air-conditioner as one of mankind's great inventions, and likes to live his entire waking life at 22 degrees c (reduced to 19 degrees C at night while sleeping). August 23<sup>rd</sup>.

<sup>11</sup>Optics is one of the most important branches of physics, which studies the properties and behaviors of light and its interaction with matter. Scientists have divided optics into two important branches i.e. Geometrical (ray) and physical (wave) optics. In the former light is considered to travel in a straight line, while in the later light is considered to be an electromagnetic wave.



light (spectrum), but also made the visible spectrum one of the most dispensable and unnecessary condition for undertaking any type of activity and work. It opened new arena for human activities<sup>12</sup>. It is a welcome change from activities condensed over space to their extension into time. It was also some sort of human migration (Melbin, 1978: p. 4) of activities from daylight into night.

Moreover, the exodus of people migrating over time and space also brought in some new dimensions in the history of colonialism as a viable economic and political proposition. The Europeans that had left their homes for distant shores were well equipped with the required provisions ranging from “rifles and cartridges, steam engines and canned peas, quinine, official stationary, and thousands other necessities”, but they were far from satisfactory. An important reason for lack of satisfaction was the level of stress they had to undergo yet survive without contacts and communication with their nearer and dearer ones back home in Europe. They unequivocally challenged the traditional wisdom that believed that “no news is good news”. So, they were in dire necessity of something that can help them in establishing some contacts with their family members by opening some channels of quick communication and act as a stress buster. Under the then, prevailing circumstances the real motivating force for them was improved flow of information and communications. After all, flow of the information was/is the “lifeblood of European Imperialism; business deals, administrative reports, news dispatches, and personal messages sustained the colonisers and assured them the support of their own people” (Headrick, 1981: p. 129). Invention of telegraph, submarine cable and subsequently radio and wireless completely revolutionised the colonial communication system. From the point of view of bio-politics these had far reaching implications. Hereafter, the concept of day light activities and night activities lost their relevance, because of the global communication network<sup>13</sup>. The traditional routines, calendars, schedules and above all the biological clocks of every organism including the human biological clocks were set aside and these were replaced by the socio-biological clocks/rhythms. It was necessitated primarily to meet the communication needs of the empire. Initially, it was aimed at reducing the stress level among the Europeans working in the colonies, but their outcomes were far from satisfactory. On the contrary, the new communication technology brought in its own baggage of stress without reducing the existing ones significantly. Consequently, these induced stress in the normal lives of every individual both in the times of war as well as peace. “In times of peace they were the life lines of the ever-increasing business communications that bound imperialist nations to their colonies around the world. In times of crises, they were valuable tools of diplomacy” (Melbin, 1978: p. 163). It was a direct and pervasive encroachment of the sociological clocks/rhythms on the bio-natural clocks/rhythms.

Once, the colonisers succeeded in expanding their areas of influence over time and space (Melbin, 1978: p. 4)<sup>14</sup>, there was little scope left to deviate from their cherished destination. It was the time to realise and openly declare their intentions for global domination in terms of conquering new territories. So, it was the ideal time to exhibit their real power and might. Since, they were the masters of the world, they have subdued most of the resistances and emerged victorious every time, therefore, it was an imperative that they should declare that the time belongs to them and their concept of time should be accepted as the universal time. Great Britain was the new economic, military, naval and intellectual power in the world. Therefore, it was but natural that British time is accepted as the “Global Time” or Greenwich Mean Time = Global Mean Time. There could have hardly been any other august beginning other than introducing British Time and Clock as the Global Time and Clock. Consequently, London became the new centre of the world and the longitude passing through Greenwich was accepted as the “Zero Meridian”. The “Greenwich Time” was accepted as the Universal Standard Time or International Standard Time (IST).

Scholars have argued that the “adoption of a standard national time gained irresistible impetus from two simultaneous development that occurred at the end of eighteenth and beginning the nineteenth century England.

<sup>12</sup>Human beings are photo sensitive animals as far as their vision is concern. Unlike many other animals their ability to see is confined to a small portion of the electromagnetic spectrum called visible light. But, with the advancement in the field of optics now it has become possible to see the objects in the absence of visible light or non-visible sources of electromagnetic radiation. Night vision appliances like near-infrared or ultra-violet sensors, night vision goggles, cameras and thermal vision cameras etc. have made it possible to conduct activities round the clock. Most of these appliances are being extensively used for surveillance and monitoring of environmental changes and strategic activities by various organizations.

<sup>13</sup>Though there is a difference of 5 hours and 30 minutes between the Greenwich Mean Time (GMT) and the India Standard Time (IST), yet there is a difference of 4 hours and 30 minutes between the British Summer Times (BST) and the Indian Standard Time in the Summer and 5 hours and 30 minutes between the British Winter Times (BWT) and the Indian Standard Time. The change from the winter to summer Times takes on 28<sup>th</sup> March and from summer to winter on 28<sup>th</sup> October.

<sup>14</sup>“In 1890 the Bureau of the Census announced that the land frontier in America had come to an end, it was no longer possible to draw a continuous line across the map of the West to define the edge of farthest advance settlement” M. Melbin, *ibid.* p. 4.

The first was the factory system and the second was the creation of a national communication network...” (Davies, 1978: pp. 194-199). There is no denial of the facts that though, these were important reasons yet, decidedly not the only and fundamental ones. On the contrary, the real reason was the rise of British economic and military power that had established global domination and emergence of London as the power centre of the world. So, it was an imperative to the stakeholders of the British Political Economy to remain vigilant, well informed and up-to-date in everything that was even remotely related to the British interests. Therefore, by virtue of their new powers they could decide and determine the time and the clock for rest of the world. The intensity of entrenchment with the Time as a bio-political tool even in a relatively small country like the Britain was anything but an event free affair. Acceptance of standard time even in Britain was never a peaceful and smooth process. Like any other traditional society, the British too were habituated living in temporal in-exactitude. Moreover, they also had “the image of time as a devourer, a defacer, a bloody tyrant, a scytheman...” (Cipolla, 1967: pp. 56-97). Transition from a traditional to a modern industrial society was expected to value and treat the Time like any other input or commodity, to be used and scheduled according to the prevailing norms of rationality of the age i.e. economic and temporal or time rationality (Godelier, 1972)<sup>15</sup>.

## 5. Clock and the Temporal Rationality

The first and foremost component of the new rationality was “Time is money” (Franklin, 1748: pp. 1726-1757)<sup>16</sup>. To inculcate a new rationality is to respect and have a sense of Time i.e. to remove the inexactitudes of time and treat it as the most valuable input in factory production. Hence, factory discipline was considered as an essential part to attain that objective. Therefore, to make discipline as a precondition for entering into all types of social contract, clocks and clock times had penetrated into deeper and intimate levels in the eighteenth century industrial society in England. This in turn, called for severe restructuring of working habits—new disciplines, new incentives, and new human nature upon which these incentives could bite effectively. Meaning thereby, masses in general and factory workers in particular were expected to inculcate new sense of time along with its close links with task-orientation (Thompson, 1967: p. 60). England and the British were not the only to adopt the social clock. There were countries like Germany, where social clock was accepted as part of the declared state policy particularly under the Nazis. The Nazis under Hitler and particularly its propaganda and cultural secretary Thomas Martin Luther was forthright in introducing the “bi-phasic” approach of clock times. According to him “A.M. is for work, reality and ego principle. P.M. is apparently for the instinctual urges of the pleasure principle”. In his scheme of time bi-phasing, Martin Luther was of the firm opinion that the principle of pleasure and work are interdependent on each other. Meaning thereby, “the pleasures P.M.: are clearly subordinated in the column to requirements of A.M.: pleasure is a reward or compensation for work”. Moreover, pleasure is only permissible “if it serves ultimately some ulterior purpose of success and self promotion” (Adorno, 1975: p. 17). It was a major transition not only in terms of considering time as value but also the very process of conceptualisation of time. It was different from the conceptions held by traditional societies during medieval times. Those societies visualised time as an uninterrupted cyclic process, perfectly in tune with other natural rhythms, but hereafter, it was visualised as linear, clock oriented and ultimately task oriented (Thompson, 1967: p. 60); “life falls into two sections, one where he functions as a producer and one where he functions as a consumer” (Adorno, 1975: p. 97). For the Nazis A.M. symbolises work of production and P.M. consumption or pleasure. This change in attitude about time made it possible to divide time into discrete units and each unit was weighed in terms of its monetary value. The time, which was previously seen as a collective undifferentiated entity, now it could be looked at from two diametrically opposite interests:

a) The employers looked at it from the point of view of productive time. Their main interest was to take all possible measures to minimise its wastage and losses and extract from the labour as much value as they can. For them, time has only two sides i.e. either it is productive labour time or wastage. The employers were very particular about budgeting the time particularly when it was part of the working time. It is perhaps, due to their

<sup>15</sup>Under the hegemony of the West, particularly after the Industrial Revolution in Great Britain, the Economic Rationality became the Rationality of the age. It was defined in terms of the “Utility Functions” i.e. optimization of given and perceived opportunities for attaining certain goals at the least possible cost. For details also read Maurice Godelier (1972): *Rationality and Irrationality in Economics*, Monthly Review Press, New York and also, Steven D. Levitt & Stephen J. Dubner (2006): *Freakonomics*, Penguin Books, Harmondsworth.

<sup>16</sup>Benjamin Franklin (1748): *Advice to a Young Tradesman Written by an Old One*, *The Writings of Benjamin Franklin*: Philadelphia 1726-1757. “Remember that TIME is money...Remember that money is of a prolific generating Nature. Money can beget Money, and its Offspring can bet more, and so on...Way to wealth...Waste neither Time nor the Money, but make the best use of both”, Philadelphia at New Printing Office.

heightened concern about the value of the productive time, that the employers were happy to grant medical leaves to the employees rather than keeping them employed below the optimum level of their health, medical fitness and productivity.

Thus, hereafter, the concerns for good health were transformed from an inalienable issue of human rights that should be available to every member of society to a technology in social engineering. Its primary aim was to intervene and manage the body spaces of the individuals that can serve both as an ideology and market for the corporate interests on the one hand and can be kept in a dormant state, subject to reactivation in future depending upon the needs. This is possibly an important reason even today that most of the governments/states and employers insist on the medical fitness of their employees and provide medical allowances over and above the salaries to most of the employees. It is an imperative on the part of the modern state/employers to keep and maintain large number of young, energetic and medically fit population in best of their health particularly those employed in the armed and paramilitary forces and other government jobs to demonstrate before the people that the government/employer neither suffers from any medical handicaps nor does it tolerate one possessing such handicaps. Modern states are firm on their opinion that a sick and unhealthy person representing the state is likely to erode the credibility of the government and the state that they represent. Thus, the provisions of sick leaves for the workers testify that the government is committed to fight lethargy and sloth on the one hand and maintain a healthy image of the government and the state on the other (Butola, 2008).

b) Time for the workers was conceived diametrically opposite of what it was for the capitalists. To put it differently, the success of capitalism was based on its open war against sloth and lethargy. From the point of view of the workers, time was either wages or it was leisure. So, unlike the industrialists the main efforts of the workers were to get the maximum in their favour while bargaining with their employers.

