

Market, Regulation and Sustainability

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Abstract

[The argument of this study is philosophically rooted in the paradoxical Grand Design. The destiny of humankind, at all levels of existence and organization, is to optimally resolve omnipotent paradoxes in the universe of tangible as well as intangible phenomena. However, the instinctive behavior of the majority of humankind inherently favors shortsighted suboptimal resolutions. This is specifically so in situations where collective wellbeing and sustainability warrant proactive behavior of free and independent individuals and groups. The study traces back the genealogy of contemporary technology and sociology, the two broad realms of human society, and identifies the market as the central force in technological development and sociological evolution since the Industrial Revolution. Market hegemony, as one of the greatest factors, is apprehended to have overwhelmed the collective wisdom and undermined the individual and group ability to take action in the face of multi-prong threat to sustainable development, which is a great peril to civilization and society. Moreover, there is also that *wizardly wheel* warranting to be incessantly greased with fast depleting natural resources, many of which, including atmosphere, cannot be replenished. The study maintains that the species of the *Homo Sapiens Sapiens* must appreciate the difference between forward looking progressive moves and the *rat race*. It is recommended that unbridled market power should be saddled with pragmatic regulations, specifically aiming at curbing the magical power of electronic media in promoting, glamorizing and even sanctifying consumerism which is heedless as well as headless. – *Author.*]

Introduction

The core issue as well as challenge of sustainable development is the need for resolution of a paradox in which free market economy itself warrants regulation. This situation inevitably is part of the paradoxical *Grand Design* where variable is the only constant. Most of the knowledge of nature uncovered by the humankind is confined to the Earth, the Home Planet, a small and yet the most significant particle of the infinite universe. All species begin their life under a strategy predefined by the nature. However, all but one of the species, the *Homo S. Sapiens*, also known as humankind, has been ordained by the Providence to redefine the predefined strategy of nature.

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Owing to the capacity to think, along with the ability to take action, human beings assume for themselves the title of *higher organism*. Their superiority, divinely ordained in relation to other species of biodiversity, has been subjected by the Providence to a tradeoff demanding workable resolution at all levels of the organization of human society. This universal as well as inevitable tradeoff is between a weakness and a strength, both unique to the humankind. The weakness is their instinctive love of material, broadly categorized as wealth, power and progeny. The strength, on the other hand, is their love of wisdom. However, unlike the love of material which is biological, the love of wisdom is a gift of Providence which is largely proportionate to individual and collective struggle to ensure personal growth and societal cohesion respectively.

The central thesis of this paper is to analyze the collective efforts of humankind to optimally resolve the tradeoff between their two loves, material and wisdom. It is this struggle which underscores the issues and challenges of sustainable development. The argument is structured around four parts. Part I reflects on forces governing the evolutionary process of human society, followed by Part II, III and IV, highlighting sustainability threats to physical environment, economy and society respectively.

Time Walk

There are more humans than all of the rabbits on Earth. There are more of us than all the wildebeests, than all the rats, than all the mice. We are the most numerous mammal on the planet. But because we're not like rabbits or rats or mice, we have technology, we have a consumptive appetite, we have a global economy.

David Suzuki¹

Access to capital is the fundamental condition to the existence of all life on the Home Planet. All but one of the species of biodiversity fulfill their need for capital in accordance with the predefined strategy of nature. On the other hand, the most vital force defining evolutionary process of human society, at all levels of organization, has universally been the drive for capital accumulation. The original source of all capital owned by individuals and societies in all spaces and all times has been the natural capital, which has tangible as well as intangible existence defined as physical capital and social capital respectively. The nature provides only one type of social capital defined as love of progeny to ensure continuity of the species. However, the conflict of interest over the

¹ David Takayoshi Suzuki, a Canadian academic, science broadcaster and environmental activist.

distribution of human made physical capital increasingly created an ever multiplying and diverse stock of social capital.

The embodiments of human made capital, physical and social, are the two mutually reinforcing broad realms of society, technology and sociology respectively. Each realm has been passing through an evolutionary process since times immemorial. For analyzing the history of capital accumulation, the evolution of human society is divided into two extreme periods in human history, popularly defined as the old Paleolithic and the Neolithic era, and second, the contemporary age of Industrial Revolution and the age of Information and Communication Technologies (ICT).

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Paleolithic era, also known as the Old Stone Age, is the earliest and the longest period on the evolutionary scale of human society.² The technologies of these early societies of hunters and gatherers offered next to nothing opportunities for capital accumulation. Therefore, the sociology of this era also did not evolve beyond the nomadic type *Band* settlements with egalitarian leadership and informal conflict resolution arrangements. The sociology evolved in a leapfrog manner with the first technological breakthrough brought about by the invention of agriculture over 10,000 years back in 8,000 B.C.

The Neolithic era, also known as the New Stone Age, is characterized with successively enormous opportunities for capital accumulation, many times at the cost of compromising the natural capital by eroding soil fertility and exhausting surface water resources. Various subsequent technological progresses were followed by advances in social and political organization which, in turn, led to the *best of the times and worst of the times*;³ namely, the Industrial Revolution, underscoring from 18th century onwards to the subsequent evolution of human society into the age of ICT Revolution.⁴

² For elaborate and comprehensive information on the socioeconomic and cultural dynamics of Paleolithic era see, R J Wenke, *Patterns in Prehistory: Humankind's First Three Million Years* (Oxford: Oxford University Press, 1999).

³ Quote from the opening page of Charles Dickens famous novel *A Tale of Two Cities*.

⁴ The beginning of the present era, the age of ICT Revolution, is identified with commercialization of first generation of tabletop computers in 1981, under the brand name International Business Machines (IBM).

Policy Perspectives

The hallmark of Industrial Revolution is the development of economic, political and social institutions with a pace unprecedented in the history of human society. Enormous increase in the size, availability and accessibility of consumer goods, representing countless diverse forms of human made physical capital, inspired new ideologies paving the way for new political and social movements. Most of the associated developments helped embolden the disadvantaged majority of humankind to disarm the hierarchies historically responsible for inventing and widely disseminating those varieties of social capital which empowered the few to have legitimate claim on illegitimately huge share of society's stock of physical capital.⁵

Second half of the 2nd millennium witnessed rapid pace of growth in world economy compared to its first five centuries. Table in the following compares ten historical points in time, over 1000 years, enabling the humankind to accumulate successively higher stocks of capital, represented as the total gross domestic product (GDP) of the world. However gross approximations, the available evidence reveals that the world economy only managed to double.

⁵ French Revolution and the Unionist and Socialist movements, culminating in Russian Revolution, are the most relevant cases in point.

**World Economy During 2nd Millennium
(1000-2000 AD)[▪]**

Sr. No.	Year	Population (000) World total	(1990 International Geary-Khamis dollars) ⁶	
			GDP (World total)	GDP Per Capita (World average)
1	1000	267, 330	121,208	453
2	1500	438, 428 (64%)	248,345 (105%)	566 (25%)
3	1600	556,148 (27%)	331,438 (33%)	596 (5%)
4	1700	603,490 (9%)	371,344 (12%)	615 (3%)
5	1820	1,041,720 (73%)	694,493 (87%)	667 (8%)
6	1870	1,271,916 (22%)	1,110,952 (60%)	873 (30%)
7	1900	1,563,464 (22%)	1,973,682 (77%)	1,262 (46%)
8	1950	2,525,501 (61%)	5,336,686 (170%)	2,113 (67%)
9	1975	4,064,231 (60%)	16,643,806 (212%)	4,095 (94%)
10	2000	6,061,593 (49%)	36,703,863 (120%)	6,055 (48%)

Source: The Maddison-Project, <http://www.ggd.net/maddison/maddison-project/home.htm>, 2013 version, accessed on June 27, 2015, at 19:00 hrs.⁷

▪ Figures in parentheses show the percentage increase over the previous point in time.

The per capita income on the other hand increased by a much lesser rate, 25%, and that in a world where over 90% of the population lived in dire poverty. The next two points in time provide the corresponding comparisons over a hundred years period each. The fifth point in time, 1820, boasts of remarkable increase in GDP over a period of 120 years which, however, does not correspondingly reflect in the GDP per capita owing to nearly commensurate increase in the world population. The offsetting effect of increase in world population

⁶ The International dollar, first proposed by Roy C. Geary and further developed by Salem Hanna Khamis in 1958 and 1970s respectively, is a currency unit to compare the value of different currencies. International dollar comparisons between countries will generally differ from comparisons based solely on currency exchange rates.

⁷ The Maddison Project was initiated in March 2010 by a group of close associates of Angus Maddison, the famous British economist, to continue Maddison's work on quantitative macroeconomic history.

notwithstanding, the increase registered in GDP per capita over this period reverses the previously declining trend by visible margins. The change observed over the next 50 years, from 1820 to 1870, shows unprecedented increases in both world GDP and GDP per capita, followed by even more impressive performance 30 and 50 years down the line in 1900 and 1950 respectively. The largest increases are observed for the 25-year period encompassing two golden decades of growth, 1950-1975. The world economy registered over this period record increases in both GDP and GDP per capita. Despite the historic down wave in 1970s, overall upward trend, amply verified by the figures listed in Table 1, sustained till the end of 2nd millennium.

Finally, according to the Worldwatch Institute, humankind has used more goods and services since 1950 than in all the rest of its history.⁸ However impressive a claim, it fails to extend the sense of gratification when weighed against the perils discussed in the following parts.

Impact on Environment: A Profaned Planet

Nature provides a free lunch, but only if we control our appetites.

William Ruckelshaus⁹

The relentless production of the countless forms of human made physical capital continues to threateningly deplete natural capital stocks of the Earth.

To begin with, no workable systems are yet in sight to cope with the depletion of ozone layer and global warming, the atmospheric threats to life on Earth. Insofar as consequences of the problems occurred in the atmosphere cannot be readily reversed or even mitigated because of the chemicals already emitted into the atmosphere, it was already too late when discovered in the 1970s that humankind's 'insatiable love of material' is threatening to deplete the ozone layer. Despite dire warnings of the scientific community, many nations did not ban the industrial use of chlorofluorocarbons. Moreover, some of the newer sources of threat to ozone layer, such as nitrogenous fertilizer, remain central to global economic activity.

⁸ "Living in a throwaway society," *Watchtower Online Library*, 2002, <http://wol.jw.org/en/wol/d/r1/lp-e/102002601>

⁹ William Doyle Ruckelshaus, first head of the Environmental Protection Agency (EPA) of the US.