These were the two diametrically opposite positions regarding time between the capitalists and the workers. It constituted an important aspect of the class struggle between the workers and their employers. The employers consistently insisted on strict disciplines in the economic and social life with respect to time. They tried to make it as discrete and objective as they could and the workers struggled to keep it as organic and cultural as they could. Not much was expected from these struggles, mainly because of low level of political consciousness as well as lack of unity among the workers. The net outcomes of the struggle were the victory of the employers. They had the final say in incorporating the time as an essential component of factory discipline. Discipline was accepted as the basic requirement for participation in all types of social activities. In order to initiate this seemingly rational activity, standardisation of time and acceptance of clocks as the objective instrument became the hallmark of capitalism. As a consequence of this:

“the worker who left the background of his domestic workshop or peasant holding for factory, entered a new culture as well as new sense of direction. ‘It was not only that the new economic order needed... part-humans: soulless, depersonalised, disembodied, who could become members or little wheels rather, of a complex mechanism’. It was also that men who were non-communicative, non-acquisitive, accustomed to work for subsistence, not for maximisation of income, had to be made obedient to the cash stimulus, and obedient in such a way as to react precisely to the stimulus provided”.

Moreover, “Labourers from agriculture or domestic industry do not at first take kindly to the monotony of factory life”. The records and reports of many factories also mentioned that apart from lack of discipline among the workers in general; the highlanders in particular were most unruly. They were described as “transient, marginal and deviant or volatile” and would “never sit at ease at a loom; it is like putting a deer in the plough”. Thus, for the success of the system, disciplined workers were preferred over better labourer, and this was/is also the prime consideration for giving preference either to an apprenticed man or an experienced worker over other (Pollard, 1963: p. 255).

Initially, the factory discipline was found utmost distasteful by most of the workers, and at various times they also registered violent protest against it. The Luddite’s movement<sup>17</sup> of early Nineteenth Century England is the classical example of workers’ opposition to the introduction of new machines in the factories including moni-

<sup>17</sup>King Ludd also known as General Ludd or Captain Ludd, led the Luddite movement in Britain. This machine breaking movement started in 1811. Initially, it was against the introduction of New-Wide Framed automated looms, which could be operated even by unskilled workers replacing the skilled ones, but gradually it spread through the length and width of England and raised opposition to the introduction of new machines. The interpretation of Luddite movement has been refuted by British labour historian E. P. Thompson. According to him the Luddites were not against the introduction of new machines. On the contrary they were for the abolition of fixed prices and rigid factory disciplines.



toring of the working hours by the clock time.

Lack of experience of the Luddites in leading the workers movement and linking it with the broader issues of alienation, exploitation, rising social inequalities and spatial disparities under capitalist development resulted into gaining success but marginally. It was only after the first mass movement of the working classes that the issues raised by the Luddites could be formalise in the form of People's Charter of 1838<sup>18</sup>. It was a laudable achievement in many ways as far as working class movement was concerned, but it's near silence on factory discipline not only exposed large mass of workers to economic exploitations but also made them vulnerable to bio-political manoeuvres by the factory owners and the state. Various methods were put into use in order to execute these manoeuvres, but among all, time discipline and surveillance by clock proved to be the most effective one. It also formed the bases of new economic rationality (Marx, 1978). In order to initiate this seemingly rational activity, standardisation of time and acceptance of clocks as the objective instrument became the hallmark of capitalism<sup>19</sup>. Initially, the concept and practice of standard time was applicable to Great Britain only through the "Definition of Time Act" of 1880, in which the Greenwich Time was accepted as a legal time across Great Britain, which in reality meant standard time for the entire British Empire and by default the World in general. The might of British military (Navy) and economy was so emphatic that the countries that tried to resist in accepting and adjusting their respective national times and clocks to the Greenwich Clock and Time, were considered as backward and obsolete. In the words of English Horologist J. J. S. Tripplin, the French resistance to accept Greenwich as the Prime International Meridian reflects their 'backwardness' and different character of their economy. Moreover, the British also ridiculed the French by levelling the epithet like "no sun, no gun" (Davies, 1978: p. 199)<sup>20</sup>.

The cult of clock was so overwhelming in England that, charitable donations were made to popularise the standardisation of time and its precision by erecting towers etc. to hang the clocks and bells etc. so that people can see and hear the signs made by these. And accordingly, the land hoisting such devices was named as the "clockland", "ding dong land", or "curfew bell land". However, the experiences of 18<sup>th</sup> century England showed that "sound served better than sight, especially in growing manufacturing districts" (Thompson, 1967: p. 64). Ultimately, it was pontificated in the form of "London's Big Ben"<sup>21</sup>, which continues to hold its supremacy even in the age of electronic watches. The "Big Ben" was not only the largest clock tower in the world, but it was also the symbol of British Supremacy and Power. It was also a statement to their colonies in particular and World at large that the British has succeeded is acquiring the time consciousness much ahead of the rest of the world and they are far ahead of the medieval days of temporal inexactitude. Society is at a different (new) age where, time is used as an effective tool of political technology in shaping the individual, cultures, life its forms and processes and ultimately the World itself. Moreover, the ability of the British to know the value of time and translate the same into their socio-political life much ahead of the others, seemed to have contributed in making the Empire the most powerful Nation at that point of time. The time then belonged to the British Empire. It was their time and they had the power to decide the time for rest of the world. England and particularly, the Greenwich became the centre of new concept of time, and it was left to the rest of the World to follow the Greenwich Time, if they desired to be included among the civilised ones. In other words, England defined, decided and determined the time and rest of the World only adjusted their watches according to the Greenwich Time (British time).

The timings of the construction of the Big Ben were most suitable to culture, antiques and socio-economic ethos of the Victorian England, which had an undoubting faith in the wonders that discipline could bring to the British society in terms of the virtue, value and dividends. The Big Ben, as a concept as well as an artefact was

<sup>18</sup>Chartism or Chartist Movement took place between 1838-1848 in England. The movement formalized the Charter of Demand of the Worker stating that: 1. Suffrage of all men age 21 years and above. 2. Equal sized electoral districts. 3. Voting by secret ballot. 4. An end to the need for a property qualification for parliament. 5. Pay for the members of the Parliament; and 6. Annual Election for Parliament. It is believed that these movements prepared the backdrop for the publication of the Manifesto of the Communist Party by Karl Marx and Fredrick Engels. The first edition of it was published in London in February 1848.

<sup>19</sup>"clock is the key-machine of the modern industrial age" from Lewis Mumford's (1934): *Technics and Civilization* as quoted in Eviatar Zerubavel (1980): *The Benedictine Ethics and the Modern spirit of Scheduling: on Schedules and Social Organisation; Sociological Inquiry* Vol. 50, No. 2, p. 157.

<sup>20</sup>In place of the Big Ben of Greenwich that was used to indicate the accurate time in the British island the French used to Fire a Midday Gun which was ignited by the sun's rays focused through the lens, precisely at noon, but during the cloudy days it was not possible. As quoted in Alun C. Davies (1978) p. 199.

<sup>21</sup>In 1844, the British parliament decided that it will have a new building in place of the old one which was destroyed by fire on October 22<sup>nd</sup> in 1834 and it will also have a four faced clock tower situated at the north-eastern end of the Westminster. The height of the tower is 96.3 meters and it is the largest four-faced clock in the world. This clock tower is referred to under different names; Tower of Big Ben, The Great Bell, St. Stephen's Tower or colloquially the Big Ben.

well supported by the Victorian Society's obsession with time. It was nicely calibrated through the popularisation of the culture of 'household clocks', which in turn, made it possible for the puritans to introduce the most rigid timetable. Hereafter, the "Clock time was fetishized. Meal time, work time, dressing time, visiting time; all activities were made temporally exact and exacting since breaches of timekeeping" (Thrift, 1996: p. 553). The fetish of time was so intense during the Victorian England that the household clocks, bells, gongs and sirens etc. became indicative of new culture and social status that values time. Punctuality in keeping the time and disciplined life styles were synonymous to Victorian antiquates. According to E. P. Thompson: "the small instrument which regulated the new rhythms of industrial life was at the same time one of the more urgent of the new needs which industrial capitalism called forth to energize its advance. A clock or a watch was not only useful, it conferred prestige upon its owner, and a man might be willing to stretch his resources to obtain one". Possessing a clock also gave a sense of confidence and mastery to a human against one of the "worst devourer, a defacer, a bloody tyrant and a scytheman" i.e. the Time. Time, which was viewed with great awe so far, was within in the hold and control of an individual and the nation states. It was a great booster to the level of their confidence in the sense that they were no more mere pawns in the all powerful hands of time. On the contrary, time was now more predictable, manageable and vulnerable to manoeuvres and manipulations. Owning a timepiece, the Victorian man felt more empowered. Moreover, the "Timepiece was the poor man's bank, an investment of savings: it could, in bad times, be sold or put in hock". For the upper classes it was a mark of their status, prestige, luxury, affluence and convenience. They distinguished their social class through ostentatious exhibitions of their timepiece/clocks on the one hand and synchronisation of their social engagements, dresses, foods, rituals, etiquettes etc. with the rhythms of the clock on the other. For example, they marked their distinction by following a strict dress code suited to the occasion and time and following a social timetable. "The official time table for visiting was 3 p.m. to 4 p.m. for ceremonial calls, 4 p.m. to 5 p.m. for semi-ceremonial calls, and 5 p.m. to 6 p.m. for closer friends and family. Sunday was traditionally a day for closer friends and family" (Thompson, 1967: p. 553).

The obsession with clock was not confined to the nobles, aristocrats and other gentries only. On the contrary, it was also imposed on the middle and the lower class of workers and peasants in different forms. For example, there were fixed time to go to work, duration of work and time to return from the work. However, special cares were taken to counter the "formidable beast of monotony" on the one hand and to minimise the loss of working time along with decline in productivity of the workers due to fatigue, sloth, lethargy, tiredness and over stress on the other. Thus, to counter these monsters, special provisions were made for recesses in between the work. There were recesses for coffee time, peach time, banana time, fish time, coke time, and of course, lunch time along with window time and pick up times etc. (Roy, 1959: p. 162).

In order to optimise labour productivity, clock times were introduced in the lives of the workers to maintain regular cycle of hours, weeks and months. The entire duration of working days were divided into bouts of intense labour and of idleness, whenever the workers were in control of their own working lives. The time to recess was not a philanthropic act on the part of the employers, on the contrary, it was primarily, to allow the workers to recoup from the temporary fatigue so that they can fight sloth with renewed vigour and enhance their productivity. There were some employer who provided frequent recesses during the working hours, but extended the length of the working day through candle lit hours in the morning and evening. Apart from this, there were some traders such as shoemakers, tailors, colliers, printing workers, potters, weavers, hosiery workers, cutters, all cockneys etc. that did not honour even important holidays i.e. the Saint Monday. In this way, the clock and the time discipline it stood for proved an effective device in controlling the employees without raising frequent tensions and discords among different contending classes. Initially, the workers did resent the intervention of clocks in their life but gradually the focus shifted from fighting against the time to fight about the time. According to the records of Dundee workers report the use of clock was effective in the exploitation of the workers that:

"...in reality there were no regular hours: masters and managers did with us as they liked. The clocks at the factories were often put forward in the morning and back at night, and instead of being instruments for the measurement of time, they were used as cloaks for cheaterly and oppression. Though this was known amongst the hands, all were afraid to speak, and a workman then was afraid to carry a watch, as it was no uncommon event to dismiss any one who presumed to know too much about the science of horology".

The tyranny of clock was so entrenched even in the psyche of the workers that, most of them took it as an indirect presence of the employer in their midst but more like a conspiracy.

“... and they want to nip every corner that they can, so that the bell will ring to leave off when it is half a minute past time, and they will have them in about two minutes before time...If the clock is as it used to, the minute hand is at the weight, so that as soon as it passes the point of gravity, it drops three minutes all at once, so that it leaves them only twenty-seven minutes, instead of thirty” (Thompson, 1967: p. 86).

There are no doubts that time became the central concern of capitalism particularly during the Victorian Period in England and, it vigorously circulated the “time-as-currency imagery” (Thompson, 1967: p. 90) through art and culture. However, no stones were left unturned to reinforce the time discipline in the society particularly: “...by the division of labour; the supervision of labour; fines; bells and clocks; money incentives; preaching and schoolings; the suppressions of fairs and sports—new labour habits were formed, and a new time discipline was imposed”.

Capitalism in its mature form stood firmly on the principles of optimum utilisation of time and it was a serious offence for the labourers to mere “pass the time”. In fact, the core of such a society was formed by a group of workforce that is time disciplined and knows the worth of time-thrift. The obsession with these twin “virtues” of time (time discipline and time thrift) was so intense that it was justifiable under all circumstance whether it came in the forms of Methodism, or Stalinism, or nationalism and ultimately it also came to the developing World (Thompson, 1967: p. 93).

It was mentioned before that the introduction of time discipline did not remain confined to the workers only, on the contrary, it had far reaching social and cultural consequences, particularly the way it aimed at bringing about secular changes in the biological clocks and rhythms of every individual member of the society.

Invention of clocks, watches, calendars and schedules etc. and their subsequent absorption in the social life are some of the well conceived and articulated epitomes of some of these social rhythms. Consequently, these simple looking machines like watches and clocks etc. are anything but simple. These are an epitome of social power as well as a bold statement to the other components of our environment, that “we are in an age where human beings are not only the most dominant but they are also the sole determining factor in deciding their own social rhythm and it turn they are also the only one who decide the relevance/irrelevance, rationality/ irrationality of all other biological rhythms or natural clocks”. But at the same time, it is also a statement to other fellow members of society that; the “Time” is neither an abstraction nor a metaphor (Thapar, 1996). Time and its rhythms (social time) as have been constructed either by an individual or a group of individuals, or by the nation state etc. is the ultimate reality and it is applicable to all the members of the society. Time is power with a difference. It is visible as well as capillary (subterranean) and the clocks, timepieces and watches and other artefacts of time are the epitomes and symbols of that power and authority.

Thus, clocks and watches acquired the position of becoming one of the major parameters in defining and constructing not only the socio-cultural but also the Natural world. Meaning thereby, generally it is believed that, the social life is structured in accordance to the social clock (Zerubavel, 1980) and the physical world along natural rhythms, frequencies and cycles etc. But, hereafter, the natural world was understood and conceived according to the rules and logic of the sociological time i.e. the clocks and watches etc. Hereafter, is became possible only by virtue of the social rhythms the sole representative and epitomes of the Time, to understand the natural rhythms. Meaning thereby, the natural world and its rhythms were interpreted largely in terms of the sociological time, which had both ontological as well as epistemological significance. In other words, the being is a construction as well as conceived in accordance to the parameters of sociological time.

The clocks and watches are different from most other tools and technologies. These have secular acceptance not only in defining and conceiving both the natural and social worlds, but also the most important tools in constructing and controlling these worlds. Thus, it is not surprising that, Time, which, is such an important tool, has been the central concern as well as preoccupation of people particularly in modern times, when human beings are spending large chunk of their resources in domesticating Time.

Today, clocks, calendar and other artefacts of sociological rhythms have become the all-pervasive instruments of power and control. The clocks have become an inseparable part of our association with the worlds: internal as well as the external i.e. the world that is social, physical, and psychological. Moreover, every individual and institution is involved in an intricate, invisible webbing of clockwork relations that employ universal and homogeneous units of time (Briod, 1978: p. 9). According to some scholars, the world has become so much accus-

tomed to the rhythms of the social times and its mechanical manifestations in the form of watches and clocks that, it is impossible to conceive a world and life that is moving independent of the discipline or tyranny of the clocks and watches.

It is important to mention here that the lovers of Freedom in general and human freedom in particular have so far failed to pay due attention to the tyranny of clocks and watches. Unlike the tyranny of a ruler who places his/her own interests or the interests of a small group to which he/she belongs, over and above the interests of the population and enforces the same relentlessly, remorselessly and ruthlessly, with complete disregard to the popular feelings, the tyranny of the time is ubiquitous, pervasive yet invisible. Thus, for want of popular support a tyrant inevitably degenerates into an illegitimate ruler, which ultimately end-up in mass resentment leading to decline and fall of the tyrant. This is the autocratic path of the rise and fall of a tyrant. As opposed to this, the tyranny of clocks and watches takes what can be called a popular route for becoming a tyrant. It follows the roots of subterranean-capillary power, gets entrenched into the social structure, mind-set, culture, common sense and ultimately the very process of socialisation and living itself. More often than not, it is based on the assumption that human beings are essentially social animals, so it is an imperative to standardise the time in order to connect, communicate and cultivate the personal (the psychological) to jell completely with the social and, national. This is perhaps the underlying assumption behind various forms of social contracts that are quintessentially those same paths through which the individual moves to the social and the social get epitomised and concretises into the individuals and the institutions they come from. Narrative and discourses are constructed and circulated as if the entire process is democratic, voluntary, rational and normal process, though these are the most refined forms of unilateralism.

## 6. Clocks and Biological Rhythms: The Antinomies of New Forms of Unilateralism

Unilateralism as a matter of statecraft and policy measure is one of the most crucial aspect of the modern state from the point of view of bio-politics. Unlike the medieval rulers and the state they represented, the source of legitimacy to the new state shifted from external sources (divine touch) to the people (masses), particularly in the after math of the French revolution. Democracy based on the universal and adult franchise became the new magic mantra for seeking legitimacy for the new rulers or the state. True to the logic of class rule, it became an imperative to every rulers as well as the state not to trust any other, than those that shared the class interest with them. Thus, most of the social interactions were based on the universal principle of mutual mistrusts and conflicts. In the backdrop of such conflicts and mistrusts, the easiest way out was to actively engage the state itself in generating consent and legitimacy, which became possible by constructing and manufacturing legitimacy. In other words, class rule got transformed into hegemonic control. Various tools of political technology were invented and pressed into service so that everything was not only brought within the ambit of the political power of the state but they were also brought on the visible and legible spectrums, open to forces of surveillance and super-surveillance. The new methods and tenets of disciplines were introduced for facilitating the same.

Therefore, legibility formed the core of the statecraft (Scott, 1998: p. 2) of the modern state, which was achieved through varied methods suitable to given situations. For example, in case of the mobile population sedentarization was considered an easy way out, because, it is always easy to homogenise and standardise the sedentary population in the name of rationalisation than the mobile population. In its turns, it was much easy to construct including regimentize such people and under certain conditions, even converting these into concentrations camps and ghettos. But, most often, it was realised that the tools adopted were crude, devoid of human touch, hence proved self-defeating more often than not. In order to mitigate the losses: “Creation of permanent last names (surnames), the standardization of weights and measures, the establishment of cadastral surveys and population registers, the invention of freehold tenure, the standardization of language and legal discourse, the design of cities, and the organization of transportation seemed comprehensible as attempts at legibility and simplification” (Scott, 1998: p. 2) etc. were introduced uniformly over time and space. Meaning thereby, creation of a standard grid for the purpose of monitoring, manipulation and control became the themes of central concern in the political discourses of the modern state. Simplification by displacing the objects from their natural, socio-cultural, politico-historical, spatio-economical and physiological settings and placing them on the standard-grid did not only robbed these of their vitalities, organic wholesomeness and emancipatory potentials, but also galvanized the same under rationality (instrumental against practical), decisive advantages (strategic against

communicative) and legitimacy (legible by destroying the organic) etc. jargons of state power. As opposed to this, the vernacular methods of simplification were driven by the “logic of local practice” as much as they “shared some generic features despite their bewildering variety”, which were always interpreted by the agents of the state either “impediments to administrative uniformity” (Scott, 1998: p. 24) or open act of defiance.

It is possible that, some intellectual may believe that the human history has reached at a stage where the twin prime movers of history in the form of non-recognition and mal-redistribution have lost their relevance in the post-revolution and globalised world order. Some of these scholars were more forthright in their prognostication than the others in declaring that humanity has entered into the “End of History Epoch”. They believed that, capitalism as a model of economic development and democracy as the political system have not only solved the twin principal contradictions of history, but it also brought human kind at a stage beyond which it is difficult to think and imagine a better world that is neither democratic nor capitalist. Though, there are many loopholes in such preposterous propositions, yet suffice would be to mentioned here that, participation in elections for electing people’s representatives may be a necessary condition for the functioning of democracy, but it is far from being the sufficient. Similarly, over production, culture of mass consumption and hyper-consumerism is not capitalism; on the contrary these are its pathologies or nemesis.

To become a viable democracy and movements for democracy will have to take positions against all types of unilateralist tendencies. Intellectuals have spent quite a substantial amount of time and energy in fighting economic, social, political, cultural and technological unilateralism at various points of times in the past. But, the annals of human history have very few instances to justify that enough was done to resist and oppose unilateral standardisation of time. Consequently, the necked truth that constantly haunts the human history and mind indicate that standardisation of time stands out as an epitome of unilateralism in our social life. The concept of time of the powerful was always projected as the standard time and it reached its climax during the prime days of the British Imperial Power, when the Greenwich Mean Time (GMT) was unilaterally accepted as the standard time in Great Britain, which was subsequently, accepted as the unilateral reference point for all the times and cultures world over. The British were neither the only one and nor will they be the last to unilaterally impose their concept of time on the others. It is a well known fact that during the helicon days of the Holy Roman Empire, the time at the Vatican Garden was unilaterally imposed on other. The French republican opposed unilateral imposition of GMT and in its place proposed their own Republican Time centred at Paris. Similarly, the American and the Bolshevik revolutionaries along with many other culture groups and communities favoured their own concept of time against the time imposed by the powerful.

Though, there are various interrelated aspects of contestations about the notion of time among different cultures, yet the differences about the beginning and duration of the day are more interesting than many other aspects. According to the Gregorian calendar, the beginning of the day takes place at 00.00 hours at night, but as per the Hijri calendar the day starts at the sun set, which is different from the Vedic calendar. As per the Vedic calendar the day starts with the sun rise and continues before the next sun rise. Such acts of unilateralism were justified by various rulers at different points of time by reducing multiple temporal formulations to a standard and common point in order to elevate the vernacular and personal to the universal and social levels so that: human the political animal (*zoon politikon*) of Aristotle gets elevated into Rousseau’s Social Animal or Marx’s Producing Animal (Marx, 1976: p. 10)<sup>22</sup>. To be a social animal or more precisely a producing animal, it was thought an imperative to accept and adhere to the principles of sacrificing the personal or psychological perspective on time to sociological perspective. According to Emile Durkheim:

“If...men did not have the same conception of time...all contacts between their minds would be impossible, and with that, all life together” (Durkheim, 1964). Moreover, if “time is to be shared as an intersubjective social reality, it ought to be standardized.

Standard time is thus among the most essential coordinates of intersubjective reality, one of the major parameters of the social world. Indeed, social life would probably not have been possible at all were it not for our ability to relate to time in a standard fashion”.

Thus, to be social means to acquire abilities and express ones willingness to calibrate the subjective temporal formulations in accordance to a commonly agreed single standard yardstick (Zerubavel, 1982: p. 2).