Similarly, the 3rd millennium is underscored by the apprehensions of a major change in global climate caused by the splendid civilization and society of contemporary times. Ever since the Industrial Revolution, most of the production processes, both minor and major, require combustion of carbon rich fossil fuels. The increasing production of CO₂ and certain other gases is scientifically claimed to be associated with successive increases in temperature of the Earth. A warmer Earth may potentially pose a formidable challenge with catastrophic threat of greenhouse effect. The unprecedented technological development of the last century is largely a story of ever growing reliance on fossil fuels. Deforestation ought to be considered partly responsible for the looming threat of global warming as the absorption of carbon dioxide by trees decreases the amount emitted to the skies.

The high flying global civilization and society of present times scarcely allows a soft landing. The surface of the Earth is a bumpy runway with serious safety hazards and yet 13 million hectares are lost annually to deforestation. According to the Food and Agricultural Organization (FAO), deforestation is responsible for 18% of global CO₂ emissions, matching the transport sector in adding carbon to the skies.¹⁰ More importantly, deforestation is responsible for triggering the loss of key ecosystem services and biodiversity losses [Elmqvist et al. (2010)].¹¹ Worldwide, 3079 animal and 2655 plant species have been identified as endangered.¹² Contemporaneously, the history of the evolution of human society is recording the greatest extinction crisis, because many of the global production processes and consumption choices are seriously undermining the biodiversity.¹³ The estimated extinction rates are between 50 and 500 times higher than the so called *background rate*, the rate observed from fossil records.¹⁴ Of the world's 250,000 known species of plants, 170,000 are found in rainforests. At the current rate of

¹⁰ "Global Forest Resource Assessment," *Food and Agricultural Organization*, 2010.

¹¹ Direct and indirect contribution of nature to the well-being of humankind is termed as ecosystem services. The concept was popularized at the turn of the 21st century by Millennium Ecosystem Assessment (MEA) project. The direct contribution of nature includes *provisioning*, such as the production of food and water; *regulating*, such as the control of climate and disease; and *supporting*, such as nutrient cycles and crop pollination. The indirect contribution on the other hand is the *cultural* spillover effect of the ecosystem, such as recreational, esthetic and spiritual benefits, see MEA, *Ecosystems and Human Well-Being: Biodiversity Synthesis* (Washington: World Resources Institute / Island Press, 2005).

¹² "Red List of Threatened Species," *The International Union for Conservation of Nature* (IUCN). Version 2012.2. www.iucnredlist.org.

¹³ The current extinction crisis is suggested as the sixth major extinction event of the Earth, surpassing that which resulted in the disappearance of dinosaurs. For more, see "Global Forest Resource Assessment," *Food and Agricultural Organization*, 2010.

¹⁴ "Global Forest Resource Assessment," *Food and Agricultural Organization*, 2010.

deforestation, the world's rainforests could completely vanish in a hundred years.¹⁵

Another major culprit for biodiversity losses is the pollution from liquid and solid waste. Consumers and producers all over the globe are throwing away mountains of trash. In addition to that, the pollution of the oceans, rivers, other inland water and the groundwater is an extremely sorry sign of humankind exceeding its limits.

In recent times, human consumption and production activities are extensively using groundwater and increasingly becoming heedless of groundwater's actual and potential scarcity. Indeed, groundwater is the world's most extracted mineral resource. In 2004, the United Nations' Educational, Scientific and Cultural Organization (UNESCO) reported its withdrawal rates in the region of 600 to 700 billion m³/year. According to the United Nations (UN), the last century's rate of increase in water use of the world was more than twice the rate of increase in its population. A corresponding estimate of the UN is about the serious threat of water scarcity apprehended to be inflicting 1.8 billion people by 2025.¹⁶

Technology produces surplus value or human made physical capital when combined with a social mode of production which is one of the major exhibits of the quality of social capital of a society.

Finally, the sustainability of contemporary sociology is conditional to the continuity of prevalent technological possibilities which to a great extent depend on uninterrupted availability of mineral commodities. Insofar as mines of many metals will last for millions of years, even at the current rate of consumption¹⁷ and substitutes may be invented or discovered for critical commodities like petroleum, the threat is economic rather than physical depletion because the high production cost of mineral commodities and/or their substitutes may render their prevalent uses unaffordable. Market therefore may become victim to its own mechanism and fail the advanced technologies of large scale production.

¹⁵ "51 facts about Deforestation," *Conserve Energy Future*, <http://www.conserve-energy-future.com/various-deforestation-facts.php>

¹⁶ "Environment-Freshwater Crisis," *National Geographic*, <http://environment.nationalgeographic.com/environment/freshwater/freshwater-crisis/>

¹⁷ J.E. Tilton, "Is Mineral Depletion a Threat to Sustainable Mining?" Paper presented at the International Conference on Sustainable Mining, Santiago de Compostela, Spain April (2009).

Ironically, such an eventuality may happen even in the presence of ideal market situation where all consumption and production items are priced and reflect their true values i.e. the willingness to pay exists for each item; also with no externalities attached.

Impact on Economy: Rat Race on a Wizardly Wheel

We were all in it together, of course, desperate to regain some hypothetical upper hand by any means necessary.