Here the question is not of accepting the standard time reckoning and dating framework but it is a question

<sup>22</sup>“Production by an isolated individual outside society—a rare event, which may well occur when a civilized person who already possesses the force of society within himself dynamically is accidentally cast into the wilderness.” in other words, production is a social activity. Karl Marx (1976): Preface and Introduction to the Critique of Political Economy, Foreign Language Press, Peking, p. 10.



about which among the multiple temporal formulations one particular formulation is to be accepted as universal<sup>23</sup>. This was the reason that each nation state had accept standard time/times for the nation as a whole or parts of a single nation and it was expected from all the other constituent regions and communities to follow the standard time without exception<sup>24</sup>.

Practicing of such unilateralism is a serious violation of democratic functioning, because democracy and unilateralism are antithetical to each other. The antagonistic relationships between the two emanates from the diametrically opposite assumptions on which these are build around. Democracy presupposes pluralities and thrives on the celebrations of diversities. "It is intimately connected with public discussion and interactive reasoning". It is particularly so because quintessentially democracy means "government by discussion" (Sen, 2005: p. 14). As opposed to this, unilateralism is a doctrine based on one sided action having total disregards to other viewpoints. Unilateralism also referred as neologism acquires enhanced significance, when viewed in the light of the unilateralism (domination) of the Sociological Clocks, National and International Standard Times over the vernacular, natural and biological clocks. Moreover, it is not about standardisation of time and unilateralism alone. On the contrary, it has far greater socio-cultural repercussions. In some other similar context, Gregory A. Petsko warned about the dangers and disastrous consequences of singularities of any kind. Singularities being practiced in places of higher learning like universities etc. he opined that research in the "universities aren't just about discovering and capitalising on new knowledge; they are also about preserving knowledge from being lost over time" (Petsko, 2010: p. 2). Standardisation of time too is possible only at the loss of numerous vernacular narratives and knowledge systems particularly about time.

## 7. Spatial Dimensions of Unilateral Time Discipline

Settlement Geography, an important branch of Human Geography emphasises on the analysis of rural and urban settlements. Though, there is hardly any unanimity among the geographers, planners, and policy makers about these concepts i.e. rural and urban, yet there exists abroad consensus among these stake holders as far as their indifference towards the inclusion of time consciousness derived from the vernacular narratives on rural and urban settlement. Apart from so many indicators used for differentiating these settlements from each other the non-inclusion of time consciousness is one of the most significant omissions. Urban centres, unlike the rural settlements are different from each other in terms of the level of time consciousness. The former are characterised by extreme form of time consciousness and its social repercussions are visible mostly in the cities and urban centres, where it has become an important basis of new form of social contestations including the class struggle. The all-pervasive clocks, particularly their instrumental precisions and unsmitten concern for the human sensibility plays an important role in transforming an organic social entity to an alienated and formal relation in the urban centres. In urban centres, the Time is a measurable quantity and a commodity, which ultimately graduates into an effective tool for the colonisation of all the organic relations and the vitalities of life. Though, it is a difficult feat to achieve yet, it has become possible by introducing the clock discipline, which ultimately yields the desired results by integrating the human and machine. Furthermore, it paves the ways for smooth onward march to further alienation and commodification. And above all, it is also used as an effective biopolitical tool to get rid of the old and rustic habits of idling and inculcating time indiscipline. To make this happen three basic methods are put into operations: i.e. deterrents, material incentives and the formulation of new work ethos. It was a common experience in the past that the emphasis on the feasibility of the above-mentioned methods was in the reverse order. Deterrents like, fines, dismissals, and other forms of punishments were most common in the beginning and these were awarded only under unexceptional circumstances. These were more demonstrative rather than usual practice. These had relevance at the level of individual and on short-term basis. Similarly, the material incentives (wage increase, bonus etc.) as temptation too had served limited purpose. Thus, these were also used occasionally. But, introducing a new work ethos was the most effective as well as most sustained method. It was thought that the working discipline needed to be inculcated right at the young i.e. schooling age.

<sup>23</sup>Cultures differ from each other in terms of the temporal formulations they possess. To Quote Kurt Vonnegut (1963): "When I was younger man-two wives ago, 25000 cigarettes ago, 3000 quart of booze ago" as quoted in Zerubavel, *ibid* p.1 and also "Three Rice Cookings" in James Scott (1998): *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, London, p. 25.

<sup>24</sup>The United States of America has accepted Six Time Zones i.e. Alaska Time, Hawaii Time, Central Time, Eastern Time, Mountain Time and Pacific Time. Russia has Eleven Standard Time Zones i.e. Kaliningrad Time, Moscow Time, Samara Time, Yekaterinburg Time, Omsk Time, Krasnoyarsk Time, Irkutsk Time, Yakutsk Time, Vladivostok Time, Magadan Time and Kamchatka Time.

So, changing the school curriculum and inculcating the habits of time discipline formed the basis of school education. “Putting little children to work at school for very long hours at very dull subject was seen as a positive virtue, for it made them habituated, not to say naturalised, to labour and fatigue” (Thrift, 1996: p. 556).

The most fundamental challenge to the operationalization of time discipline came from repeated breakthrough in the production, transport and communication technologies. Successful incorporation of these technologies had not only brought in more comforts and less drudgery to the working population, but these also gave a lot of leisure time to many. Thus, it was a major challenge to put this leisure time into constructive uses otherwise it had enough potentials for dangerous distractions. Legitimisation of recreational activities, tourisms and travels were preferred as effective measures to achieve this end. Revival of old sports; fairs and festivals, journey, railway outing and holidaying etc. were promoted. Finally, it gave rise to corporate and commercial entertainment. Perhaps, this was the reason that motivated the Nation States world over to seriously consider the revivals of Olympic Games and Sports and other International Sports and Club activities etc. and also sponsor the entertainment activities, which are in vogue right from the end decades of the nineteenth century.

The entertainments in the changed circumstances were much different from what they used to be in their original forms. The new recreations, entertainments, cultural activities and other curricular activities “were based on paying consumption rather than participating production and could be more easily confined to particular location and precise time slot”. Thus, entertainment hereafter was separated from the other social activities in time and space contexts. There were two diametrically opposite interests involved in these activities. The performers were on the supply side and the audience were on the demand side. The primary aims of these entertainments were to strike right balance between the likes and dislikes of the two opposite sides. The former was mainly interested in getting access to the time and resources of the audience which they are willing to give provided their needs are satisfied. On the contrary, the audience were mainly interested in realising the worth of their time and other resources that they were willing to spare subject to their satisfaction. In other words, there was commoditisation of the entertainment and recreation activities, which in turn put more stress on the existing clocks and calendars. Ultimately, entertainment that used to be an organic activity in the traditional society was bargained for a piece of shoddy (Thrift, 1996: p. 557).

Apart from these, it was also expressed by some scholars that the employers also emphasis on the provisions of providing recreation to the employees so that former will be able to axe the customary holidays that the workers were availing so far. The first of such casualty was “Saint Monday”, which used to be a holiday but hereafter it was part of the working days. Some places, it was also bargained for half Saturday’s holiday, which was ultimately converted into working days after sometime. The point here was not only that of holidays and leisure times etc. which started gradually disappearing from the life of the workers, but also that of culture becoming subservient to the logic of economy. Though, It was a small incident, yet a fundamental one because, it augured the beginning of a new phase of class relations between the workers and their employers. Hereafter, direct coercion was replaced by a more pervasive and effective control i.e. hegemony (Gramsci, 1978; Cavalcanti & Piccone Paul, 1975). Reorientation of culture particularly the role it can play in exercising the control over the ideas, values, norms and morals was given enhanced importance in the class struggle. Social institutions like family, clubs, political parties, schools, churches and other religious institutions etc. were assigned the task of generating consent among the masses for the ruling classes. It was a precondition for the hegemonic control, which subsequently graduated into new and more effective surveillance, super-surveillance and ultimately social and moral-policing. Schools, that were initially conceived as basic social institutions for imparting fundamentals on social skill including the three “R”s were gradually replaced by schools that are working as basic social production units of the “best fits” and “well programmed” individuals that are good enough to obey and follow the given command without showing too much resentment. Apart from other attributes of proving ones bonafides as the “best fit”, it was taken for granted that punctuality and obedience to the clock time are implicit to the system of education and schooling. As mentioned before, punctuality was reinforced through various ways but gradually the old techniques of incentives and succumbing to pressure became uneconomical as much as it was turning unnecessary. Therefore, it was thought that the onus should rest with the individual. Development in the railway transport and telegraph communication were the ultimate in this, where it was the responsibility of the individual to follow the railway clock and timetable and not the other way round. Initially, these were the main functions of towns particularly in England. It is beyond doubts that the railways were the most effective means of transportation during those days, but at the same time these also worked as a symbol of particular time (hour) of the day. People use to adjust their clocks with the movement of rails (trains). Initially, there were differences

between the clocks used by the railways itself and to remove these anomalies standardisation of time zone was thought to be the best way out and subsequently, the Greenwich Time became the Standard Time for England on November 2nd, 1852 (Gay, 2003: p. 118)<sup>25</sup>.

## 8. Clocks and the Biopolitics of Ontological Metamorphosis

Time as an ensemble was so wide and universal phenomenon that it touched almost every aspect of the individuals and their social life. Moreover, it also had serious repercussions on the ontological and epistemological spheres. For example, the social clock also became the sole basis of constructing new beings and the ultimate narratives about the existence of the beings. In other words, the Time did no more remain a meta-caste and class realities. On the contrary, it was defined according to ones social position. Colonisation which was justified by the coloniser as a historical inevitability to civilise and bring in the colonised population in the so-called main stream was deconstructed as the beginning of the age of slavery and colonisation. So, Pax Romana, Pax Britannica, Pax Americana or Pax Economica etc. were reinterpreted by tropical and subtropical population as universal processes of enslavement and colonisation by the Europeans (Koning, 1991; Galeano, 1997).

The supremacy of the colonisers in terms of their sense of time and punctuality was primarily based on the invention of the mechanical clock, which was rather difficult to maintain with any other types of clocks. It is interesting to note that the so-called supremacy in terms of punctuality and regularity that the advocates of the Western Civilisation were so proud of did not start form the normal processes of socialisation. In other words, punctuality was never part of the lived social experiences even in the West. The entire credit to this great feat goes to the inmates of St. Benedict's Monastery<sup>26</sup>. It was St. Benedictine Ethics that had made what subsequently became the hallmarks of the Western Civilisation. During St. Benedict's time, it was mandatory for all the inmates to assemble for the service known as "Divine Office" at the strike of the bell. In fact, the monastic life was selected to work out the feasibility of implementing the clock rhythms in social life at a large scale largely because life in monasteries were characterised by strictly disciplined which was governed by equally rigid routines. Though, it would be preposterous to mention that the Benedictines were the first to introduce strict daily schedules (the horarium) for carrying socially significant events at specified time of the day, yet they were definitely the pioneers in the West, who established temporal regularity not only on an annual, monthly, and weekly basis, but also at the level of day, and even the hour, as well. It became possible only in the monasteries because every moment of a monk's life was "accounted for" and their life was governed and regulated by strict schedules. These temporal orders had liturgical significance too. Particularly impressive was the temporal organisation of the celebration of the eight daily "Divine offices": i.e. the Matins, Lauds, Prime, Terce, Sext, None, Vespers and Compline. The importance of these daily celebrations was also reflected the way their time were venerated and called "canonical hours" (Zerubavel, 1980: p. 158), signalling the daily routine of the monastery. These celebrations were also used for the purpose of standardisation of the duration of the hours. Before the introduction of Benedictine ethics the length of an hour was depending upon the length of the day and night, which in its turn was based on the rise and setting of the sun. Previously the day and the night were seen as the intervals between the sunrise and the sunset. This duration was divided into twelve equal segments, thus, during summers the hours were longer during the day and short during the night and just the opposite was the case during the winter. These fluctuations had seriously affected the timings of the canonical hours, which in turn had adverse effect on the rigid life in the monasteries. This anomaly was removed only after the introduction of the mechanical clocks. Thereafter, it was possible to temporarily fix the timings of canonical hours, which were aimed at reinforcing regularity and punctuality in the life of the monks to begin with and subsequently to be adopted by every other member of the society. Thus, the inhabitants of the monastery were the first formal "clockwork Communities" in the West. The routines followed by the monks were so rigid that their schedules were taken as epitomes of time and space synthesis. For example, the monks were supposed to take their supper around 5.30 to 6.00 p.m. which means if the monks are taking the supper that stood for the clock time around 5.30 to 6.00 p.m. Similarly, if it was the time around 5.30 to 6.00 p.m. then one could expect that the monks are at their supper. Apart from these there were some other significant aspects of monastic life that were crucial for

<sup>25</sup>Nigel Thrift (1996): op. cit, p. 566. There are differences of opinion about the exact year of accepting GMT as the standard time for Great Britain some believe that it was in 1847 GMT was standard for the London region, which was ultimately accepted for the entire nation and its colonies world over only in 1880. Hannah Gay (2003): Clock Synchrony, Time Distribution and Electrical time Keeping in Britain 1880-1925, Past and Present No. 181, November, p. 118.

<sup>26</sup>It is a monastery situated in the mountainous state of Colorado.

assigning the temporal location of events and activities; “the rules of Saint Benedict were also responsible for the standardisation of hours and their rates of recurrence”. By fixing their location at certain times of the day, for example, the horarium also assured their regular recurrence at 24-hour intervals, thus actually imposing a daily rhythmic structure on monastic life. This daily recurrence of events was supplemented by introducing rhythmicity in the monastic life on weekly and yearly bases. There were some events like bathing, bloodletting, head shaving and mattress refilling etc. fixed for certain number of days in a year. However, the most significant aspect was the weekly beat of the monastic life: e.g. feet and beer jugs were to be washed once in week and reading the full cycle of 150 psalms was to begin every Sunday as were the rotation of kitchen service and of reading to other monks during meals. Though, the mealtimes, wakeup times, and nature and order of the psalms and hymns that were sung on Divine Office all varied according to the day of the week. The clock timetable of the monastery was so rigid that the duration was fixed even to the reading of a particular psalm and each was limited by a temporal boundary. Thus, the discipline of the monastic life necessitated in popularising the secondary functionary of the clock<sup>27</sup>. It was primarily due to these reasons that initially the clocks did not have arms indicating the minutes and seconds. Those clocks were primarily “horologia” whose primary function was to tell the hour. Though, the synchronisation of the activities and hours in the life of the monks was so perfect and rigid that it appeared as God-given, natural, inevitable and absolutely unalterable, yet it was purely conventional. This process was by no means less constraining than any other physiotemporal or biotemporal order. It was equally coercive and imposed on the lives of the monks independent of their will (Zerubavel, 1980: p. 160).

The so-called discipline oriented modern society owes a lot to the social temporal order and a synthesis between the clock and life that was evolved by the monks at the St. Benedictine Monasteries. Though, the contributions of the Benedictine orders were many yet the following four aspects have special significance in the modern life particularly the way it contributed in the construction of social life thereafter; namely:

### 8.1. Standard Locations in Time

To be modern means to be punctual. It is almost a universal practice that most of the social activities that modern humans are associated with take place at a definite day, days of the week, months and year. Most of the schools in India open between 7.30 - 8.30 a.m. and they are over by 2.00 to 3.00 p.m. The office hours are generally 9.00 a.m. to 5.30 p.m. Sundays are holidays in most of the offices and schools. In India, most of the festivals are fixed in the months of September and October. The National Holidays are fixed for 26<sup>th</sup> January (Republic Day), 15<sup>th</sup> August (Independence Day) and 2<sup>nd</sup> October (Gandhi Jayanti) etc.

### 8.2. Uniform Rates of Recurrence

Fixed duration and rigid sequential structures is yet another hallmark of control by clock. The municipal supply of water, the timings of street lights, the timings of the railways, airlines, bus, ships and other public transports, their arrival and departure take place at fixed time and after fixed interval. In schools and other academic institutions, specific subjects are taught by designated resource persons who address the participants within the framework of rigid and fixed clock time and these are strictly recurrent in nature. Similarly, the roll-calls of the prisoners, army columns, religious congregations etc. are also the events that recur at uniform intervals.

### 8.3. Fixed Duration

The classic example of fixed duration is singing of the National Anthem in India. It is the constitutional duty of every citizen to sing the National Anthem standing in an upright position in exactly 52 seconds. Similarly, the duration of every class, the sessions of Parliament and state assembly, events like sports and games, recess after tiffin, lunch and dinner times etc. are also fixed. Moreover, the duration of one’s service tenure, punishments to the convicts, duration for upward mobility while in service etc. are also for fixed duration. The force of fixed duration becomes more explicit while exercising their control particularly in institutions that are known for their strict discipline. In the religious institutions there are fixed duration for performing specific action in a fixed time. Similarly, most of the military rules compel their soldiers to complete their meals and other activities within fixed number of minutes.

<sup>27</sup>Initially the clocks were introduced primarily to indicate the time of the day and not to measure the duration of the occurrence of an event. Zerubavel Eviatar (1980): opcit. p. 159.

#### 8.4. Rigid Sequential Structure

It is an important aspect of the temporal control and at times it can also raise some moral and legal bindings. For example in most of the communities, it is always preferred that marriage should proceed before getting the biological parenthood. Sometimes, the sequencing is either inevitable or have external control over it, in that case the sequences are logical e.g. “it is a natural imperative that forces farmers to plough their field before sowing” (Zerubavel, 1980: p. 162). But, the most crucial aspects come when the sequencing is socially determined and conditioned by the social clock and calendars. There is no justification why should one need the sanctions from the elders to form a union particularly with the member of the opposite gender including marriage<sup>28</sup>. Or, why should one have the sanction from the state and so-called higher authority to start any enterprise before one venture into it?

It is obvious from the above discussion that one of the fundamental concerns in most of the human endeavours has been to extend the realm of their control over other forms of life including members of their own species under the watchful eyes of the “clock” (Zerubavel, 1982: p. 9). The control starts right from their basic urge to live and not merely to exist. If recent researches and developments in the field of Genetic Engineering and Biotechnology etc. are any indication to fathom the reach of human urge to control the life, its forms and processes, than it can safely stated that today, the humans are not only in a commanding position to regulate the biological and natural clocks, but they have also developed required wherewithal to create and set into motion the new biological clocks and temper with the existing ones, to their advantages. In fact, it is this particular ability that has equipped the modern humans to create new colonies. Consequently, today, not only the life of their fellow beings but also Life in general has been converted into colonies.

The process starts among the humans right from the time of their birth in most generalised forms. The newborns face their first encounter with the outside world, not the one supposed to have been created by the so-called almighty but by the human beings themselves. There are some who even argue that, even the All-Mighty itself is constructed and subsequently appropriated by the same humans to justify, legalise and reinforce the world that they themselves have created and anchored on the sociological clock. The child faces the world where (s)he has to be conditioned, brought and normalised after subjugating his/her biological clock to the sociological rhythms i.e. clocks, timetables, schedules, rhythms and calendars etc. The much celebrated enthusiasm about the proper and normal growth and development of a child, which is also the top most concerned to every parents, is nothing but peaceful acceptance and adaptation to the various rhythms and cycles of sociological time by the child. Thus, a mature, responsible and rational individual is one who has successfully adjusted, adopted and graduated from simple to more complex sociological rhythms. On the contrary, a deviant, irrational, unsuccessful and insane person is one who has failed to achieve and internalise proper synchronisation between his/her individual rhythms and the rhythms of the sociological clock(s).

As far as a child is concern the entire process of socialisation, concept formation and cognition of the surrounding etc. takes place in accordance to the internalisation of the sociological clocks. It is so pervasive that, it does not only appear rational, legitimate and logical but also the basis of new ontology and episteme within the broader rubrics bio-politics. For example, the followers of the Lunar Calendar consider the beginning of a New Day after the sunset and the followers of Solar Calendar think that the New Day starts with the sunrise. For the astronomers midnight is the dividing line between the two days i.e. 0.0 Mid Night, while the Chinese Day begins at the noon. These are simple acts of fixing the beginning and end of day and night. Apparently, it is believed that these are innocuous without any significant social consequences, but in practices these have serious repercussions.

Since human beings are luminescent animals and most of the activities done by them during the day are also recognised as legitimate and nights are reserved for the nocturnal activities or for the activities that are similar to the nocturnal animals. Devils, in every belief are painted with the black colours representing night. The nights are also considered as an ideal time for carrying nefarious activities, black art and necromancy etc. Moreover, there are believes among different cultures, who consider certain times as auspicious and other as inauspicious. Most of the festivities, including offering prayers to different deities, getting married, joining new jobs, taking

<sup>28</sup>According to Claude Meillassoux inter generational transfer of surplus from the younger to elder generation takes place primarily due to facts that the elders have the authority to sanction the access of young male to the females. Thus, the material basis of surplus transfer from the younger to elder generation is to get the legitimacy and sanction from the elders and this should always proceed before the formal union is sanctioned and legitimized. For detail see Claude Meillassoux (1983): The Economic Bases of Demographic reproduction: From the Domestic Mode of Production to Wage Earning, Journal of Peasant Studies, Vol. 11, No. 1, Special Issue.



new assignments, proceeding on a pilgrimage, filing nominations for the election, laying down the foundation stone for new building (institutions), inauguration of tournament, passing-out parade of the new cadets, launching of new projects, convening inaugural day of the assembly and parliament etc. are done at the auspicious time of the day after due consultation with the religions leaders and astrologers. Most, of these inaugurations take place in the mornings or during the day. Nights are seldom considered auspicious for such occasions. Among the Hindus and believers of some other religions, it has been observed that the expecting mothers always wish to deliver on auspicious occasions, time, days and months. Delivery on periods that are considered inauspicious always assigns adverse ontology to the newborn, which they have to bear and repent throughout their life as a serious handicap<sup>29</sup>. There are also instances that some people that remain unmarried throughout their life due to the inauspicious time, day, month and year they were born. There are also examples that some parents had to abandon their newborns due to their inauspicious taming of their birth. In order to take care of such eventualities, there are provisions among the Hindus to declare some days and months inauspicious for marriage along with fostering a culture of separation/exclusion between the married couples. It was a common practice among the people of Uttarakhand (Northern India) to send the married women to their parents' place during the first month of Hindu calendar i.e. Chaitra. This was done in order to minimise the chances of births during the winter months, which are generally very sever in the hills. Moreover, there is arbitrariness in some of the prevalent social customs that puts restrictions on sexual intercourse during certain phase of their menstrual cycle or during the duration that is considered holy/unholy. These are arbitrary because, there are no biological or scientific reasons behind such social practices. On the contrary, these are devices that have been invented for exclusive control over society, its members particularly the females.