Peter Watts¹⁸

As mentioned earlier, technology and sociology are mutually reinforcing realms of human society. Technology produces surplus value or human made physical capital when combined with a social mode of production which is one of the major exhibits of the quality of social capital of a society. The social mode of production has almost universally favored the *mighty* and the *fittest*, notwithstanding the universal formation and reformation of the positive laws of sociology to resolve the conflict of interest between the economic agents over the distribution of gains, surplus value or capital generated by the production activity.¹⁹

The regulatory framework of the Paleolithic society was closely associated with food production as food was the major form of physical capital or gain from economic activity. The near absence of the surplus value, because of minimal value addition opportunities, and closely coordinated survival efforts of the members of a *pack* evolved an egalitarian system for resolving the conflict of interest over the distribution of gain from economic activities.

Owing to the opportunities and constraints of early Neolithic era, the size of the market was too small to warrant temporal regulation and humankind as a group universally feared the terrestrial and extraterrestrial regulatory powers. The nature was everything; the sovereign, regulator and the benefactor.²⁰

Several thousand years after the advent of Agricultural Revolution, the humankind evolved into complex societies needing regulation in all spheres, economic, social and cultural. The extended exchange possibilities and opportunities increasingly spurred economic

¹⁸ Peter Watts is a Canadian marine-mammal biologist and science fiction author.

¹⁹ The functional distribution of income in present times is a crude representation of the distribution of gains from the production activities of a country.

²⁰ T.H. Greer and G. Lewis, *A Brief History of the Western World* (United Kingdom: Thomson Wadsworth, 2005).

activity under a regulatory framework; a mutually reinforcing construct of law, tradition and custom, which largely favored the *fittest* and the *mighty* mostly including priests, kings and large private landowners. The market driven new forces had started to undermine a plethora of regulations which religion, society and multitier absolutist governance directly and indirectly imposed in economic life of the individuals and communities.²¹

Another significant contributing factor to the rise of market economy had its roots in the forces unleashed by the Renaissance. The age of antiquity was the age of conformity. The deviation from the established norms and code of conduct of the society was an unrewarding and highly risky venture for both commoners and the quality folk. The scientific progress of the 17th century challenged the continuity of the values, customs and regulations of antiquity with growing optimism about human capacities and prospects which underscored the right to all kind of freedoms including economic freedom.

Subsequently, the 18th and 19th century liberalists trusted and propagated that market, if left alone with economic agents freely consenting to the price arbitrage, will ensure a prosperous and efficient society.²² This coupled with the technical advances led to new production processes and products which, as the Table lists, resulted in unprecedented increases in the world GDP. The functional distribution of income, however, was highly injudicious since it favored the owners of capital who sought profits when and where they could by working toward the elimination of unwanted government regulations.²³ They were also successful in wooing government support to help them reap higher and higher profits. In many cases, the growing concentration of economic power eliminated competitors with mergers and trusts [Blackford (1998)].

²¹ For example, punctuality, hard work and thrift overwhelmed the religious ideals of prayers, meditation and alms giving. Even the clergy itself fell victim to the new riches which extended them wealth, power and elegance [N.J.G. Pounds *An Economic History of Medieval Europe* (London and New York: Longman, 1994)].

²² Adam Smith in his pioneering work *The Wealth of Nations* (1776) venerated the role of human selfishness in the existence of a *natural* economy. According to him, an economic system allowing the people to freely follow their own nature and interests will promote the welfare of all. He based his ideas on Hobbes's atomistic view of society, a sociological theory that postulates that human beings are fundamentally self-interested, equal and rational *social atoms* and their self-interested cooperation occurs for the mutual preservation of the individuals and society at large (see, R.L. Heilbroner and W. Milberg, *The Making of Economic Society* (New Jersey: Prentice Hall, 2006)).

²³ Ricardo's Iron law of wages, set forth in his *Principles of Political Economy and Taxation* (1817) furnished the employers a *morally acceptable* justification for keeping the wages down. The liberalist economy therefore thrived on the impoverished workers who faced compulsion of a choice between low paid work and starvation (See *Ibid.*)

Indeed, the economic and political realities at the turn of the 20th century widely differed from the outcome of the free market economy envisaged by Adam Smith. On the contrary, his doctrine had become a convenient theology with tenets flexible enough to be followed or bypassed to suit the interests of profit earners. Eventually, the conflict of interest which arose over the distribution of the increased wealth paved the way for Marxist ideology. Moreover, the harsh working conditions of the factory laborers was the potent source of bitter discontent.

Notwithstanding the pioneering and major socialist movements of the Western world, the first communist government of the world was established in largely agrarian and absolutist Russia. Nonetheless, the Great Depression was a proof enough that the so called self-regulatory mechanism of free market economy cannot be trusted to sustain the standard of living raised by the Industrial Revolution. The long and bitter experience of the Great Depression turned the promise of *laissez-faire* into a myth.²⁴ Additionally, the looming threat of social upheaval, intensified by the totalitarian governments in Russia, Italy and Germany, made the shift from liberalism more inevitable than desirable.

Although paying heed to timely warning saved the Western world from the tsunami of socialism, the preventive measures were executed at the cost of building up mountains of public debt.

Indeed, the welfare state of the Keynesian economics was more of an antidote for socialist movements than it was a response to curb failure of the market. Therefore, after World War II (WWII), widening intervention by the state in the economy became a norm in the so called *free world*. Extensive plans were also made by the governments around the world, initially for economic recovery and later on for growth and development. Finally, although for most part of the 20th century there was much less economic freedom than it was in the nineteenth century, the living standards and economic security both increased owing to leapfrog technological progress and institutional development.