It goes without saying that the nature and form of social control have changed over time. Naked displace of brute force to exercise social control has become a thing of the past and it is linked to medieval mindset and ways of delivering justice. Modern times have devised new and subtle ways of exercising control. Discipline and enforcing regularity, dedication and commitment etc. through incentives like increments, promotion, upward mobility, awards and rewards etc. are the new ways the system tries to exercise control. The practice of imposing deadline for completing a given assignment by the teachers, parents and elders on the children and young in the family and by the superiors on the juniors in the work place etc. are also the ways social control is exercised. The worst nightmare for most of the school and college going children is to complete the examination and other academic assignments, with in the stipulated time limits. Similarly, the travellers using various modes of public transports where meeting the deadline is the basic prerequisite, understand the importance and pressure of meeting the deadline. The concept of roll-calls in prisons, army camps, factories, Schools and seminaries etc. admissions into various academic institutions, applicants to jobs etc. too know fairly well the stress that deadline can induce on the subjects and the way they are compelled to follow the arbitrarily fixed time limits without registering any form of protest.

The control of the clock is so subtle and effective that the upholders of the rights of human freedom and dignity, inheritors of relentless struggle against the subjugation of one human by another in the name of casteism, class struggle, religion, regionalism, nationalism, development, monarchy and autarchy etc. fail to notice the controlling powers of such capillary forces (Foucault, 1993: pp. 198-227) and meekly surrender to the supremacy (tyranny) of chronarchy (Zerubavel, 1980: p. 163). It completely belies the image of the "human ...the beauty of the world! The paragon of animal!" (Shakespeare, 1623: p. 1141)<sup>30</sup> or "... Heirs of Glory, Heroes of unwritten story" (Shelley, 1819) and get transformed into a "clockwork man". So, clocks were not only important in disciplining and exercising control but these were also used in grading human into ideal, average (normal), below normal, person with different ability and finally useless. Use of time for grading the individual and culture groups reached its zenith during the heydays of the Utilitarians and the Protestants. One of the cardinal points of departure from these earlier believes as well as practice was "rejection of the myth of the eternal return, time was viewed as a unidirectional, irreversible entity". It is this change of attitudes that contributed in transforming the unending and surplus time into time one of the scarce resource. Thus, wisdom and virtue desires to use it judiciously and optimally on the one hand and declare an open war against the wastage and misuse of time at the economic, cultural, moral and spiritual levels on the other. "Idleness was thus, condemned as the enemy of the soul" (Zerubavel, 1980: p. 166).

<sup>29</sup>It is believed that Hindi poet Tulsi Das was abandoned by his parents due to his birth on inauspicious astrological configurations (Abhuk-tamula Constellation). Acharya Ramchandra Sukla (2009): Hindi Sahitya ka Itihas, Naman Prakashan; pp. 27-30.

<sup>30</sup>William Shakespeare (1623): The Complete Works of William Shakespeare, Collins Clear-Type Press, London; p. 1141.

To reinforce the supremacy of clock and value of time there were certain activities like “excess of sleep, needless gluttony, idle talk, inordinate adorning of body, reading of vain books, and vain ungoverned and sinful thought as morally condemnable thieves” considered characteristics of low cultural attainment. Though, it goes without saying that there were solid material advantages underlying such manifestations, yet change in the concept of time as a free gift and eternal resource to a scarce and limited one, brought in the commodity relations into play even in relation to time. Hereafter, time did not only become a commodity, but also the pivot around which the value of all other commodities were based and revolved<sup>31</sup>. Similarly, though, the concept of “time is money” originated with Calvinism and the Protestant Ethics and it was given a practical shape in the Benedictine Monasteries, yet its popularity and wider applications are attributed to the success of Industrial Revolution. One of the many cardinal points of the Industrial Revolution was sense and urge for optimal utilisation of time, which was increasingly becoming a scarce resource. This, in turn gave rise to new expert group of time-management consultant as well as the institutionalisation of the practice of meeting the deadline.

## 9. Time Famine and Biopolitics of Its Mitigation

Since, industrialisation was the major concern of the age, so it was but natural that every other social phenomenon was affected by the changing interrelationships of industrial development. Scarcity of time was the major fallout of the new spirit of the age and “time famine” (Zerubavel, 1980: p. 166) was the most prominent concern in most of the endeavours. Various, experiments were made at different points of time to mitigate the spectre of the time famine. Initially it was thought that wastage of time could be minimised through qualitative improvements in the technologies. It was also expected that, technological improvisations would contribute not only in saving the time but also provide opportunity to use the time saved for undertaking other activities. Improvements in transport and communication, entertainment, production, consumption and distribution technologies were some of these experiments. Thus, speed was considered as an important attribute of efficiency and was duly recognised and appreciated. The unprecedented popularity of T-20 Cricket over the One-Day Cricket and in turn its popularity over the Test Match and other forms of time consuming cricket are the best examples of the speed and efficiency syndrome related to aspect of time famine and its austerity.

Recently, a lot of new and innovative methods have been put into use for saving the time or mitigating the Time Famine, in different spheres of human activities. It has almost been accepted now that combining many discrete activities and performing these at one and the same time are yet another way of minimising the scarcity of time. Driving and listening music (viewing television) and attending telephone etc. are some most common and effective ways of optimising time.

The process of saving the time by combining more than one activities within single unit of time is a continuous process which starts with the socialisation of the new born with different social units. Family is the primary as well as the most fundamental unit followed by school and other socio-cultural, politico-economic institutions. Family is different from many other social institutions primarily on account of the nature of interpersonal bonds among its’ different members. Sharing common inheritance, lineage, mutual respect, love, obligation and respects are some essential attributes for a family to function as a viable social institution. But, above all these, respect for each others’ time is also important for a family to function as a viable social unit. There is enough wisdom when someone says that “Family that dines together stays together”. Meaning thereby, concerns for the time of others is the bedrock that can sustain the tremors that institutions like family are vulnerable to experience ever moment. Therefore, it is an imperative for every member of the family to value others time as they value theirs. The process starts right in the childhood.

## 10. Child and His/Her Family or Child’s First Encounter with the Familiar Social Rhythms

The first encounter of a new born with the outside world and particularly its time schedules starts immediately after the birth when the then existing life support system i.e. the umbilical cord gives way to the external life support systems particularly the respiratory system (the lungs) and the digestive system etc. are synchronised to

<sup>31</sup>“Commodities, therefore, in which equal quantities of labor are embodied, or which can be produced in the same time, have the same value. The value of one commodity is to the value of any other, as the Labor-time necessary for the production of the one is to the necessary for the production of the other. ‘As values, all commodities are only definite masses of congealed labor time’”. K. Marx (1978): Capital: A Critique of Political Economy Vol.-I, Progress Publishers Moscow; p. 47.

the sociological rhythms. The first action on the part of the medical persons attending the child immediately after the delivery is to hold the child upside down without wasting any time in order to protect the respiratory system from the flow of unwanted fluids in the respiratory system and if need be provide external stimuli to activate these systems. This is the beginning of an endless journey that every child has to undertake by synchronising the biological rhythms to sociological rhythms. The so-called development of a child's external and internal sense organs is nothing but the adaptation and acclimatisation to the frequencies and rhythms of the sociological clock. In the process of nurturing the child consciously or unconsciously gets accustomed to the sociological clock, social rhythms and schedules. It is expected that a child, who is also the "father of man" (Wordsworth, 1802)<sup>32</sup> does not only imitate but also internalise the sociological clock without showing any form of resentments. Smooth acceptance and internalisation of the sociological clock by the child is considered a normal behaviour. It is considered essential for primary socialisation and a successful child gets duly acknowledged and rewarded with accolades like an ideal child, pride of the family and obedient child etc. However, there are instances when the process is not as smooth as the social norms would expect it to be. In such cases the child does not only display deviations but also exhibits defiance. At time it takes a violent form and becomes the basis of major conflicts between the elders and the children in the family. Most often, these conflicts surface at wake-up times, mealtimes, playing-times, bedtimes and parting-times etc.

At any given point of time every child has the option to look at the time and its epitome the clock at least in three different ways:

One way is to let the action take place and record its beginning and the end points and consider the duration as the time for that action. Game of tennis, chess, volley ball, kho-kho, and time taken to treat a patient etc. could be considered some of the examples of these actions. This is perhaps the best and actor friendly way to familiarise the child with the time. It is simple because, here the actor enjoys more freedom and is at liberty to perform the action at its optimum level without much of the external pressure.

The other way is to fix the time for the proposed event in advance and let the event to be completed in the stipulated time limit. Football, cricket, the examination time etc. could be some examples of this method. Here the clocks become the epitome of the time and the player always tries to catch-up with the time. It is less actor friendly and gives more power to the controlling authority.

There is a third way of looking up the clock and time as far a child is concern. In this approach a series of similar events are allowed to take place and finally the average time used in these is calculated and that is considered as the optimum time for that particular event. This is perhaps the most appropriate way to familiarise the child to the clock and time. Duration of harvesting and performing a cultural activity etc. are some of the best example of this approach. Since, this approach is more organic and humanising with minimum external control, it is less favourite among the stakeholders of power that may be.

The child tends to recognise and familiarise (him/her)self with the people that they find always present in the close proximity, which also constitutes the first social unit i.e. the family. Within the family, the most frequent visitor is the mother, followed by the other members of the family to whom, the child remains attached and whose rhythm it accepts/imitates without much reservations and tries to follow their timetables so that both are able to accept each other as their own inseparable parts. Apart from the close family members the child occasionally encounters the schedules and timetables of other people. They constitute the child's next social circle of friends and relatives of the family, with whom the child tries to adjust rhythm in the process of familiarisation. As opposed to this, the unknowns and outsiders are those that the child had never experienced and he/she is unfamiliar to their schedules and timetables. Thus, the initial socialisation and familiarity is a process of adaption by the child to different rhythms of sociological clocks as articulated by the rhythms of social life practiced by different members of the society in which the child gets an opportunity to participate. The child tries to adjust his/her biological rhythms to the social rhythms. It may be as simple as the need to satisfy hunger and sleep etc. Gradually, the child also finds his/her different systems such as the respiratory system, the circulatory system, digestive system, the nervous system, excretory system and finally the reproductive system etc. synchronised with the sociological clocks. The adaptation process takes place so smoothly and naturally that the child tends to associate the recurrence of something in and around him/her with the change in the intensity of light, direction and length of the shadows, behaviour of the plants and animal etc. This is perhaps the instinctive desire of every child to give a concrete or formal shape to these associations.

<sup>32</sup>William Wordsworth (1802) "My hearts Leaps When I behold" "The Child is Father of the Man".

### 10.1. Child's Encounter with the Formal Rhythms

It is generally accepted that in the stage of nurturing, a child consciously or unconsciously imitates and adapts to the sociological rhythms of the other members of the social group. Most of these adaptations take place without any external pressure and force. The child takes these as a challenge and works for attaining perfection/optimum level of synchronisation between his/her own rhythms with that of other members. It happens purely on informal bases as part and parcel of socialisation and living. Each child gets used to the hourly, daily (day and night), weekly, monthly, seasonal and yearly schedules of his/her respective social group. The child adapts all the waking, sleeping, playing, eating, drinking, bathing, cleaning, and working times according to the social clock and schedules followed by other members of the society particularly the family. The time between the dawn and sunrise is considered ideal to wake up time. The wisdom of the past gets sermonised to the child with the proverbial saying "early birds catch the worm" or "early to bed and early to rise makes one healthy, wealthy and wise". Meaning thereby, the key to material as well as non-material prosperity lies in one's ability to adapt the social schedules of the family. It is followed by bathing and cleaning times along with the time to change the night clothes and putting on the day clothes, which is followed by the breakfast time and time to formal work including going to school. While in school the child has to follow the timetable for different things that are to be taught for the day. After the school hours there is time to come home and lunch time, which is followed by time to rest until there is time to change clothes and time to play. The end of the playtime is followed by cleaning and bathing times, then comes time to complete the homework, dinner times and finally the sleeping times. This is the normal schedule that a normal middle class child follows with minor deviations. The only exception is in case of the child falling sick. In case of sickness the child spends more time in the bed or indoors at the expense of even the playing time, working and bathing times. The other exceptions are in case of the children that have to support the elder members in running the affairs of the family or those who are deprived from attending the schools. In a nutshell, a happy and healthy childhood is synonymous to the successful and eventless acceptance of the ways of the working household schedules of the parents and the routines of school life (Briod, 1978).

### 10.2. Formal Education or Adjustment to Formal Social Rhythms of Life

Schools are generally considered as institutions that transform raw individuals into skilled, confident and responsible members of the society. Schools and school education in modern life are considered the only legitimate ways of graduation of children to maturity<sup>33</sup>. Formal education and schoolings have become the most indispensable and legitimate ways guiding the children in their graduation into maturity. Their roles have become so important that they have pushed the age-old time-tested institution like the family into margins<sup>34</sup>. School education has increasingly become the necessary and rational way of graduation into maturity in life particularly for the children. Apparently, the mandate of every school is to impart knowledge and inculcate socially desired values in the children, but in reality, the situation is different. In schools, a child gets socialised to numerous clock time rituals, routines and schedules. Here, the child along with other members of the schools has to strictly follow the time schedules and timetables as epitomised by the clocks, bells or other similar time-keeping devices. The clocks act like the all-powerful and ever-watchful eyes of the Big Brother (George Orwell, 1949). The apparent motives of these schedules and timetables at the school are to ensure all-round development of the child without boring the child with monotony, but, the hidden motives are different. Here these time tables and schedules are enforced to habituate the child to an unending saga of monotony in the name of heterotony and habituate him/her to unwitting marriage to a synchronous public life. Once again, the school hours are divided into different periods allotted to different subjects and activities namely: time for the study of language, literature, humanity, social studies, mathematics, life sciences, natural sciences, environmental studies, games, sports and other co-curricular activities, art and computer studies etc. yet these so-called different activities aimed at achieving all-round development of the child, are quintessentially ways of administering and habituating the child to receive various narratives without having too many reservations. Here, a child is exposed to various issues and themes related to life without changing the ambience including the team of classmates. It creates serious doubts in the mind of a child to receive different things within a given context. Thus, the only thing a child is able to get successfully is that living a life and getting knowledge about how to live a life are two different

<sup>33</sup>Prathamam naarjitam vidya, Dwitiya naarjitam dhanam, Tritiya naarjitam punyam, Chaturtham kim karishyathi".

<sup>34</sup>Ko-ati bhar samarthnam, kim dooram vyava sainam, Ka videsheshu sa vidya, Ko perpriya Vadinam, or Buddhiryasya balam tasya, Nirbuddhestu kuto balam. Pasya singhao madaonmat, shashaken nipatita.

things and it is not important to know the linkages between the two. The child also knows that there are ways to conceptualise the change without things actually undergoing (experiencing) the process of change.

School is the place where the child is prepared, processed and constructed into a socially desired individual perfectly synchronised with the quantified modular time, a time that is precise and continuous, replete with deadlines, appointment, punctual behaviours, carefully timed routines, and calendars arrangement for the future. Here, the child experiences the first rupture between the voluntary desire to imitate and incorporate the informal sociological time and the formal clocked social order (Briod, 1978: p. 9). The child experiences the pressure to keep pace with the clock times. His/her performance in the schools is also judged in terms of the distance that separates him/her with the other fellow students. In the field of games, their positions are determined not because they failed to cover a particular distance but the difference that lies in the time they have taken to complete the assignment in comparison to other classmates. Similarly, in the examination hall the difference between the so-called meritorious student and the rest also lies in their abilities to complete the given task with in a stipulated time. Thus, time becomes the most standardising tool to judge the diverse abilities the students possess.

Moreover, the experience at school exposes a child to different manifestations of time. The first bell also called, the call bell is indicative that it is time to give up the non-formal concept of time and switch over to the formal one. Say good bye to domestic time and accept the school time. The second bell is indicative of assembly time and the third bell means it is time for prayer and taking oath. The completion of the assembly marks the beginning of the first period; hereafter the clock time brings in some new dimensions. It is expected from every child to change his/her learning and thought process along with the change from one period to another. It is observed that for most of the children the teaching hours are some sort of synthesis of time-space-interaction and narratives, occasionally interrupted by (de)contextualised unilateral sermonising by the teacher, on the themes and issues that are not even distantly related to the ongoing principal narratives. The students find it hard to understand and adapt to the changes that come along with the change from one teaching hour to another. Take for example; teaching of maths is followed by language teaching, which in turn is followed by science, social studies, and computers etc. It is interesting to notice that the students studding in the traditional educational institutions experience less of these jumps and ruptures per day as compared to the modern educational institutions. Some of the justifications given to these ruptures are to reduce the burden of teaching by breaking the monotony on the one hand and widening the range of the knowledge and awareness among the students by exposing them to new and more branches of knowledge on the other.

It is, in these formative days at school that a child experiences the differences in the phases of time i.e. the past, the present and the future. Meaning thereby, “the present of the past thing is the memory, the present of the present things is direct perception and the present of the future things is expectation” (Van Rossum, 1996). Consequently, the child finds him/her self struggling against the time. He/she is fighting against a power that is ubiquitous. The child is in the mid of a chaos, where he/she is trying to find a way out or discover an order, where exists none.

## 11. Clocks for Spatial Ordering

Clocks are anything but only clocks. They are the key machines of the modern industrial age. There are differences of opinions among scholars about the causes of transition from one social formation to another say from pre-capitalist to capitalist social formations. Scholars such as Henri Pirenne argued that long distance overseas trade was the main reason for the decline of feudalism and rise of capitalism, particularly in Europe (Pirenne, 1978). Maurice Dobb, disagreed to such a theoretical postulations and criticised Pirenne for suggesting reasons like externality of trade to European feudalism as the principal reason for its decline. He argued that, neither the trade nor even the long distance overseas trades were unknown and external to feudalism so, these cannot be the causes of it decline (Dobb, 1978). On the contrary, he believed that the processes of internal differentiations within the feudal social formation mostly in the rural agricultural sector and trader, apprentice, journeymen and master craftsmen in the urban areas etc. were some of the prime causes for the decline of feudalism and rise of capitalism. There were others like Postan M. M. (1978), who believed that sudden change in the demographic structure in Europe was largely responsible for the transition from pre-capitalism social formation to the capitalism. Still there were some others like Robert Brenner who believed in the crises of Agrarian structure as the prime cause for the transition (Brenner, 1976). Thus, there are as many views as the number of deliberations made by the scholars. Moreover, feudalism was not a universal or World System and the differences in the



viewpoints of different scholars were largely due to the differences in the contextual as well as ecological factors that played important role in creating variations in the process of transition. The specificity of feudalism lied in its unique and highly localised characteristic features. But there is near unanimity among the scholars that capitalism was the First World System. It was for the first time that under capitalism the entire world was brought within the ambit of the interplay of single World Market System. To facilitate the graduation from the local to national to global, capitalism had relied on some new technological innovations that can be used for global referencing and the invention of clocks and their spatial referencing are of prime significance in this respect. But, the graduation from the local to global needed to be sustained through appropriate social-political and institutional orders as much as it required economic and technological orders (Headrick, 1981). Scholars have written elaborately on most of these aspects but there exists some kind of conspicuous silence about the global temporal order.

## 12. Clocks for Temporal Ordering: Clocks for Social Ordering or So-Called Regularity, Punctuality and Discipline

It is believed that in the process of the so-called socialisation or in other words adoption to the sociological rhythm was so complete among the Romans that they did not eat when they felt hungry but at a socially fixed time. The process of internalisation of the social clock and its gradual domination over the biological clock is not always through the display of violent or brutal power. On the contrary, this so called socialisation process is carried through three interlinked yet vital processes, namely: the rituals, theatrics and routines, which in turn also constitute the three important dimensions of the hidden or capillary powers practiced in every society.

It was particularly true in case of the Victorians who firmly believed that colonisation of Africa Continent in general and South Africa in particular “was not only a matter of ‘taking hold of the land’. It required seizing the hearts and minds of its wild inhabitants, rousing them from a state of nature that rendered them indistinguishable from their crude surroundings” (Comaroff, 1998: p. 6). There were many options available getting into the heart and mind of the people but, inculcating time consciousness, the culture of time thrift and internalisation of the Puritan Ethic and Spirit of Protestantism particularly: “to waste time is thus the first, and in principle, the worst of all sins” (Young Michael, 1988:201), was considered the most effective. Hereafter, these were not the soldiers equipped with gun powder, steam gunboat and quinine but one “armed with sextants and moral certainties, with trade goods and technology, conjured up new maps, new system of human relationships, new concepts of personhood, time and labour—new order of domination” (Comaroff & John, 1998: p. 8) who laid the foundation of colonialism. The success of these methods could be judged the way “the ideal of time thrift had become culturally embedded” in life of every Briton by nineteenth century England on the one hand and attitude people developed against “Traditional rhythms” among the masses on the other. Hereafter, people began to look these rhythms “indolent and even primitive” (Gay, 2003: p. 110). Wasting time was considered “downright contemptuous of people” (Galison, 2000: p. 367). Punctuality and time consciousness became the new indicators of superior class status and characteristic features of Victorian High Class Etiquettes, which were considered diametrical opposite of the Lower Class Temporal Inexactitude. Moreover, the clock was not only an obsession with the Victorian High Classes but it was also an indicator of their progressive etiquettes and independence (Hope-Jones & Bowell, 1895: p. 114). Thus, a clock became the epitome of the superiority of the high classes provided it recorded and served right time. For the Puritans, a lying time keeper was as abominable as a clock that did not record the correct time and both were never tolerated.

Clocks in the Victorian period were more than simple time keepers. These got completely entrenched into the body politics of the system as well as the individuals. The clocks were so much fetishized that “breaches of timekeeping were treated as much a moral lapse as a breach of good taste” (Thrift, 1996: p. 553). The clock times defined the social timetable of individuals as well as their classes. Urban dwellers and industrial workers were superior to their counterparts in rural and agricultural sectors mainly because they were punctual, parsimonious in terms of spending times and knew the value of time in money terms. They were more disciplined and worthy of undertaking time-work instead of piece-work, which is applicable to people suffering from lethargy and sluggishness. A disciplined and punctual worker was one who has synchronised himself with the clock and together they got integrated with the machine. To break the monotony of working with the machine, provisions were made to provide time to recess to the workers, but it was not meant to provide them leisure. On the contrary, the primary objective of leisure time was to counter lethargy and fatigue so that the workers could work at

their optimum levels. Otherwise, leisure was viewed as a dangerous distraction among the workers. In continuation of the spirit of the age, the following methods were introduced to institutionalise the temporal ordering.

### 12.1. The Clocks Rituals

Rituals play an important role in imparting and assigning desired social roles to every individual member of a culture group. There are various kinds of rituals that are followed by different groups, depending upon their past experiences and the context they are placed in. However, in most of the communities, the first ritual of the day starts with remembering ones god<sup>35</sup> including paying reverence to various elements of the nature, such as the mother earth (particularly among the Hindus, Buddhist, Jains, and all others who worship the nature) before stepping on it, salutation of the elder member of the family, offering prayers to the rising sun and other revered things in and around etc. are part of the clock rituals. It is important that all these rituals need to be performed within specified time frame preferable before the sunrise or before taking breakfast.