Although paying heed to timely warning saved the Western world from the tsunami of socialism, the preventive measures were executed at the cost of building up mountains of public debt which still

²⁴ For a detailed and technical account of Great Depression, see C.P. Kindleberger, *The World in Depression, 1929-39* (London: Allen Lane, 1986).

continue to be heaped up all over the world; as to keep the newly decolonized countries of the developing world in the Western Block, their people and governments were also encouraged and supported to emulate the so called blissful modern life of freedom and abundance in US and Western Europe.²⁵ Additionally, a systemic propaganda network spread the horror stories of scarcity, bondage and tyranny suffered by the populace under communist rules.²⁶ Keynesians' welfare economics was therefore in vogue all over the so called *free world* in the 1950s and 1960s, the two golden decades of economic growth. The 1970s, however, recorded, a different story. The energy crisis fueled the price inflation and led to stagnant economic growth; hence the coinage of the new term *stagflation*.²⁷ The post WWII boom was over. Although the mid-1970s was the worst period, the trouble lasted until the 1980s. The latter marks humankind's ascent into an era of abundance which is loaded with the apprehension of a downhill descent into a chaos following the scarcity unimaginable for at least three generations born after WWII.

The monopoly capitalism of the late 19th and early 20th century has made comeback with megalomaniac ferocity. The academia, intelligentsia, politicians, governance and mass media are puppets with strings in the hands of business tycoons. Bailing out Fannie Mae, Freddie Mac, Lehman Brothers and American International Group (AIG) is *good governance*, while regulating their unsustainable, if not unfair, trading practices is *deadweight loss*; undoubtedly the most striking paradox of the political economy of world's richest country. Another similar paradox is the unprecedented ascent of monopolistic power in an era of increased competition. Contrary to the assumption of competitive markets being the order of the day, monopolistic retail business chains, now fast emerging even in developing countries, have swallowed a large number of small producers not lacking the information and formerly major suppliers of the items having similar units, no barriers to entry

²⁵ In 2014, size of the world GDP was 77.869 trillion dollars, source Databank, "World Bank, <http://databank.worldbank.org/data/download/GDP.pdf>. The public debt of US and Japan in 2014 was 18 trillion and 13.4 trillion dollars respectively, see Mike Patton, "The US debt: Why it will continue to rise?" *Forbes*, September 18, 2014, <http://www.forbes.com/sites/mikepatton/2014/09/18/the-u-s-debt-why-it-will-continue-to-rise/>. The total US debt, its government, businesses and people, was 60 trillion dollars in 2014 (<http://rt.com/usa/166352-us-total-debt-sixty-trillion/>). Public debt to GDP ratio in Euro area was 84% in 2012, taken from (<http://wdi.worldbank.org/table/4.12>), while the corresponding ratio for 28 countries of the European Union was 86.8% in 2014(<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=teina225&plugin=1>).

²⁶ *Animal Farm* and *1984* by George Orwell are two of the most relevant cases in point.

²⁷ The two worst crises of this period were the 1973 oil crisis caused by interruptions in exports from the Middle East and the 1979 energy crisis following the Iranian Revolution.

and exit, perfect mobility, same price and perfect information on part of the consumers whose instinctive love of material is now being force-fed by glamorous advertising; hence a formidable challenge to *the imperfect information paradigm*.²⁸

Consumerism, promoted and mediated by the mass media with excessively glamorous portrayal of democratic consumers [Barber (2008)], is universally distorting priorities of the populace in favor of a perverted maxim *The One With the Most Toys Wins* [Cohen (2003)]. The present and future role of mass consumption in sustainable development is open to question. Indeed, rationalized production processes are intertwined with the socialization of irrational and hedonistic consumption²⁹ contrary to the suggestion of consumer optimum theory that rational choices meet affordable opportunities. Ironically, the largest economy of the world, which is also the citadel of neo-liberalism, expends billions in public money to encourage consumption of an alarmingly indebted citizenry.³⁰

Finally, with unsustainable dependence on consumer *leverage* and historically unprecedented level of backward and forward production linkages, the economy of the neo-liberalist world is the *house of cards* founded on a highly vulnerable global financial system. Since the 1980s, Financialization of global economy is an economic as well as political development. In both developed and developing countries, the financial sector is ruling the real economy with growing power allowing it to exercise increasingly greater influence to dictate priorities to the governments and terms to the vulnerable businesses. More importantly, with internationalization of the monopoly capital and globally integrated financial markets, a financial problem in one region has the potential to spread panic all over the world. The most destabilizing part of financialization is the widely prevalent practices of financial speculation which underscore the money's capacity to make more money without ever taking risks in the real economy. In recent past, the collapse of speculative bubbles was responsible for bursting of major financial bubbles in the world economy.³¹ Notwithstanding the apparent recovery, the apprehension of a financial crisis similar to the Great Depression cannot be ruled out in a world where the traditional role of finance as a

²⁸ A famous paradigm of the neo-liberalist era identified with the 2001 Nobel Prize winning work of Joseph Eugene Stiglitz, an American economist, professor, and former senior vice president and chief economist of the World Bank.

²⁹ G. Ritzer, *The McDonaldization of Society*. (Newbury Park: Pine Forge Press, 2009).