Among some communities the rituals related to the birth of a child precedes even the actual birth. Rituals like “Goad Bharai” (blessings the lap) are most common among some communities in the North-India. After the birth of a child, strict calendar is followed particularly among the Hindus and some other communities in South Asia particularly India and Nepal. Generally on the sixth day after birth is reserved for Chhat or allowing other to see the New Born. Eleventh day after the birth is reserved for the naming ceremony. From Fifth to Eleventh month (only odd months) the food ceremony takes place. Similarly, in the odd years the hair cutting ceremony is performed. Apart from these, the ritual of sacred thread ceremony is celebrated with great pomp and show among the high castes. It is believed that after performing these ceremonies successfully, the child is entitled to get access to some higher rituals performed by elder members of the family. A child is not the mute and meek observer and participant in all these. On the contrary, he/she tries to learn and socialise through the process of internalising the social clock. It is interesting to know that the gender and position in the caste hierarchy are closely associated with these rituals. Meaning thereby, male members among the high castes observe more rituals than the female members from the same caste and members of high castes perform more rituals than the members from the lower castes. The concept of “Dwijja” or “double birth” used for the members of high castes among the Hindus is derived from the specific rituals that the members of these castes have to perform in order to attain respectable position in the society.

### 12.2. The Clock Theatrics

The clock rituals are not like any other normal activity. These have specific place on social space. In order to make these specific, there is a need to perform these in most theatrical ways so that they appear extraordinary and legitimate. Special postures, codes of conduct, cloths or dresses, colours, food habits, specific places to perform these, in the company of selected members of the group, and above all special decorations, particular types of sounds and gestures etc. are produced to mark the occasion special. In most of the cases, the range of theatrics encompasses from mundane to supernatural and oracles. At times the protagonists pretend to transit between the mundane and the trance and communicate in the sound alien to other members of the community. Moreover, the ceremonies are performed with the help of playing musical instruments, invocation of the spirit, keeping fast and night vigil and finally sacrifice of animals etc. It is also believed that the scale of ceremonies and the grandeur associated with these are specific to the time of its recurrence. For example, the ceremonies that take place once in life time such as the sacred thread ceremony, the food ceremony and marriage etc. are done with greater theatrics, while ceremonies that happen more frequently have less of theatrics involved with these. Similarly, there are differences between the theatrics performed by a commoner and a person of high birth. The annual festivals have relatively greater theatrics than the monthly or weekly. Similarly the ceremonies that take place once in many years like the “Ardh Kumbha” and the “Poorna Kumbha”<sup>36</sup> that take place once in Six years and Twelve years respectively have more theatrics than the ordinary “Magha Shnaana”. The child becomes aware of the special types of eatables and gifts he/she receives from the elders before, during and after the

<sup>35</sup>God among the Hindus and many other communities in South Asia is addressed as “BHAGAWN”. Where Bha stands for Bhoomi (land), A stands for Agni (fire), Ga stands for Gagan (sky), Wa stands for Wayu (air) and Na stands for Neer (water). Meaning thereby BHAGWAN stands for all the five elements of Nature.

theatrics.

These theatrics play important roles in dis/re orienting the young mind from raising fundamental questions about the rationality behind all these. The need to introduce these modes of expression, communication, indoctrination etc. arises primarily due to the need to break the monotony and make every event inclusive. It also breaks the monotony by appealing to a few selective sensory organs like the sight, sound and smell. It also helps in invoking the alienated self, which is constantly in need of regaining the lost self. Therefore, the invocation of supernatural, extraterrestrial and invisible supreme always remains an inseparable part of the theatrics. Its strength lies in the way it employs two pronged strategies: On the one hand, it heavily banks on the relevance of the supernatural and extraordinary and the helplessness of the mortal humans, but it is also supplemented by raising the ordinary, mundane and exclusively private to a level of commonality and social acceptability on the other. To accomplish this difficult task, selection of time, position of the sun, stars and moon, creation of unique ambience with the help of light, colours, sound, gestures, costumes and ultimately unfamiliar body language and gestures etc. play important role.

Theatrics play such an important role in the popularisation of the clocks that there are examples of some communities that have institutionalised the task assigned to different members of the community to specialise in excelling the art and science of clock theatrics. In most of the village of India there are some people whose primary task was to perform special rituals and theatrics on the days of significance such as 1<sup>st</sup> day of the month, on full and no moons day, on the occasions of festivals, eclipses and similar other ceremonies. Ringing of the Church Bells, blowing horns, conch shells, ringing temple bells and recitation of Quran verses from the Mosque etc. are all parts of the grand theatrics of the clock. Occasionally, it is also observed that people in general also join the theatrics in a big way, i.e. keeping fast on “Karva Chhauth” and viewing the moon through, sieve before breaking the fast, putting on new cloths and jewelleryes, decorating the house and surrounding, preparing special type of food, and sweets playing special music etc. all add to the theatrics of clocks. Among the Muslims this particular theatrics is performed on a large scale during the month of “Ramadaan”. The tradition of offering ‘Namaz’ five times daily among the Muslims is also one type of theatrics linked to the clock<sup>37</sup>.

### 12.3. The Clock Routines

This is perhaps the most significant aspects of the clocks. Use of clocks today has gone far beyond than what it was supposed to do in the past. Today, these are important machines in exercising structural, capillary and subterranean control and discipline in the society. Its secular and universal use as the normalising device was perhaps the dimension that prompted Louis Mumford claim that the clock “is the key-machine of the modern industrial age” (Mumford, 1934: p. 34).

The post industrial ages has incorporated a lot of new things and left many behind from the industrial age, but clock is one of those few things that have not only continued from the past but also become more important than ever before. Time and its epitome the clocks have made a paradigmatic shift during this transition. Industrial societies were characterised by time as a standardised entity having macro dimensions (standard times). In the post industrial society, the concept of standard time has lost its relevance and it has been replaced by private time or privatisation of time. Fast and processed foods along with refrigeration and microwave technologies have delinked food from the break-fast, lunch, dinner and supper timings. Similarly, privately owned means of transport have delinked travel from the transport time tables and travel schedules. ATM facilities have made the closing and opening times as well as holidays irrelevant in bank transactions. Cell and mobile phones have removed the boundary that was separating the private time and public times. Internet facilities have made access to libraries independent of the time schedules. Satellite communications have contributed in making access to the news and entertainment a function of one’s economic status and political connectivity. Rich and powerful people have di-

<sup>36</sup>Kumbha Mela is a month long festival observed by the Hindus all over the world in the month of Magha. On the basis of recurrence it can be divided into three i.e. the Ardhha Kumbha after five years, Poorna Kumbha after the interval of 11 years and the Maha Kumbha after twelve Poorna Kumbha or 143 years. It is believed by the Hindus that the places where the Kumbha (pitcher) of Nectar was placed by Goddess for the purpose of distribution among the other Gods so that after taking they attain immortality are sacred and they want to attain immortality after washing their sins and taking water from the rivers. There are four places where the Mass Pilgrimage of the Hindus take place These are Allahabad, Ujjain, Nashik and Haridwar. Out of these Maha Kumbha is celebrated only at Allahabad.

<sup>37</sup>Muslims offer prayer (Namaz) five times daily. The timings and the text to read are: Morning Prayer (Salat-ul-Fajir) consists of four rakats Early afternoon prayer (salat-ul-Zuhr) consists of ten rakats; Late afternoon prayer (salat-ul-asr) consists of eight rakats, evening prayer (salat-ul-maghrib) consists of five rakats and night prayer (salat-ul-isha) consists of thirteen rakats. (Here rakats stands for prescribed body movements and words uttered by Muslims during the prayer).

rect access to these much before than anyone else. Ultimately, today the new social divisions have been created on the basis of technological have and haven't. These are only a few of the many changes that have given primacy to privatisation of time at the cost of public time.

Apparently, the humans in the post industrial society are feeling more empowered than ever before particularly the way privatisation of the time have taken place. Modern humans feel confident in exercising their free will in relation to time and clock. But, a little more critical insight into these claims of so-called empowerment reveals that it is the biological or natural clock that has been once again suppressed under the tyranny of the sociological clock. Take for example the case of privatisation of time due to the mobile phones. It is often believed that mobile phones have increased the access and connectivity over time and space. But, there are certain serious flaws in such apparently simple arguments: first of all; it has increase the connectivity with the world outside but increased immobility of the individual in need of getting connected. Sedentarization leading to change in life style is one of the main casualties. If current medical researchers are some indications towards certain deep seated health related maladies, than it can be safely accepted that most of the health related problems particularly: hyper tension, blood pressure, diabetes, obesity, and to a great extent even cancers and AIDS etc. are due to changes in the life style. There is no doubt that the cell phone is an important technological input that is largely responsible for sustaining the change in the life style. Secondly, freedom to access and get connected is a two way process. The needs and timings of the caller need not necessarily be same as that of the respondent; otherwise, it is a serious violation of others right to privacy. So, the so-called private time is possible only by invading others time. Thirdly, the advantages of the so-called direct and quick accessibility along with the need to be in regular touch with the world outside are less on account free will and more due to fear of being left behind in the maddening rat race. These are symptoms of psychological disorder where ones despises and prefers to remain away from the world around yet wants to remain in regular touch with the same world. Finally, to become "news", it is important that there are limited sources and ways to access it within a given time frame. 24 × 7 availability of news is more in the form of sensation than news. This is perhaps an important reason behind sensationalization of news through distortion of information, false propaganda and finally rendering unconditional apologies have become a norm in most of the news channels. News, which used to be the voice of the Nation, has been reduced to create sensation and improving Target Rating Points (TRP).

### 13. Conclusion

Clocks not the steam engines are the key technology under capitalism, said Lewis Mumford. Capitalism as a system of economic, political a whole lot of other social relations is inconceivable without colonies. It is a universally accepted historical fact that "human history is the history of colonisation" (Butola, 2012: p. 1). Under capitalism the processes of colonisation have become the most universal phenomenon. Life and its processes have become the central theme of colonisation in modern times.

Various technologies are in use for achieving this unique feat. Clocks, watches and time-pieces etc., apparently the most innocuous tools are being used by the system to construct and colonise life and its processes. In the name of development, modernisation and progress the natural clocks in every organism have been suppressed by social or sociological clock. Today every organism, life forms and their processes are struggling to survive under the tyranny of sociological clock. The process has become so pervasive that the much talked "Bioeconomy to 2030: Designing a Policy Agenda" is going to be the name of the game in future (OECD, 2010).

Social clock or sociological clock is a myth. In every society and culture, the sociological clocks are nothing but the clocks decided by those same forces that have control over the material wealth of the society. Under patriarchy the social clocks and rhythms are nothing but the schedules and rhythms that favour the male population. Similarly under capitalism it is the schedules of the capitalists that are circulated as legitimate social rhythms.

In the age of biopolitics the struggle for human dignity and freedom has entered into new arena. Capitalism has entered into its last colony i.e. life and its processes. Clocks, watches and time-pieces are the manifestations of the sociological time which in turn are being used to manipulated and maneuver the biological clock on every organism. The process of colonization of life starts right from the time of the birth which, graduates at every passing moment. Finally, if "knowledge is power" then the Knowledge should not be restricted to the art and science of knowing. On the contrary it should be/is for cutting and construction. Cutting is the very foundation of colonization of life in every forms.

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