³⁰ As of December 31, 2014, total household indebtedness in US was \$11.83 trillion, <http://www.w.newyorkfed.org/microeconomics/hhdc.html#/2014/q4>.

³¹ Asian financial crisis of 1997, bursting of the dotcom bubble and housing bubble in the US, in 2000 and 2008 respectively, are the cases in point.

help to the real economy continues to be overwhelmed by hyper speculation.

Impact on Society: Brave New World³²

Actual happiness always looks pretty squalid in comparison with the overcompensations for misery. And, of course, stability isn't nearly so spectacular as instability. And being contented has none of the glamour of a good fight against misfortune, none of the picturesqueness of a struggle with temptation, or a fatal overthrow by passion or doubt. Happiness is never grand.

Aldous Huxley

Out of a plethora of social issue, this study will limit the scope of argument to following three realms:

- Poverty and inequality
- Education and health
- War and peace

The earliest available poverty count dates back to 1820, when a tiny elite enjoyed exceptionally higher standard of living at the expense of an overwhelming majority of the populace living in extreme poverty.³³ Even in 1910, over three fourth of the world population was living in absolute poverty.³⁴ Despite a 7-fold increase in the world population, poverty headcount fell continuously over the last two centuries. Nonetheless, the progress has been relatively much better in recent times. Even in 1981, more than 53% of the world people, living with less than 1.25\$ a day, were absolute poor. This number is claimed to have fallen to 17% in 2011.³⁵

The real threat to sustainability arises from the fact that in 2010 the total number of people living in absolute poverty was only a little less than that of a hundred years back, 1.324 billion and 1.442 billion respectively.³⁶ These comparisons, however, refer to markedly different social dynamics in terms of values, aspirations and access to information

³² Title of the famous novel by Aldous Leonard Huxley, a 20th century English writer and philosopher.

³³ There were about 61 million people in 1820 not living in absolute poverty, while the corresponding number of those living in absolute poverty was over one billion [see, F. Bourguignon and C. Morrisson, "Inequality among World Citizens: 1820-1992," *AER*, 92, no. 4 (2002):727-744.

³⁴ Bourguignon and Morrisson, "Inequality among World Citizens: 1820-1992."

³⁵ M. Roser, "World Poverty," Published online at Our World In Data.org, 2015. from: <http://ourworldindata.org/data/growth-and-distribution-of-prosperity/world-poverty/>.

³⁶ Bourguignon and Morrisson, "Inequality among World Citizens: 1820-1992."

on a life of comfort and luxury. Although the term conspicuous consumption was coined in 1899,³⁷ the world of 1910 did not have ostentatious lifestyles conspicuously displayed in everyday life; specifically in developing parts of the world which indeed are lodging majority of the poor.³⁸ In the present era of globalization, callous and glamorous mass media advertising campaigns of consumer items sold in developing countries' markets, dominated by both national and multinational corporations, expose children and youth of poor households to a cosmos of luxury not permitting them to access even its fringes. Whatever little the poor households are unable to resist, junk food and some vanity items, for example, costs a sizeable chunk of their meager earning, thus moving many of them beyond their opportunity set in favor of suboptimal choices which may get some of their members, particularly youth, in serious economic, social and psychological troubles.³⁹

Apart from glamorous advertising campaigns of luxury items, some other potentially explosive social divisions are also emerging in developing countries that widen the gap between haves and have-nots.

Apart from glamorous advertising campaigns of luxury items, some other potentially explosive social divisions are also emerging in developing countries that widen the gap between haves and have-nots. One of the most manifest of the new socially divisive phenomena are the shopping malls in countries like India and Pakistan, two countries which between them home the largest number of poor on Earth. Malls are the

³⁷ Thorstein Veblen coined the term Conspicuous Consumption in his classic treatise *The Theory of the Leisure Class* (1899) to describe extravagant spending on products intended chiefly to display wealth and thus signal status. Consumers frequently pay higher prices for functionally equivalent goods because they crave the status associated with material displays of wealth [See, L. S. Bagwell and B. D. Bernheim, 'Veblen effects in a theory of conspicuous consumption.' *American Economic Review* 86, no. 3 (1996): 349–373.

³⁸ Indeed, in 1910, the social conditions of the populace in many of the Asian and African countries almost mirrored the medieval Europe where sumptuary laws specified in minute details what each social class was permitted and forbidden to wear, including the maximum price an article of clothing could cost [See, C. J. Berry, *The Idea of Luxury: A Conceptual and Historical Investigation* (Cambridge, UK: Cambridge University Press, 1994).

³⁹ Apart from causing escalating sense of deprivation, helplessness and hopelessness among youth of the poor, many mass media marketing campaigns encourage the well-off young people to adopt unethical and socially irresponsible lifestyle and behavior.

new quasi-public spaces⁴⁰ in developing countries. Private owners of such a place may exercise the power to deny its access to anyone they choose. Therefore, along with extending the facilitation to customers to save on the transaction cost by avoiding bargain and finding everything under one roof, the fast emerging shopping malls culture in big cities of developing countries discriminates between the middle classes and the poor. Moreover, the foreign retailers like Wal-Mart, Tesco and Carrefour not only have the potential to adversely affect the small traders in the developing countries, their vertical integration from *plough to plate* may also squeeze the small informal sector and farm producers into ever lower margins, thus escalating the poverty headcount.

Perhaps the most *sacrilegious* phenomenon supported and promoted by the neo-liberalist era is the thriving market for school education. The article on universal, compulsory and free school education adorns the constitution of many developing countries with fast emerging oligopoly markets in school education at the national level with franchises sold both locally and abroad. Along with the franchised chain schools, monopolistic competition also thrives at the local level where a large number of small private schools offer a package of *English medium* to the children of lower middle income and marginalized strata at affordable rates. Another work of this author [Khan (1999)] postulates that teaching and healthcare professions are of fundamental importance in a society which, like a human being, is a synthesis of soul and body. The teacher helps sustain and enlighten soul of the society, while the healthcare giver is the custodian of its body. Mercenary orientation and market reinforcement of these two professions alarmingly undermine sustainable development of the society.

Social functionality of those not well versed with three Rs of school education may be hampered.⁴¹ However, such kind of deficiency neither threatens life nor it makes one socially dysfunctional. The same is not true when healthcare is denied to those in dire need while not having the ability to pay. Up until the 20th century, medical science was not heavily professionalized, specifically in Asia and Africa where majority of the population relied on a large, varied and effective tradition of home remedies and benevolent indigenous healers volunteering their services almost gratis.⁴² Unprecedented advancement in medical science during

⁴⁰ K. Gray and S. Gray, "Civil Rights, Civil Wrongs and Quasi-Public Space," *European Human Rights Law Review*, 1, no 4 (2004):46-102.

⁴¹ Reading, writing and arithmetic.

⁴² For example, Ayurveda and Unani medicines were the medical systems of India. Both, based on the theory of the presence of elements, are very close to each other [see, D. Wujastyk, *The Roots of Ayurveda* (ed.). (London: Penguin Classics, 2003) and H.S.Z. Rahman, "Arab Medicine During the Ages," *Studies in History of Medicine and Science*, IHMMR, New Delhi 14, no. 1-2 (1996):1-39.

the last century not only slighted and uprooted the traditional sources of costless treatment for many ailments, it also created increasingly wider and deeper markets for medical industry including professionals, pharmaceuticals and instrumentation. However, mercenary culture of the market for medical services is a recent development having its origins in all-encompassing liberalist ideology. Presently, apart from unfair and unaffordable transaction cost of primary healthcare, the poor households in low and middle-income countries (LMICs) suffer high financial insecurity in the event of a major illness or any other medical contingency. Moreover, extremely costly medicines for treatment of life threatening diseases like cancer, human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) are out of reach for many patients in LMICs.⁴³

Finally, developments in medical science have been a mixed blessing in some important ways. There are highly advanced technologies like computerized axial tomography (CAT) and magnetic resonance imaging (MRI) which have revolutionized the diagnostic procedures. Simultaneously, there are ethical dilemmas like euthanasia, female infanticide and increasingly unaffordable cost of long-term healthcare of elderly.⁴⁴

The CAT in the medical science has become MAD (mutually assured destruction) in the modern science of warfare. Given the eternal power of the conflict of interest, warfare must have begun in time immemorial. However, the first documented war dates back to the Sumerian civilization around 2700 BC.⁴⁵ Indeed, there have been countless wars since ever the onset of the Neolithic era. Historically, many a times these wars have been responsible for deliberately wiping out entire communities in different parts of the Earth. However, the collateral damage witnessed in 20th century wars and in the ongoing *war on terrorism* does not find its parallel in the documented history of warfare. Given the human love for material, peace on Earth has hardly ever been a reality. Although it is difficult to qualify what exactly is the

⁴³ Of the 2.1 million people worldwide who became newly infected with HIV in 2013, 240,000 were children. Most of these children were living in Sub-Saharan Africa, the poorest region of the world, "Global Statistics," HIV-AIDS, <https://www.aids.gov/hiv-aids-basics/hiv-aids-101/global-statistics/>

⁴⁴ A report on the long-term care of elderly, published by the Organization of Economic Cooperation and Development (OECD), highlights the fact that, even for relatively wealthy people, the cost can be unaffordable. In OECD countries, the population share of those aged 80 years and over is expected to increase from 4% in 2010 to nearly 10% in 2050, see "OECD paying for care of elderly out of income is unaffordable," *Citywire*, May 23, 2011, <http://citywire.co.uk/money/oecd-paying-for-care-of-elderly-out-of-income-is-unaffordable/a493145>

⁴⁵ J. Keegan, *A History of Warfare* (New York: Vintage, 1994).

peace, the world as a whole is presently experiencing relatively more peaceful times than ever before. Compared to any previous time, the humankind now places greater value on life. The xenophobia of the past has now given in to a symbiotic relationship of communities connected on the social media all around the world. Indeed, humankind's awareness

Despite the humanity having become more humane, peace loving and ever closer to each other, the fact cannot be ignored that, since after WWII, world military spending has been higher than ever before.

and tolerance of each other is admirably greater than any other time in the documented history of wider human society. More importantly, never before in history human beings were willing to help people of the other countries facing natural or temporal calamities.

Nevertheless, the humanity having become more humane, peace loving and ever closer to each other, the fact cannot be ignored that, since after WWII, world military spending has been higher than ever before.

Similarly, there is a global arms industry and, unlike other legal economic activities, this industry makes profit by producing machines designed to kill and maim human beings. Also, there is international arms trade which is a highly market oriented big business as it operates without regulation. Developing countries are the main buyers from the world dealers in arms. Ironically, the five permanent members of the UN Security Council top the latter; in seven years to 2011, US, Russia, France, UK and China together accounted for 88% of reported conventional arms exports.⁴⁶ Additionally, a large number of developing countries are also producing small arms and most of them lack both ability and will to regulate distribution and use of firearms.

Although conventional arms underscore the havoc caused by the 20th century wars, including still ongoing so called *war on terrorism*, atomic bombing of two Japanese cities introduced a new chapter in the history of perverted human capabilities for self-destruction. The *Little Boy* and the *Fat Man*, dropped on Hiroshima and Nagasaki respectively in August 1945, were small toys compared to the nuclear warheads now lying in the arsenals of major powers. Unfortunately, present times are marked with alarmingly potent threat of the extinction of contemporary civilization and society. The military doctrine MAD that emerged in the 1960s acknowledged nuclear parity between the two superpowers of

⁴⁶ R. F. Grimmett, and K. K. Paul, *Conventional Arms Transfer to Developing Nations, 2004-2011* (Congressional Research Service(CRS) Report for Congress: Washington, DC, 2012).

those times.⁴⁷ Presently, there are nine nuclear powers in the world and between them they have 15,695 nuclear weapons.⁴⁸ Even more alarmingly, there is a huge inventory of the weapons of mass destruction (WMDs) which, along with the nuclear warheads, include radiological, chemical and biological weapons.

What this apocalyptic stockpile of warheads is supposed to destroy and whom it is supposed to kill? These are the pertinent questions along with the apprehension that WMDs may fall in the hands of criminally inclined people and/or terrorist organizations.⁴⁹ Finally, and most importantly, devotedly guarded secrets of nuclear weapon accidents are very often out in the open. For example, the Pentagon's official list of mishaps with nuclear weapons mentions 32 accidents. Similarly, In July 1992, an official report of the Ministry of Defense in UK claimed that 19 accidents had occurred with British nuclear weapons between 1960 and 1991.⁵⁰

The neo-liberalist free market paradigm is agenda of the corporate world promoting monopoly capitalism in the name of competition where exchange is neither fair nor volunteer.

Conclusion

An ever-increasing number of people today are part of the *rat race* fast eroding the natural endowment of humankind. Earth has survived everything in time and will survive this test too. Life will also survive in one or the other form, even if the MAD envelopes the Earth with entire arsenal of WMDs going off at once. Unfortunately, what will not survive is anthropocentrism which historically has been responsible for extinction and diminution of the fellow species in biodiversity.

⁴⁷ MAD reflects the Cold War idea that, in a nuclear war, both superpowers will face destruction with the minor difference of *shoot first, die second*. Notwithstanding the presently prevalent term mutually assured security(MAS), MAD still remains a reality now also between India and Pakistan.

⁴⁸ "World Nuclear Weapons Stockpile," *Ploughshares Fund*, <http://www.ploughshares.org/world-nuclear-stockpile-report>

⁴⁹ Oklahoma bombers of April 1995, Twin Towers bombers of September 2001, Oslo bomber of 2011, and suicidal bombers, all around the world, are the cases in point.

⁵⁰ For elaborate details of nuclear weaponry and a groundbreaking account of accidents and near-misses, see E. Schlosser, *Command and Control* (London: Allen Lane, 2013).

Ever since the Industrial Revolution, technological development has always needed an ever widening and deepening market. Through the mass media advertising campaigns, market is now exercising unbridled power to the extent of making invention the *mother of need*. Materialism has therefore reached unsustainable heights and its fatal attractions have made the individual a customer of mass culture which is synthetic, commercialized and conformist, holding on to superficial values and blatantly trading in the wisdom for unwisdom.

The neo-liberalist free market paradigm is agenda of the corporate world promoting monopoly capitalism in the name of competition where exchange is neither fair nor volunteer. This is specifically true in the fast-emerging corporations for services like school education and healthcare which, by the virtue of their significance for sustainable development, are merit goods. Exchange is also not fair for many other goods and services because it allows only the *fittest to survive* on the producer's side. It is not volunteer because the glamour of mass media advertizing campaigns overpowers the consumers, many of whom succumb to the temptations in favor of suboptimal choices. Regulation of the mass media advertizing is more warranted than desirable, specifically in developing countries where callous marketing campaigns of multinational corporations are emulated also by the local producers. Not only many such campaigns challenge social sensibilities, also a vast majority of target consumers neither have the affordability nor the capacity for self-regulation.

History of human society and civilization is the history of positive laws of technology and sociology. The latter are about the regulation of human behavior with both informal and formal positive laws. The sustainable development warrants that formal positive laws of sociology are judicious and ensure optimal conformity with the natural law. Therefore, may it be environment, economy or the society, it is the destiny of *Homo S. Sapiens* to ensure that individual and/or group freedoms do not compromise the collective wellbeing of present and future generations of humankind. Failing to live up to that destiny will invite the law of nature where *might is right* and only the *fittest survive*. In all fairness, contemporary society and civilization is *not fit to survive* and appears to be challenging the *eternal might* of nature to get it *right*.

Finally, changes in the Earth's atmosphere are potentially more threatening than the onset of another Great Depression or a worldwide MAD. The *tragedy of the commons* predicament warrants a regulatory framework in all spheres of human society with a global perspective and futuristic vision.

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